Journal of the
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ATMS

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BRISBANE 2024

SUNDAY 10 NOVEMBER

POWERING A GROWTH MINDSET

ATMS invites practitioners to join us in **Brisbane on Sunday 10 November 2024** for a great day of networking and learning business skills from highly experienced and successful professionals at the upcoming **Powering a Growth Mindset Seminar.**

This event will take place alongside ATMS' Annual General Meeting (AGM)*.

All practitioners are encouraged to take advantage of this invaluable opportunity to enhance essential business skills and foster a growth mindset to drive personal and professional development.

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ATMS

ATTEND THE SEMINAR TO EARN 6 CPE POINTS!

Learn from Angela Carroll, Heather Porter and Annie Gibbins as they host sessions on mindset, social media and AI, and business branding.

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- Want to develop a growth mindset to enhance their practice
- Connect and network with fellow professionals in the field
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- Want to learn techniques for preventing burnout and maintaining wellbeing
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MEMBERS: **$95** NON-MEMBERS: **$195**

*AGM is only able to be attended by ATMS members.

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Hotel Grand Chancellor Brisbane

9:00am - 4:30pm AEST

#ATMSSYMPOSIUM

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SPRING 2024

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Accredited member
Associate member
Student member (free)
Fellow
Life member

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ATMS strongly supports sustainable practices to preserve the health of our planet. Consequently, we encourage members to take up the online option for this journal.

President's *Report*

Christine Pope | ATMS President

On Saturday, July 20th, we celebrated a remarkable milestone: 40 years of the Australian Traditional-Medicine Society! A heartfelt thank you to all those who have supported ATMS over the years, especially our Accredited Practitioner members, past and present Board members, our CEO's, industry suppliers, and education providers, for your unwavering support over the past four decades.

Personally, my involvement with ATMS has been focussed on the past decade and at the fortieth anniversary celebration I shared some of the association's highlights from the past ten years.

At the thirtieth anniversary celebration Maggie Sands referred to Dorothy Hall's quote "about always having a sword in her hand." It surprised me at the time, but a decade later, as I look back, it's clear that ATMS needs to be active in advocating for natural medicine and ensure that members' interests are protected. The preference now though is for meetings, petitions and social media campaigns, supported by good quality research.

Lobbying Campaigns: The two major campaigns ATMS ran over the past decade were 'I support Natural Therapies and I vote' and 'How Dare They?'. Both campaigns have raised awareness of the importance of natural therapies with the government and influenced the decision to initiate a further review of natural therapy rebates. We are expecting final reports to be with the Health Minister in September 2024 and are looking forward to the return of natural therapies to their rightful place in private health insurance.

Advocacy: As part of the advocacy around the Natural Therapies Review ATMS hosted a Healthy Breakfast at Parliament house, attended by the then Health Minister, Greg Hunt. Marcus Blackmore was the keynote speaker. The NTREAP submissions were a good exercise in collaboration and ATMS compiled over 320 pages of evidence in collaboration with five researchers and the team at Metagenics. The process was supported by over 12 trips to Canberra to meet Health and Small Business ministers.

More recently our advocacy efforts were focussed on the Home Care packages for remedial massage, after a decision was made that the accreditation body would be AHPA, an association who didn't want this role. In collaboration with MMA and other massage associations we managed to change this decision so that it included practitioners accredited by a professional association.

COVID-19 Response: the COVID-19 crisis was a period when associations were really active in supporting members, including communicating the various lockdown restrictions, and advocating for the return to work of members in a range of government roundtables and consultations. In one year we sent 91 EDMs with updates across eight jurisdictions regarding work permissions and advocated for members across all States.

At an AGM I was approached by a member who had a massage practice with ten staff, and she advised me how much the support from ATMS was valued during that period. Some of her staff were with other associations who were basically recommending that they stop work for the duration. The advice about how to operate safely through COVID was really valued and she had also assisted her staff to transfer to ATMS!

Natural Medicine Week: Since its launch in 2016, this event has grown tremendously. In 2024 we hosted 79 online practitioner events, blogs, and recipes, reaching over 4.2 million people. Our 38 ambassadors have thrived, and our practitioners have gained new audiences, website traffic and signups to their mailing lists. More importantly, 45% of members recognise that it has improved the recognition of natural medicine by both the public and government.

ATMS Symposiums: Starting with the Endometriosis Symposium, we've expanded with annual events with strong industry support. Streaming has also enabled ATMS to increase access for practitioners across Australia, particularly in remote and regional areas. This year, we eagerly anticipate the Post-viral Symposium in September.

Transition to Practice in Sydney: This initiative supports new graduates and students in establishing their practices. This year we ran it in June 2024 in Brisbane. We were fortunate to have

President's *Report (cont.)*

Natalie Hume and Stephanie Mortimer assisting with the event in their new roles and they also took the opportunity to visit six of our accredited colleges while they were in Brisbane. Over 60 practitioners attended the event and we were supported by a number of sponsors on the day, including Bioceuticals, Bioclinic, Designs for Health and Oborne. It's always such a pleasure to see the growth and development of students as a result of attending these events.

Education Provider Symposium: These symposiums have successfully connected our teaching community via an online learning forum. Running it as a streaming event has enabled trainers around Australia to participate. This year's theme is Facilitating Kindness in Education.

Recognition of Practitioners: This process has evolved over the past decade, the initial focus being on acknowledging the skills and abilities of our members with the Accredited Practitioner logo, which has been trademarked, and then further progressing members' recognition with the introduction of Fellows at 10 years, and more recently with the introduction of the 30 year pin. This is awarded to members at the annual seminar and AGM.

Cyber Wardens: ATMS is leading the way in cyber-security through free online training in collaboration with the Council of Small Business Organisations Australia (COSBOA). Over 900 members have enrolled in the training and more than 450 have graduated.

Accredited Nutritionist: for the past four years ATMS have been lodging submissions to deny the use of the Accredited Nutritionist trademark by the Dietitians Association. In early July 2024 ATMS finally received confirmation that the hearing was successful.

What's ahead for the next ten years? At the July Strategy Day the Board worked on the 2024-2026 Strategic Plan, which has been well informed by the sound contribution of members who completed the member survey. The results will be analysed and shared in the next edition of the Journal. Based on an initial overview it appears that members want ATMS to focus on the major benefits that the Society offers, including a comprehensive CPE program, accreditation with a wide range of health funds, well priced professional indemnity insurance, the Journal and the website. There are a number of other initiatives in the pipeline aimed at supporting members to be successful in practice.

Christine Pope
President

ATMS

40th Anniversary

Celebrations

SIMON SCHOT EDUCATION GRANT

Apply now and receive $500AU to go towards your training in 2025!

The Simon Schot Education Grant is open to all Accredited and Student Members of ATMS wishing to undertake studies in natural medicine or to go towards their CPE training.

Ten grant recipients will each be granted a AU$500 reimbursement.

GSA Look No Further

The Simon Schot Education Grant is an annual grant made possible by the support of GSA Insurance Brokers. GSA kindly donates ten AU$500 scholarships to ATMS members for use with undertaking natural medicine education.

Applications close 27 October 2024

Grant recipients will be announced at the AGM and notified in writing.

APPLY NOW

There are no restrictions on members, should they wish to apply for the Simon Schot Education Grant each year, however only one application per member per year will be accepted.

CEO's *Report*

Annie Gibbins | ATMS CEO

Since stepping into the role of CEO earlier this year, it's been a rewarding journey of growth, collaboration, and commitment to advancing natural medicine. A standout moment was celebrating our 40th anniversary at a Cocktail Party in Sydney. It was a pleasure to meet so many of you in person and hear what matters most to you as practitioners. This milestone reflects the dedication and passion that have made ATMS the leading voice in our industry. The event was a fitting tribute to our shared journey and the bright future ahead.

Looking forward, ATMS remains focused on delivering exceptional value to our members. We've recently introduced exciting enhancements to our member portal, including access to resources like EBSCO, eMIMS, health fund provider information, and the ability to upload key documents like qualifications, CPE records, First Aid, and Insurance Policies. These features help ensure you're fully prepared for health fund audits and aligned with current practice requirements.

I'm also pleased to share that recent audits by both Medibank Private and ARHG were passed smoothly, thanks to the teamwork and responsiveness of our members. Your diligence continues to be key in maintaining ATMS's leadership in supporting you.

Advocacy remains a cornerstone of our work. As Christine Pope highlighted, campaigns like 'I Support Natural Therapies and I Vote' have made a lasting impact, leading to influential submissions and high-level meetings with government officials. We're eagerly awaiting the final reports of the Natural Therapies Review, with the aim of restoring natural therapies in private health insurance coverage.

In addition to advocacy, I'm currently overseeing Board member elections and have been impressed by the quality of applications we've received. Voting will commence soon, and I look forward to sharing the results at our November AGM.

We've also made strides with programs like Cyber Wardens and securing the Accredited Nutritionist trademark—both of which demonstrate how we continue to lead in member safety and industry recognition.

Looking ahead, I'm excited to enhance member engagement and explore new initiatives that align with your needs. The upcoming Post-Viral Symposium and our robust CPE program are key examples of our commitment to helping you thrive both personally and professionally.

On a personal note, one of the highlights since joining ATMS has been connecting with so many of you—whether through Zoom, in-person meetings, or a casual coffee chat. Your insights, feedback, and passion for natural medicine truly drive everything we do.

We've also strengthened our team with key additions. We're delighted to welcome Vinitha Virma as our new Operations Manager, and congratulations are in order for Natalie Hume, who has been promoted to Education and Partnerships Manager. I'm confident these changes will further enhance the service and support we provide to our members.

As we move into the next chapter of ATMS's journey, I want to express my sincere gratitude for your ongoing trust and support. Together, we'll continue to elevate the profession, advocate for positive change, and build a healthier future for our communities. I'm excited to work alongside you as we embrace new challenges and opportunities—there's much more to come!

Stay tuned as we prepare to launch two exciting new service offerings at the AGM. I can't wait to share more details soon!

To your continued success,

Annie Gibbins
CEO

Breathing *for stress reduction and resilience*

The damaging effects of stress overload and the therapeutic role of breathing practices.

Dr Rosalba Courtney | Breath and Body Clinic, Integrative Breathing Programs, Research, Practitioner Training, Member of the Osteopathic Research Alliance, Affiliate of the University of Memphis

Introduction

Stress is an undeniable part of the human experience, profoundly affecting our physical and mental well-being. Stress overload, sometimes referred to as toxic stress or allostatic overload, is a major driver of chronic illness and psychological distress. It also plays a significant role in functional and medically unexplained illnesses.

According to the Australian Psychological Society's "Stress and Wellbeing in Australia" survey conducted in 2019, approximately 26% of Australians reported experiencing moderate to severe levels of stress.(1) However, the actual number is likely to be even higher. In this complex and fascinating time in human history, stress affects all of us. Yet, stress is not always detrimental. In moderate amounts and when managed properly, it can promote healing and slow the aging process. However, when stress becomes overwhelming, it wears us down - it causes disruption and damage to essential physiological processes and diminishes our health and happiness.

The good news is that by understanding stress better, we can develop strategies to manage it more effectively. One of the most powerful tools for managing stress is breathing. When practised consciously and consistently, various breathing techniques can significantly reduce the physical and mental impacts of stress. Integrative Breathing Therapy is a comprehensive and individualised approach to correcting dysfunctional breathing and utilising the breath as a tool for healing. It provides a structured approach to assessing and treating patients with dysfunctional breathing, stress overload and chronic health issues.

Why Do We Get Stressed?

In Australia, a generally prosperous and peaceful country, stress affects both children and adults. Stress-related conditions, such as anxiety and depression, are persistently common across all age groups. The "Stress and Wellbeing in Australia" survey found that young Australians aged 15-19 reported higher stress levels compared to other age groups. Adolescence is particularly stressful, due to academic pressures, social challenges, and hormonal changes. Younger children are also affected, with approximately 14% of children and adolescents aged 4-17 experiencing a stress related mental disorder.(1)

While there are many causes and types of stress (see Table 1) there are enormous differences in an individual's stress tolerance. A person's predisposition and ability to cope with stress can be tied to genetics, early life experiences, personality, coping styles, life style, general health, age and resources. Many aspects of daily life may not qualify as stress but can still have adverse psychological and physical consequences due to their cumulative effects and an individual's predispositions, stress tolerance and lack of resources.(2) Psychological, biological and social stressors all need to be taken into account when considering a person's total stress load.

Table 1. Causes and Types of Stress

Chronic Stressors	Long-term exposure to stressors such as job strain, financial difficulties, health concerns and caregiving responsibilities
Life Events	Significant life changes like divorce, loss of a loved one, and major relocations
Social and Environmental Factors	Socio-economic status, social support, relationship conflicts, loneliness, neighbourhood conditions, and exposure to violence or discrimination.
Individual Differences	Genetic predispositions, personality traits, coping strategies, and lifestyle behaviours (e.g., diet, physical activity, sleep).
Environmental Stressors	Pollution, natural disasters, climatic changes (cold and heat, high altitude)
Biological stressors	Pathogens (viruses, bacteria, mould), chronic illness, dysautonomia (this is both a cause and a result of stress)
Physical Load	High intensity exercise, physical work, competitive sport, insufficient rest

Neurobiology of the Stress Response

Stress is a normal and essential part of life, enabling body systems to work together to maintain homeostasis and adapt to environmental conditions through the integrated activity of the different parts of the body's stress response system (SRS). The components of the stress response system include the central nervous system (CNS), the sympathetic adrenal medullary (SAM) axis and the hypothalamic-pituitary-adrenal (HPA) axis. The SAM axis, mediated by epinephrine and norepinephrine, initiates rapid stress responses, while the HPA axis handles longer-term responses through glucocorticoid release. These hormones influence various physiological processes, including metabolism, mitochondrial function, brain activity and the immune system.(3)

Physical stressors tend to predominantly engage different parts of the stress response system from those engaged by psychological stressors. Physical stressors are processed by the brainstem and hypothalamus while psychological stressors engage higher brain areas such as the prefrontal cortex (PFC), amygdala, and hippocampus.

We have evolved to handle a certain amount of physical and psychological stress. Some would say that our response to stress has not evolved sufficiently from the flight or fight reactions of our ancestors to short term stress to handle what is probably the lower but more chronic levels of stress today. Appropriate levels of physical stressors produced by environmental factors, such as heat, cold, physical load, calorie restriction and hypoxia, can increase tolerance and resilience to psychological stressors through their activation of stress-limiting systems in a process called cross-adaptation.(4)

An increase in stress resilience occurs when individuals are able to adapt to psychological and physical stressors. The timing, duration, capacity for recovery and cumulative dose of psychological, physical and biological stressors determine whether a particular stress is beneficial or damaging.

Breathing is both an indicator and a regulator of psychological and body stress. It is one of the few body systems that we can modulate consciously. Different types of breathing practices can be resources for stress management and tools for improving stress resilience.

Good, Tolerable and Toxic Stress

The stress response system, which is essential for adaptation and homeostasis, can cause damage if overactive and persistent, or underactive and unresponsive due to depletion.

Stress can be categorised into tolerable, good and toxic, depending on whether it's within the body's ability to cope and recover and ultimately whether it supports or inhibits homeostasis and adaptation. Understanding the balance between good, tolerable, and toxic stress is crucial for maintaining health and well-being.

Good Stress

Good stress is stress that is within the body's capacity to manage, and activates the stress response system just enough to support homeostatic processes. Beyond this, it promotes adaptation to stressors, increasing stress tolerance across various body systems, which ultimately enhances stress resilience. The physiological effects of good stress enable us to use appropriate doses of intermittent stress combined with sufficient recovery to promote healing.

Tolerable Stress

The normal stressors we experience in daily life are tolerable and non-damaging when the stress response system turns off after helping the body achieve homeostasis. When stress is in the tolerable range, stress-activating and stress-limiting processes coexist to create and maintain balance. For example, increased cortisol levels inhibit the stress response once homeostasis is achieved. Cortisol acts on the hypothalamus, causing it to stop producing corticotropin-releasing hormone (CRH). When this inhibitory feedback fails, the stress system malfunctions.

Toxic Stress

While short-term activation of the stress response system within tolerable levels can be beneficial, long-term activation that overwhelms the body's capacity to maintain homeostasis can be hazardous and even lethal. Chronic stress activation without normal feedback from stress-limiting systems is observed in many common health conditions like insomnia, obesity, heart disease, depression, anxiety, and in functional syndromes such as fibromyalgia, functional neurological disorders and conditions where symptoms occur in the absence of pathology.

Allostasis and Allostatic Load

Allostasis refers to the stability of physiological parameters in response to changing internal and external conditions (i.e., stressors). The process of allostasis involves the activation of the brain, hormonal, and nervous system components of the stress response system, and helps the body to regain the stable and balanced state of homeostasis necessary for health.

The chemical mediators of allostasis in these systems, such as adrenaline from the adrenal medulla, glucocorticoids from the adrenal cortex, and cytokines from immune cells, act upon receptors in various tissues to produce adaptive changes. However, these changes can be damaging if not properly regulated, leading to receptor desensitization and tissue damage.

Allostatic load is a concept in medicine and psychology that refers to the cumulative burden of stressors on the body's physiological systems. It represents the "wear and tear" on the body that accumulates as an individual is exposed to repeated or chronic stress.(5, 6) Biological, environmental and psychophysiological factors can all contribute to allostatic load. The

damaging effects of allostatic load occur when allostatic systems are either overworked, fail to shut off after the stressor is gone, or respond inadequately to the challenge. Allostatic load can lead to long-term health issues if not properly managed.

Importance of Managing Allostatic Load and Building Stress Resilience

An understanding of the management of stress and allostatic load is crucial for health and quality of life, especially in the context of aging. Prolonged or repeated activation of the HPA and the SAM system along with disruptions of the endocrine system caused by toxic stress (or allostatic overload) can interfere with the body's ability to regulate core physiological processes, including anti-inflammatory and immune responses, blood clotting, metabolism and gluconeogenesis.

Chronic stress leading to allostatic overload also creates neuroplastic changes in brain areas such as the amgydala. These effects on the amgydala then contribute to affective and anxiety disorders which perpetuate stress.(7) Structural and functional changes in the amgydala also affect breathing, producing hyperventilation, another factor which perpetuates stress and anxiety.(8) Disruptions in the regulatory functions of the autonomic nervous system and catecholamines resulting from toxic levels of stress have multiple negative effects on homeostasis in body systems, including the cardiovascular, pulmonary, hepatic, skeletal muscle and immune systems, resulting in increased risk for physical and psychological disease.(9)

When allostatic load overwhelms the body's coping capacity it can result in persistent activation of the stress response or a state of depletion, with low corticotropin-releasing hormone (CRH) and subsequent lack of activation of the stress response. Low CRH is central to conditions such as seasonal affective disorder (SAD), postpartum depression,

and, in some patients, chronic fatigue syndrome and fibromyalgia (10).

Stress also affects core processes of energy production and body regulation through its effect on mitochondria.(3) At the deepest sub-cellular level of health, chronic or excessive (toxic) stress is a source of allostatic load that affects the structure and function of mitochondria (11). Mitochondrial defects affect the brain, endocrine, reproductive and immune systems. They also play a role in psychosomatic disease, transducing psychosocial experiences and emotional responses to biological and physiological changes that underpin disease.(3)

Chronic stress increases the risk of developing cardiovascular disease, immune dysfunction, certain types of cancer, obesity, respiratory and neurodegenerative disease, and gastrointestinal issues.(9, 12) In disrupting the function of diverse organ systems it often creates physiological changes that perpetuate stress. The gut microbiome is one example: stress disrupts the micobiome, and this disruption lead to brain changes that increase a person's susceptibility to stress-related disorders.(13)

Hyperventilation is another example. Stress leads to hyperventilation and low levels of carbon dioxide or chronic hypocapnia. The hypocapnia and the body's attempts to create compensations leads to disruptions of homeostasis which in severe cases affect the brain and nervous system in ways that perpetuate both physiological and psychological stress.(14)

In my experience as a health practitioner, the accumulation of chronic stress is one of the most significant predictors of treatment resistance in patients with chronic illness. It's also the driver of many functional conditions, unexplained by pathology.

Finding Ways to Manage Stress and Allostatic Load

In conditions that are perpetuated by stress the following steps are necessary to improve both physical and mental health:

1. Identify and reduce physiological and psychological stressors
2. Improve the function of the stress response system
3. Improve resilience and tolerance to stress

Identify and reduce stressors

Stressors are any factors that require activation of the body's stress response factors to maintain homeostasis. To effectively reduce allostatic load in a person whose stress response system is dysregulated, it is crucial to identify both the psychological and physiological drivers of stress. Psychological drivers include emotions, trauma and cognitions such as rumination and worry. These contribute to chronic stress by creating and sustaining

hyperarousal. Physiological drivers can arise from body systems, such as the respiratory, cardiovascular, endocrine, gastrointestinal, nervous, muscular, and reproductive systems, where homeostasis has been negatively affected by stress. Disruption in any of these systems can lead to functional symptoms that can produce conditions that in turn play a role in perpetuating the stress response.

Disruption of body systems by stress can be assessed through various questionnaires and through measures such as heart rate variability. Given the close relationship between breathing dysregulation and stress overload, breathing questionnaires such as the Nijmegen Questionnaire can be helpful for identifying stress symptoms tied to dysfunctional breathing.(15)

Improve the function of the stress response system

Lifestyle and supportive measures such as sleep hygiene, a healthy diet, improved gut microbiome, social support, and work-life balance are all fundamental to improving the function of the stress response system. Psychological therapies and mental training, using tools such as mindfulness and cognitive behavioral therapy (CBT), can be very useful in improving self-regulation of the stress response system. These tools can be helpful in conjunction with body-based therapies to improve nervous system arousal and self-regulation. Some examples are:

- Vagal nerve stimulation (16)
- Massage and muscle relaxation techniques (17)
- Breathing retraining (18)
- Mind body therapies such as Eye Movement Desensitization and Reprocessing (EMDR), yoga and mindfulness(19, 20).

Increase stress resilience

Good stress, that increases the body's adaptive capacity and stress resilience, can be applied through means such as exercise, fasting, cold exposure, sauna and fasting, as well as breathing therapies such as deliberate hyperventilation and Intermittent Hypoxic Hyperoxic Training (IHHT). Hyperbaric Oxygen Therapy (HBOT) is also a type of stress, providing increased oxidative stress by means of increased oxygen delivered under pressure.

The good news is that one does not need to reduce all sources of stress, or work with every available approach, to engage in an upward spiral towards the recovery of a disordered stress response system. Working with physiology can improve psychological function, and improving psychological function can enhance physiology. Additionally, optimising the function of a single body system can have positive flow-on effects for other systems, ultimately benefiting the stress response system.

Breathing and stress

As outlined, the respiratory system plays a central role in the body's stress response and can be easily disrupted by various forms of stress. However, this relationship between stress and breathing is bidirectional: stress affects breathing patterns, and disordered breathing can maintain the stress response.

Breathing needs to constantly change to maintain physiological homeostasis. While it is primarily regulated for metabolic activity, it also responds to changes in emotion, mental patterns, and activation levels in the limbic system.(21) Mental, emotional, and physiological stressors that activate our threat system can create physiological hyperarousal, stimulating the respiratory system. Acute or short-term stress typically causes normal respiratory changes as a response to the need for immediate action. However, when hyperarousal is chronic or occurs too frequently without adequate recovery time, it can disrupt breathing control systems, including the HPA and SAM systems, leading to disordered or dysfunctional breathing such as hyperventilation, breathing pattern disorders, and unexplained breathing discomfort.

Chronic disordered breathing can contribute to allostatic load, creating a feedback loop where disordered breathing maintains hyperarousal in the stress response system. Hyperventilation, breathing pattern disorders, and unexplained breathing discomfort are common in patients with anxiety and panic disorder.(22) These breathing disorders can perpetuate dysregulation in the autonomic nervous system and brain chemistry, maintaining hyperarousal in the stress response system.(8, 23, 24)

The interaction between hyperventilation in anxiety and panic disorder has been studied for many decades. Two key theories explain the effect of hyperventilation on these systems: Ley's hyperventilation theory suggests that it causes panic symptoms, while Klein's suffocation false alarm theory views hyperventilation as a compensatory response to an oversensitivity of the brain chemoreceptors to the rise in normal levels of CO_2.(25, 26)

Recent research implicates the amgydala in the chronic breathing dysregulation and hyperventilation found in anxiety disorders.(8) Feinstein (2022) proposes that recurring episodes of amygdala-driven apnoea lead to CO_2 hypersensitivity and chronic anxiety. This hypersensitivity, driven by the amygdala and other acid-sensing brain regions, causes individuals to experience anxiety and suffocation fear with small and physiological increases in CO_2. This contributes to vicious circles of chronic heightened anxiety, low CO_2, and instability of breathing control.

Breathing training that increases tolerance to CO2 can effectively normalise CO2 responses in the body, leading to stable and significant reductions in anxiety and panic attacks. A series of studies by Meuret and colleagues over a decade showed that breathing training aimed at building CO2 tolerance using controlled breathing was highly effective in reducing panic symptoms, anticipatory anxiety and fear avoidance behaviour.(27-31)

Breathing Approaches to Stress Reduction

Despite the importance of breathing dysregulation, and the effectiveness of breathing retraining in managing stress, breathing disorders are overlooked and breathing therapies are underutilised. This might be due to a poor general understanding of the characteristics and impacts of dysfunctional breathing and the benefits and broad mechanisms of breathing therapies.(32)

There is a diversity of breathing techniques that improve physiological and psychological aspects of the stress response, including the following:

1. **Breathing to relax and self-regulate**
   a. Slow paced breathing
   b. Mindful relaxed breathing
2. **Breathing to control hyperventilation and increase CO2 tolerance.**
   a. Capnometry assisted biofeedback
   b. Reduced breathing
   c. Breath hold training
3. **Dynamic breathing**
   a. Wim Hof
   b. Holotropic breathwork
4. **Hypoxic and hyperoxic breathing**

Breathing techniques work for many reasons, including the following:

- Restoring balance in the autonomic nervous system (ANS) and improving vagal tone(33)
- Creating calming brain rhythms(34)
- Regulating stress through improving the mind body connection(33)
- Improving mood and positive affect(35)
- Providing relaxation training(18)
- Improving cortisol levels(36)
- Normalising CO2 hypersensitivity(37)
- Enhancing the effects of mindfulness and restorative interoception(38)
- Increasing the adaptive capacity of body systems through cross adaptation(39)

Individualised Approaches to Breathing Therapy

Individuals vary in their responses to breathing techniques, making an individualised approach ideal. This is especially important for patients with dysfunctional breathing and complex medical conditions, where the stress response system and breathing are dysregulated in unique ways.

Integrative Breathing Therapy (IBT) is based on the principle that dysfunctional breathing is multidimensional, encompassing biochemical, biomechanical, and psychophysiological aspects.(40) It recognizes that respiration is a complex physiological system with many functions and a bidirectional relationship with the mind, emotions, and various physiological processes. To address the causes and perpetuators of breathing dysfunction, IBT practitioners can integrate psychotherapy, lifestyle interventions, and physiological/ biological therapies based on assessment findings and patients' histories.(41)

It has been established that optimal results with breathing training occur when it targets specific dysfunctions and is sufficiently intensive to achieve measurable changes.(42) In patients with complex and chronic conditions, treatment needs to address the biomechanical, biochemical, and psychophysiological dimensions of breathing as determined from their assessments.(41) For example, in the case of patients experiencing chronic or recurrent intermittent hyperventilation, CO_2 levels should be measured at the start of treatment and also periodically during the course of breathing training to ensure CO_2 levels are being normalised.

Conclusion

Stress is a major factor in illness and psychological distress. It can lead to disordered breathing, creating a vicious circle that disrupts homeostasis and maintains dysregulation of the body's stress response system. By understanding and practising various breathing techniques, we can harness the power of our breath to improve our physical and mental health.

Breathing retraining and therapy should be considered alongside other therapies and supportive measures that reduce allostatic load and help normalise the function of the body's stress response system. In complex cases, comprehensive and personalised approaches to breathing therapies are likely to provide the best patient outcomes.

Dr Rosalba Courtney is an osteopath, naturopath, researcher, author and teacher with over 40 years of clinical experience. She regularly lectures in Australia and internationally, has published widely in scientific literature and contributed to textbook chapters on breathing therapy and related topics. Her work focuses on integrating osteopathy, naturopathy, breathing therapy, and mind-body techniques to provide comprehensive care and training in breathing-related health practices. Dr Courtney offers a range of education programs, workshops and classes. For more information, visit ***www.rosalbacourtney.com.***

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Palpating *the Anterior Hip*

– Think Hills and Valleys

Dr Joe Muscolino DC

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Rubric for Muscle Palpation

When teaching muscle palpation, there is often a rubric that is followed. We begin by learning/knowing the attachments of the target muscle so that we know where to place our palpating fingers. We then ask the client to contract the muscle so that it hardens, thereby becoming more easily palpable. And if we can find a joint action of the target muscle that is different from the joint actions of adjacent musculature, our target muscle will be the only muscle that contracts and becomes, as I like to call it, the only hard, soft tissue amidst a sea of soft, soft tissues. This way, we can not only palpate it, but palpate and discern it from adjacent musculature. Once found, we can palpate the entirety of the muscle so that we can then assess it.

Palpation of the Hip Flexors

This rubric is effective and can be used for any muscle anywhere in the body. It requires knowing the attachments and actions of the target muscle, as well as the attachments and actions of the adjacent musculature. If we apply this rubric to flexor musculature of the anterior hip joint, we could work our way from the tensor fasciae latae (TFL), laterally, to the adductor magnus, medially (Image 1). With the client supine*, and palpating immediately distal to the inguinal ligament, we would carry out this palpation approach as follows.

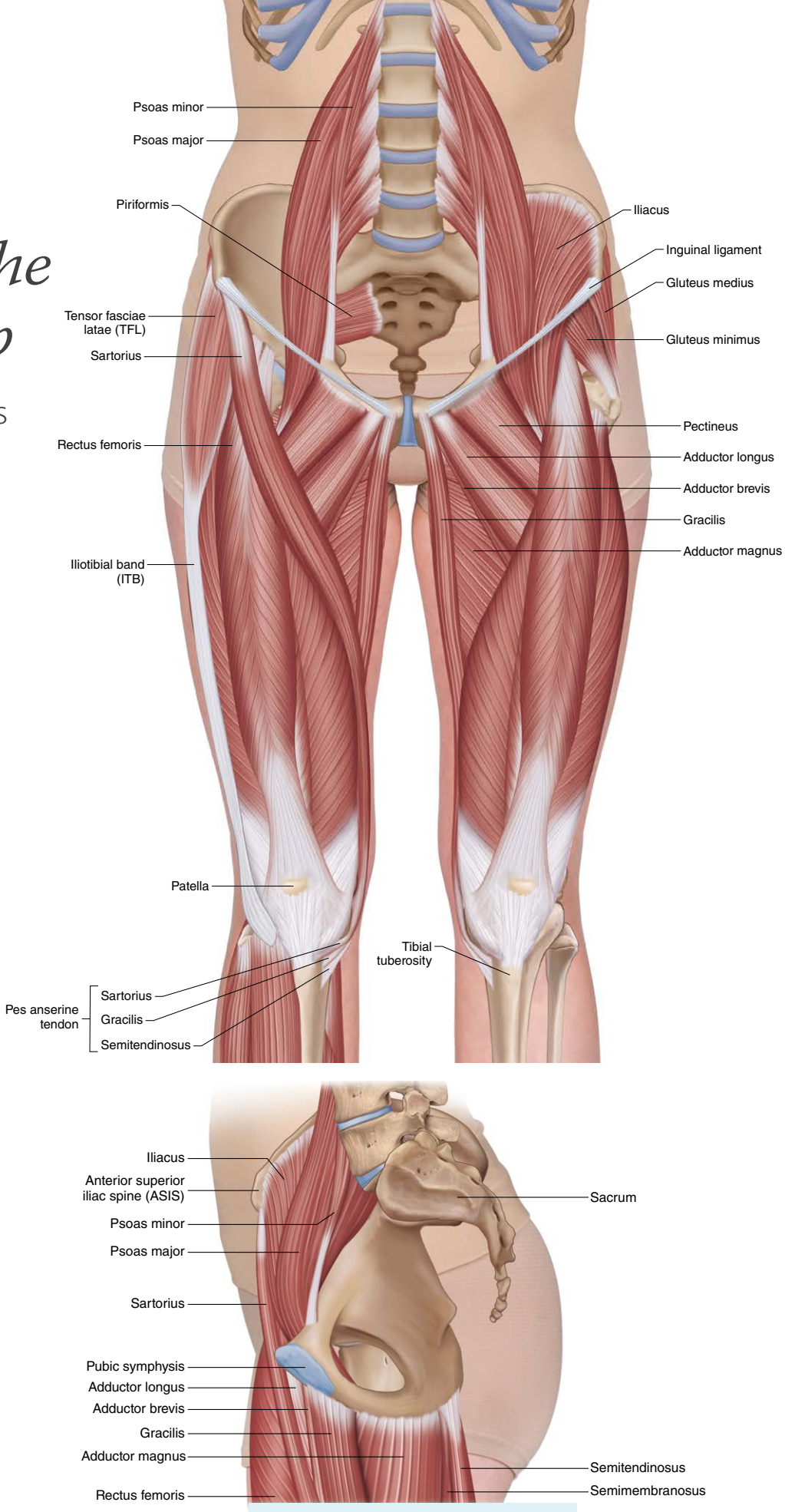


Image 1. Hip flexor muscles of the anterior thigh. A, Anterior view. B, Medial view (proximal thigh only).

Finding the difference

When using the approach wherein we ask the client to contract the target muscle by asking the client to do one of its joint actions, given that most muscles have more than one joint action, the art of muscle palpation is determining which action to choose, or perhaps better put, which oblique-plane joint function to choose given that muscle function does not always fall neatly into cardinal plane joint actions. Working with joint actions for our example, when palpating the hip flexor muscles, given that all the hip flexors do hip joint flexion, it is not useful to ask the client to try to do hip flexion because all of the hip flexors will likely engage, making it difficult to discern our target muscle from the adjacent musculature. What we need is to have the target muscle be the only hard, soft tissue, amidst a sea of soft, soft tissues. Having the target muscle and the adjacent muscles all contract will not accomplish this. Therefore, we need to find a difference between our target muscle and the adjacent muscles. For this reason, we ask for medial rotation when palpating the TFL, we ask for knee extension when palpating the rectus femoris, and we ask for trunk flexion when palpating the psoas major, to cite a few examples. The art of muscle palpation when asking the client to engage the target muscle is learning how to choose the best joint action/oblique-plane function of the target muscle that is most different from the adjacent musculature.

**Images 2-9 demonstrate the client lying on the table supine with their right thigh on the table and their (lower) leg hanging off the table; their left hip and knee joints are flexed with the left foot on the table so that the pelvis is stabilized. The palpation protocol for these muscles could also be done with the client lying supine with both lower extremities on the table.*

TFL: Find the ASIS and drop immediately distal and slightly lateral. Now ask the client to medially rotate the thigh at the hip joint, and then gently flex the thigh at the hip joint. The TFL will engage and pop, and we can discern it from the nearby rectus femoris of the quadriceps femoris group, as well as the nearby sartorius (Image 2).

Image 2. Palpation of the tensor fasciae latae (TFL).

Rectus femoris: Staying close and parallel to the inguinal ligament, drop immediately medial to the TFL and you should be on the rectus femoris. To confirm this, ask the client to extend the leg at the knee joint. This will engage the rectus femoris, but not the nearby TFL or sartorius (Image 3).

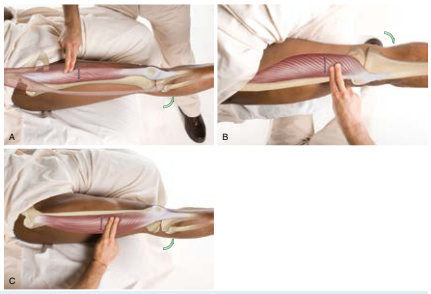


Image 3. Palpation of the rectus femoris.

Sartorius: Drop immediately medial to the rectus femoris and you should be on the sartorius. To confirm, ask the client to laterally rotate and abduct the thigh at the hip joint, and slightly flex the leg at the knee joint. The sartorius will engage and pop, but the adjacent muscles will remain relaxed (Image 4).

Image 4. Palpation of the sartorius.

Iliacus: Now drop immediately medial to the sartorius and you should be on the iliacus. The iliacus is challenging to have its engagement isolated (because its joint actions are essentially identical to those of the adjacent muscles), so I like to continue palpating medially until I find the psoas major, then return laterally and whatever is between the psoas major and sartorius will be iliacus.

Psoas major: To find the psoas major, we look for the first tissue that is medial to the sartorius that engages with gentle flexion of the trunk at the spinal joints. The psoas major is the only hip flexor that crosses the spinal joints, so this joint action should yield an isolated engagement of the psoas major. Once found, return laterally for the iliacus as previously mentioned (Image 5).

Image 5. Palpation of the psoas major femoral belly.

Pectineus: Drop immediately medial off the psoas major and you will be on the pectineus. Similar to the iliacus, the pectineus is challenging to have its engagement isolated, so I like to continue palpating medially until I find the adductor longus, then return laterally and whatever is between the adductor longus and psoas major will be pectineus (Image 6).

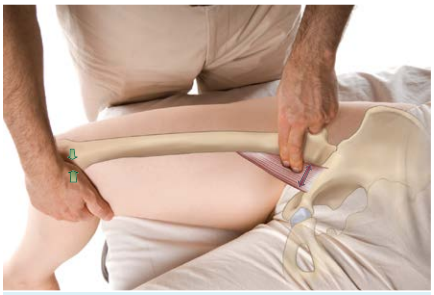


Image 6. Palpation of the pectineus.

Adductor longus: The adductor longus has the most easily palpable proximal tendon of all the hip flexors; and is usually clearly palpable even when it is relaxed. Once located, return laterally for the pectineus (Image 7). But if we did want to engage it to make it contract and pop, then we ask the client to gently adduct the thigh at the hip joint.

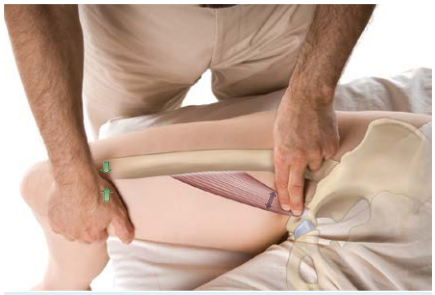


Image 7. Palpation of the adductor longus.

Adductor brevis: The adductor brevis is the most challenging and variable of the hip flexors. Sometimes it is wholly deep to the adductor longus, and therefore not discernable from the more-superficial adductor longus. Sometimes there is some superficial exposure of the adductor brevis on the lateral side of the adductor longus, between it and the pectineus. But most often, there is a small amount of superficial exposure of the adductor brevis lateral (and at this point, it could be said to be posterior) to the adductor longus. However, because the longus and brevis share all the same joint actions, it is not possible to find a different joint action to discern between them.

Gracilis: Whether it is the adductor longus or brevis, we drop immediately medial (posterior) and we should be on the gracilis. To discern the gracilis, we ask the client to flex the leg at the knee joint and only the gracilis will engage, given that the adjacent muscle on each side does not cross the knee joint and, therefore, will not engage with knee flexion (Image 8).

Adductor magnus: Once the gracilis has been found, we drop immediately posterior off it and we will be on the adductor magnus. To engage it, we can

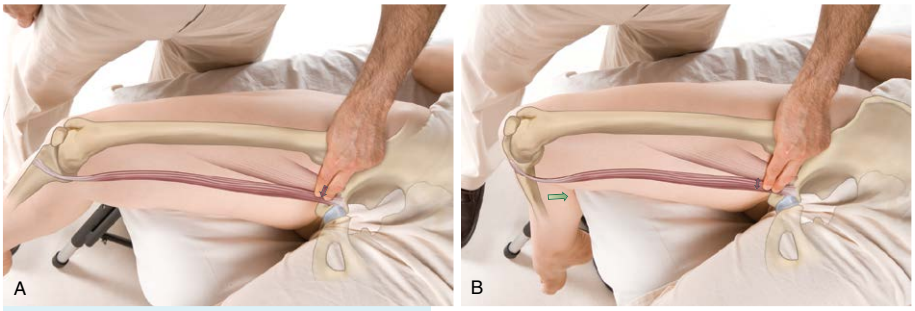


Image 8. Palpation of the gracilis.

ask the client to extend the thigh at the hip joint and the adductor magnus will engage (the anterior head of the adductor magnus is a hip flexor, but its posterior head does hip extension), but the gracilis will not (Image 9).

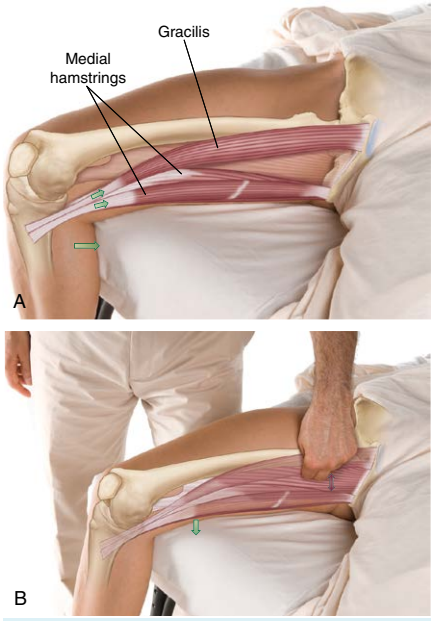


Image 9. Palpation of the adductor magnus.

Medial hamstrings: We can locate the medial hamstrings (semitendinosus and semimembranosus) by asking the client to flex the leg at the knee joint. This will engage the hamstrings but not the adductor magnus. Given that the exercise that we are engaging in with this article is to palpate and discern the hip flexors, we are only locating the medial hamstrings as a means of locating the posterior border of the adductor magnus.

As I hope this rubric shows, we can use joint actions as a means of palpation to locate and discern our target muscle. Indeed, this is how muscle palpation is classically taught and I wholly approve of this approach and use it as my default guideline with palpation assessment. However, this approach can be costly timewise, so I would like to offer the possibility of a different approach to muscle palpation. When possible, if a target muscle can be palpated and discerned simply by knowing its location, and then using its contour to be confident that we are on it, this saves time and energy and facilitates the job of muscle palpation. This contour approach to muscle palpation can be used when palpating the hip flexor musculature, and when used here, I like to call it the hill and valley approach. Instead of spending time asking the client to engage the target muscles, we can simply discern each hip flexor muscle by its contour: if the contour is rounded and prominent, it is a hill; if it is flat and sits recessed between two hills, it is a valley.

Hill and Valley Approach

The beauty of applying the hill and valley approach to palpation of the hip flexor musculature is that the hip flexor muscles form an alternating contour of hill, valley, hill, valley, etc.

We begin with the TFL which has a rounded contour and is clearly a hill. We drop immediately medial off it and the rectus femoris sits in a valley between the rounded hills of the TFL on the lateral side and the sartorius on the medial side. From the hill of the sartorius, we drop medially off it, and we have the valley of the iliacus, which sits between the hills of the sartorius on the lateral side and the psoas major on the medial side. The psoas major is another hill, and immediately medial to it is the valley of the pectineus that sits between the hills of the psoas major on its lateral side and the adductor longus on its medial side. The adductor brevis is variable, but often sits as a valley between the hills of the adductor longus on its lateral side and the gracilis on its medial (posterior) side. The gracilis is a hill and immediately posterior to it is the adductor magnus that is a valley that sits between the hills of the gracilis on its anterior side and the medial hamstrings that sit on its posterior side.

So, we have TFL (hill), rectus femoris (valley), sartorius (hill), iliacus (valley), psoas major (hill), pectineus (valley), adductor longus (hill), adductor brevis (valley), gracilis (hill), adductor magnus (valley), and medial hamstrings (hill again) as the posterior border of the adductor magnus (Image 10).

Or, looking at these muscles as couplets of two hills with a valley between, we have:

- TFL and sartorius as hills, with the rectus femoris as the valley between them (Image 11a),
- sartorius and psoas major as the hills, with the iliacus as the valley between them (Image 11b),
- psoas major and adductor longus as the hills, with the pectineus as the valley between them (Image 11c),
- adductor longus and gracilis as the hills, with the adductor brevis as the valley between them (Image 11d),
- and gracilis and medial hamstring muscles as the hills, with the adductor magnus as the valley between them (Image 11e).

When it comes to the rubric of having the client engage the target muscle to locate it, versus simply using the contour approach, I recommend that new practitioners work with the engagement approach because it is confirmation that you are, in fact, on the target muscle.

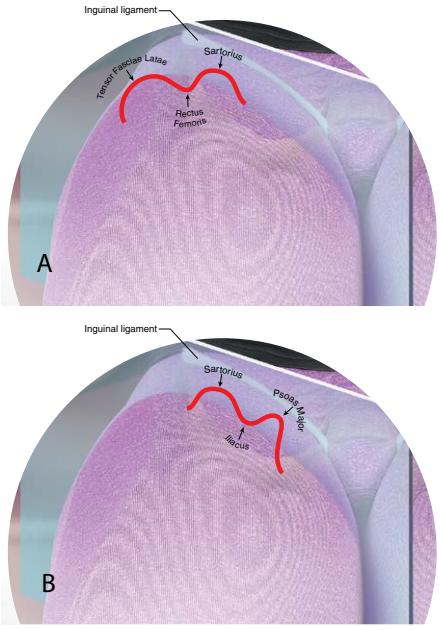


Image 11. Couplets of two hills with the valley between. A, TFL and Sartorius with the rectus femoris between. B, Sartorius and psoas major with the iliacus between. C, Psoas major and adductor longus with the pectineus between. D, Adductor longus and gracilis with the adductor brevis between. E, Gracilis and medial hamstrings with the adductor magnus between.

But once you are more experienced, simply having the knowledge of the location and contour of the target musculature is often enough to know with confidence that you have located it. With either approach, once located, the target muscle can then be assessed.

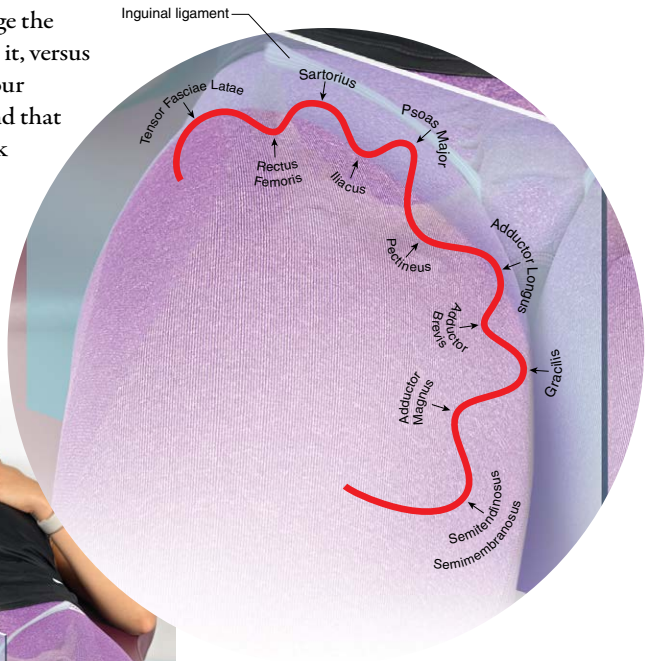
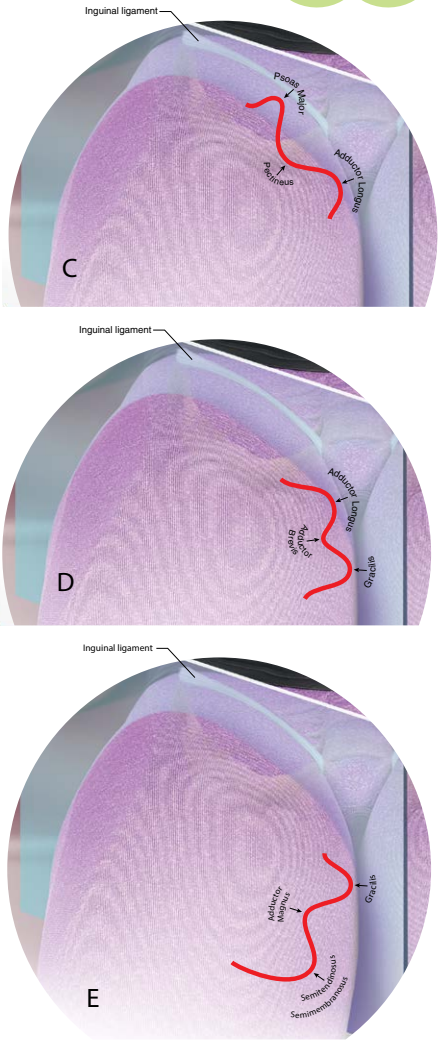
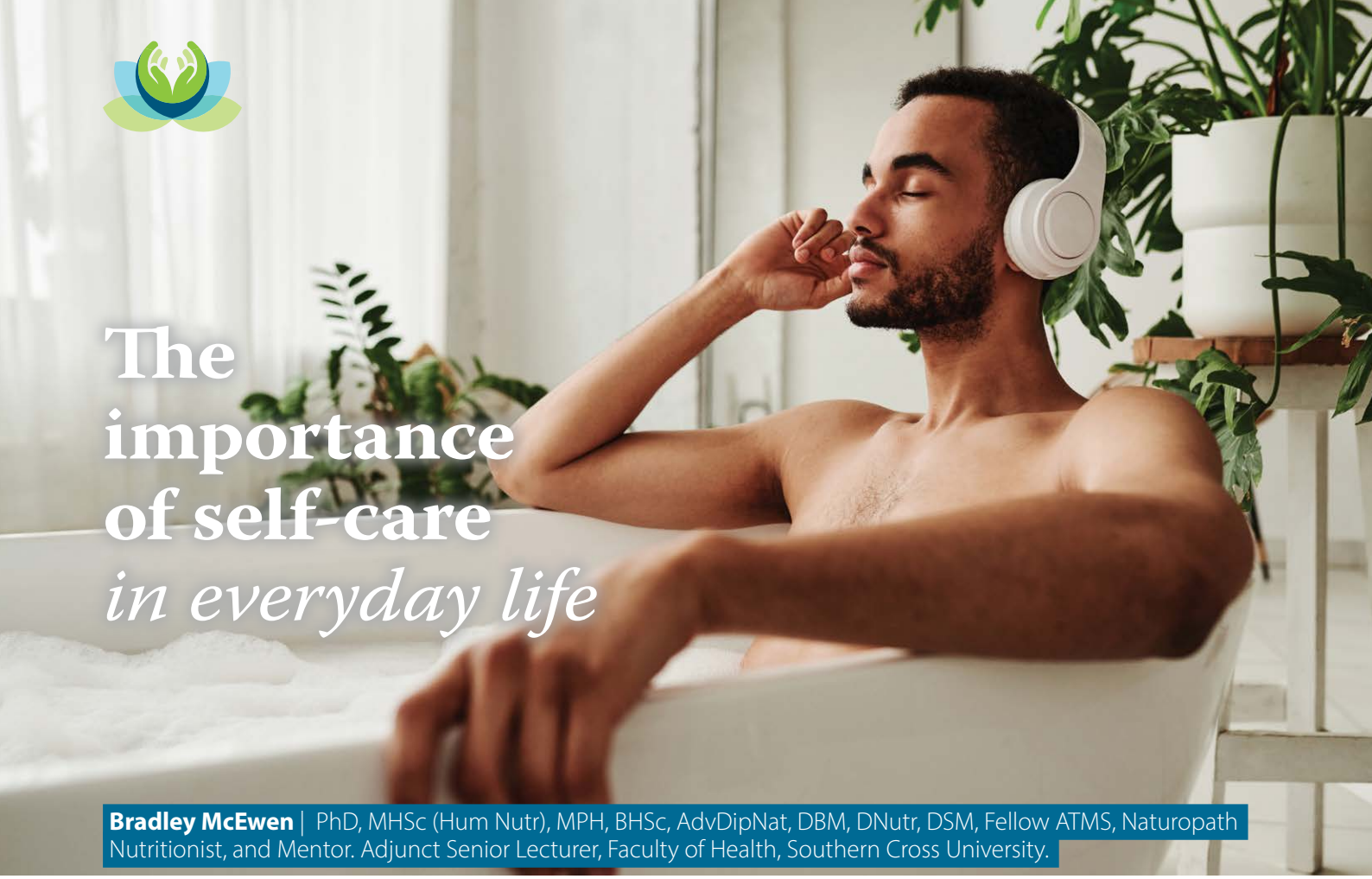


Image 10. The muscles of hip joint flexion have a contour that resembles hills and valleys.



Dr Joe Muscolino has been a manual and movement therapy educator for more than 35 years. He is the author of extensive online streaming video content on anatomy, physiology, and kinesiology, as well as assessment and treatment skillsets for manual therapists and movement professionals. He has created Learn Muscles Continuing Education (LMCE), Master Classes in Muscle Anatomy (MAMC), Bone and Joint Anatomy (BAJAMC), Kinesiology (KMC), and Visceral Anatomy (VAMC). He has also created a Master Online Curriculum for massage and other manual and movement therapy educational institutions. He is the author of multiple textbooks and he teaches continuing education workshops around the world, including a certification in Clinical Orthopedic Manual Therapy (COMT). Visit ***www.learnmuscules.com*** *for more information, or you can reach him directly at* ***josephe.e.muscolino@gmail.com.***

Dr. Joe will be teaching Clinical Orthopedic Manual Therapy classes in Sydney this October 26/27 and 28/29. Register at terrarosa.com.au.



The importance of self-care *in everyday life*

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Abstract

Self-care encompasses various health-related practices individuals undertake to enhance and sustain their general health and wellness. The development of an individual's self-care routines is influenced by numerous changeable and unchangeable factors, as well as various obstacles and challenges. Self-care is supported by essential nutrients (such as vitamins, minerals, and water), herbal medicines, and lifestyle medicine. The practice of self-care holds significance in daily life, and health professionals, such as naturopaths and nutritionists, are instrumental in educating individuals about self-care practices and offering continuous support.

Introduction

Self-care is a dynamic multidimensional concept that encompasses a variety of health-related practices that individuals participate in to maintain their overall health and wellbeing.[1] It is not a linear process or straightforward path.[2] Self-care is a fundamental aspect of health promotion, as it involves the decisions and actions taken by individuals to address health issues and enhance their overall health.[1] Self-care is important at all stages of life and health status[3] and is necessary and essential for improving quality of life,[2,4-8] restoring and improving health and wellbeing,[2,3,5,7,9,10] minimising disease complications,[2,6,7] and prevention of disease.[3] Other positive effects of self-care are decreased morbidity,[8,9] decreased hospitalisations,[2,3,8] reduced mortality,[2,3,8,9] and lowered healthcare expenses.[2,3,7,9] Encouraging patients to engage in self-care practices can enhance their ability to carry out daily tasks more efficiently.[2]

There is a variety of factors, barriers, and challenges (both modifiable and unmodifiable) that have a substantial impact on the development of an individual's self-care routines,[3] such as multiple chronic health conditions,[11] depression,[1,4,11-14] lack or absence of family support,[1,4,8,14] low confidence,[2,5] economic burden,[7,15] and the concurrent use of multiple medications (polypharmacy),[11] among others.

Self-care involves a symphony and synergy of nutrition, herbal medicine, physical activity, meditation, sleep, and nature, among others. Elements of self-care are illustrated in Figure 1. Vitamins and minerals play various roles in energy metabolism, cell signalling, nervous system function,[16,17] as antioxidants, in immune health,[17] hormone metabolism,[17] blood health and bone homeostasis,[17] cell membrane, cell signalling, coagulation, mineralisation of bone,[23] synthesis of ATP, DNA, and RNA, muscle health, nerve transmission,[17] gene expression,[17] and signal transduction[17,] and have anti-inflammatory properties.[17-22] Herbal medicines have numerous actions in supporting self-care, such as cognitive,[24,25] sleep-promoting,[26] anti-inflammatory,[26-29] antioxidant,[30-33] antidepressant,[34] anxiolytic,[34-42] improving mood,[43-45] and modulating immunity[31-33] properties. Lifestyle medicine, such as physical activity, meditation, adequate sleep, and exposure

to nature, play a role in supporting self-care via improving and maintaining physical and mental wellbeing,[46] mood,[47] pain,[47] cognition,[48,49] and decreasing risk of chronic disease.[50]

This article highlights the concept of self-care, brings attention to the factors and barriers to self-care, and introduces various vitamins, minerals, herbal medicines, and lifestyle medicines in supporting self-care.

Self-care

Self-care, sometimes referred to as self-help,[9] can be defined as caring for self when ill or taking positive actions in improving health,[9] health-promoting practices,[51] and adopting behaviours to prevent illness.[9] There are several concepts within self-care, including self-care maintenance,[9,51] self-care monitoring,[9,51] and self-care management.[9,51] People who participate in self-care maintenance are committed to practising the necessary behaviours to maintain, sustain, and preserve their physical and emotional wellbeing.[51] Self-care monitoring entails the practice of self-observation for any alterations in signs and symptoms, commonly referred to as body awareness.[51]

Self-care management is implemented by individuals to address signs and symptoms promptly as they arise and manifest.[51] Self-care monitoring and management are influenced by knowledge, attention, and expectations.[9] Self-care is generally perceived as a natural decision-making process that individuals undertake to maintain and preserve their health and address both short-term and long-term health conditions.[51] The process of making self-care decisions is intricate and in some cases complex.[51] The naturalistic decision-making process explains that individuals, in practical environments and in the "real world", make decisions that hold significance and are recognisable to them.[51] This process sheds light on how individuals navigate decision-making amid complexity and acquire the essential skills to thrive in similar circumstances.[51] Naturalistic decision-making underscores the utilisation of personal values and previous experience in the decision-making process.[51] Experience is cultivated through situational awareness, which involves perceiving the situation and understanding the importance of a particular scenario.[51] Approaching self-care as a dynamic process, rather than a collection or compilation of individual actions or behaviours, is crucial.[3] It is essential to recognise that various determinants, both changeable and unchangeable, play a significant role in shaping one's self-care practices.[3] Culturally tailored self-care enables individuals to engage in self-monitoring and management practices that align with their family dynamics, societal norms, and personal attributes.[5]

There is growing recognition and understanding of the importance of the need for people with chronic conditions to take charge of their own health and to actively participate in self-care.[9] Self-care has an essential role as people are becoming increasingly aware of prioritising their health and wellbeing and want to have a greater role in taking care of themselves and improving their health and wellbeing.[10] Individuals perform self-care alone (independent self-care) or with support and assistance from their family and/or health professionals.[10] Self-care has the potential to bring advantages to individuals, healthcare systems, and society at large.[52] It not only offers a chance to alleviate the strain and dependency on overwhelmed healthcare systems,[10,52] but also gives patients and consumers the ability to take control of their own wellbeing and effectively handle their health conditions, leading to improved health outcomes and overall quality of life.[52] Therefore, self-care is essential for maintaining wellbeing both in times of health and in times of illness[3] and is a lifestyle choice, rather than simply an item on a to-do list or seen as a task or obligation.[15]

Self-care is important at all stages of life and health status[3] and is necessary and essential for improving quality of life,[2,4-8] restoring and improving health and wellbeing,[2,3,5,7,9,10] maintenance of health,[2,6,7,12,51,53] minimising disease complications[2,6,7] and disease-related conditions,[5,15] prevention of disease,[3] prevention and management of chronic diseases,[10,13,51] along with improving treatment compliance.[7] The positive effects of self-care also encompass decreased morbidity,[8,9] decreased hospitalisations,[2,3,8] reduced mortality,[2,3,8,9] and lower healthcare expenses.[2,3,7,9]

Self-care has the potential to significantly alleviate financial burdens on the healthcare system by transferring the responsibility of managing certain conditions from health professionals to patients, thus improving overall healthcare results.[52] Therefore, it is imperative that the healthcare system prioritises the teaching and encouragement of self-care practices.[51] Implementing self-care strategies can boost patients' self-assurance by enhancing their abilities and enabling them to manage specific conditions independently rather than frequently depending on a health professional.[52] Additionally, implementing self-care practices to lower healthcare expenses related to minor ailments has the potential to benefit individuals with chronic and serious health issues by freeing up resources and reallocating them effectively.[54] However, in the case of certain medical conditions, a coordinated care approach involving initial diagnosis and treatment planning by a health professional is the most suitable, especially if symptoms persist or symptom severity increases.[52] A deeper understanding and comprehension of the intricacies of self-care decision-making will assist health professionals to effectively educate their patients in self-care practices, as well as in identifying the shortcomings and limitations of self-care and devising strategies for the enhancement of self-care.[51] It is essential for health professionals to have a comprehensive understanding of the self-care status of their patients in order to deliver tailored and effective services.[2]

Confidence in self-care plays a crucial role in influencing the overall self-care journey.[2] Research demonstrates that an increase in the level of self-care performance has been linked to an improvement in the patient's ability to be active. In contrast, a decrease in self-care performance has been associated with the occurrence of complications.[2,5] Efforts to enhance self-care confidence directly influence both self-care maintenance and self-care management. Conversely, the presence of comorbidities diminishes self-efficacy, subsequently leading to a decrease in self-care behaviours.[2] Health professionals must understand that self-care involves acquiring knowledge and practical skills. It is essential for them to tailor their approach to help patients develop their self-care habits, focusing on the process rather than just the content. Additionally, it is beneficial to establish a supportive environment where patients can openly communicate about their self-care endeavours.[2]

Prioritising self-care is essential for optimal health and wellbeing. Self-care should not be seen as the enemy of performance. Sacrificing and neglecting self-care can have detrimental effects on health and wellbeing.[55] Self-care is not selfish.

Factors and barriers affecting self-care

It is crucial to recognise, acknowledge, and understand that a variety of factors, barriers, and challenges (both modifiable and unmodifiable) have a substantial impact on the development of an individual's self-care routines.[3] The presence of multiple chronic health conditions,[11] depression,[1,4,11-14] anxiety,[1,4] distress,[1,11,14] loneliness,[1] fear of the future,[1] reduced physical capacity,[1] fatalism and fatalistic thinking (interpreting symptoms as fate),[5,6] low health literacy,[1,15,52] level of knowledge and awareness about one's health condition,[1,4,14,52,54] conflicting health information,[1] collectivism,[6] cultural beliefs and influences,[1,5,6] faith and religion,[5,13] empowerment,[13] emotional support,[5] absence of family support,[1,4,8,14] support groups,[4] lack of social support,[1,4-6,13-15] independence and autonomy,[1] social norms,[5,6] habits,[5] low confidence,[2,5] low motivation,[5] self-efficacy,[14] previous self-care experiences,[1] education level,[7,13-15] employment status,[13] economic status[1,13-15] and economic burden,[7,15] and the concurrent use of multiple medications (polypharmacy)[11] create opportunities, challenges and barriers for individuals in managing their health,[11] thereby affecting self-care. Poor cognitive function and memory impair the ability to perform many self-care tasks.[1,11,13] Older individuals exhibit suboptimal levels of self-care when it comes to symptom management, facing challenges in maintaining regular and

consistent adherence to self-care practices over long periods.[14] Additionally, older individuals are at increased risk of, and are more susceptible to, adverse drug effects from various medications due to alterations in pharmacokinetics associated with ageing.[11] The complexity of medication self-care and the likelihood of medication errors rise with an increase in the number of daily medications taken.[11]

Self-efficacy, a factor that affects self-care, is described as the confidence in one's ability and capacity to accomplish goals in particular circumstances.[14] Self-efficacy has been recognised as a factor that requires attention to initiatives aimed at enhancing self-care.[14] Elevated levels of self-efficacy have the potential to facilitate determination, particularly in the context of self-care for minor ailments.[54] This suggests that heightened self-efficacy could result in greater persistence in managing symptoms and a willingness to take more independent action in matters concerning one's health.[54]

Health literacy is a key component of self-care.[52] Health literacy refers to an individual's capacity to comprehend, interpret, and utilise information in order to maintain good health.[1] Evidence suggests that individuals with limited health literacy struggle to grasp health-related concepts, resulting in poor adherence to self-care routines such as following prescribed diets, consistently taking nutritional medicines, herbal medicines and medications, and ultimately experiencing negative and adverse health outcomes.[1] Self-care relies on improving individuals' health literacy so that they are able to understand and utilise health information acquired independently or from health professionals, enabling them to make well-informed decisions regarding their healthcare.[52]

To enhance the effectiveness and outcomes of self-care practices, it is essential to identify and remove the various factors, barriers, and challenges that may hinder self-care efforts.

Elements of self-care

Numerous elements contribute to self-care. This section of the article outlines a variety of these elements, encompassing nutrition, herbal medicine, and lifestyle medicine, such as physical activity, meditation, adequate sleep, and exposure to nature.

Self-care and nutrition

Optimum nutrition is the foundation for optimum health.[20,56] Poor nutrition is one of the most critical risk factors for chronic disease.[57] While the focus of nutrition in self-care should be on whole foods, specific nutrients from particular whole foods can be personalised to optimise health. This part introduces a number of vitamins, minerals, and water that that offer benefits in supporting self-care practices.

Figure 1. Elements of self-care

Vitamins play various roles in supporting self-care. Thiamine (Vitamin B1) is involved in energy metabolism,[58,59] metabolism of glucose,[60] nerve structure and function,[61] plays an important role in nerve conduction and excitability,[62] and modulates cognitive performance.[63] Riboflavin (Vitamin B2) is involved in normal cell function,[64,65] energy metabolism,[64-66] normal functioning of the nervous system,[67] and antioxidant function.[66,68,69] Nicotinamide (Vitamin B3) is involved in DNA metabolism,[68,70] modulation of inflammation[68,70,71] and energy metabolism;[68,70,72] it modulates insulin secretion,[70] and reduces lipid peroxidation.[71] Pantothenic acid (Vitamin B5) is involved in energy metabolism,[68] fatty acid synthesis and degradation,[68] and the synthesis of neurotransmitters.[68,72] Pyridoxine (Vitamin B6) participates in more than 100 enzymatic reactions[73] and is involved in formation of haemoglobin,[64] synthesis of neurotransmitters,[63,73] and nerve conduction and excitability.[62] Folate (5-MTHF) is involved in one-carbon metabolism,[74-80] methylation processes,[64,66,72,75,80] neurotransmitter synthesis,[68] and endothelial cell function.[72] Cobalamin (Vitamin B12) is involved in energy metabolism,[64] methylation,[66] red blood cell formation,[65] and normal functioning of the nervous system.[81] Vitamin C is required for normal physiological functions.[82] Vitamin C has anti-inflammatory properties,[83] is an antioxidant,[65,72,73,82,84,85] and is required for collagen synthesis[65,72,73] and immune system modulation.[86] Colecalciferol (Vitamin D3) is involved in differentiation,[87,88] gene expression,[88] neuromuscular activity,[89] bone health,[72] muscle function,[88] muscle strength,[72,89] and the immune system.[72,88] Tocotrienol (Vitamin E) has anti-inflammatory,[90-94] antioxidant,[64,72,73,85,90,92-100] neuroprotective,[94-96,98,101,102] immune function,[73] and cholesterol-lowering properties.[91,93,103] Menaquinone-7 (Vitamin K2) has anti-inflammatory[104] and antioxidant properties.[105] It is involved in coagulation,[73,104,106,107] bone health,[108,109] and brain signalling.[105] Omega-3 is involved in cell membrane phospholipid composition,[110-112] cell membrane function,[111,113] cell membrane fluidity,[112,113] regulation of platelet activation and aggregation,[20-22,114] mental health,[115-119] and has anti-inflammatory[20,22,111-114,119,120] and antioxidant[113,120] properties.

Minerals play various roles in supporting self-care. Calcium is involved in signal transduction,[121,122] cell signalling,[123] coagulation,[124] maintenance of bone,[125] and muscle contraction.[121-123] Chromium is involved in the metabolism of carbohydrates,[126,127] glucose,[128,129] lipids,[126,127,129] protein,[126] and insulin.[129] Iodine is involved in metabolism,[72,130,131] metabolic regulation,[131-134] production

of thyroid hormones[132,133,135-137] neurodevelopment,[130,138] brain development and function,[130] and cognitive function.[138] Magnesium is necessary for the functioning of over 300 enzymes.[64,72,125,139-143] It is involved in DNA and RNA synthesis,[64,142,144,145] membrane structure,[145] energy metabolism,[140-142] maintenance of normal heart rhythm,[146,147] neurotransmission,[140-142,146] muscle relaxation,[142] bone integrity,[141] and reduction of inflammation.[139] Zinc is a component of around 300 enzymes.[145,148] It is involved in gene expression,[72,149,150] synthesis of DNA and RNA,[151] cell structure,[151] cardiovascular health,[152] neurotransmission,[153,154] brain function,[153,155] immune system health,[156] and has antioxidant64,[151,154,157-161] and anti-inflammatory properties.[64,151,152,158,159,162,163]

Hydration is very important in supporting self-care. Water is essential for metabolism,[164] as a carrier for nutrients and waste products,[165] substrate transport across membranes,[164] cellular homeostasis,[164] temperature regulation,[164,165] and circulatory function.[164]

Self-care and herbal medicines

Herbal medicines have been used for thousands of years for the prevention and management of various health conditions, particularly chronic disease.[166-168] Modern Western herbal medicine emphasises the effects of herbs on the whole body and individual body systems with the aim of producing enduring improvements in health and wellbeing.[56,169] This part introduces a number of herbal medicines that have benefits in supporting self-care practices, including Ashwagandha, Brahmi, Chamomile, Lemon Balm, Passionflower, Rhodiola, and Saffron.

Bacopa monnieri (Brahmi) has cognitive effects,[24,25] enhancing cognitive performance,[170-172] learning,[173,174] memory[24,170,173-175] and recall.[171] Crocus sativus (Saffron) has antioxidant,[27-29] anti-inflammatory,[26-29] sleep-promoting,[26] learning and memory enhancing,[28] neuro-endocrine, and neuroprotective effects.[27] Saffron has been found to be beneficial in the management of depression[27,29,34,39,176-179] and insomnia.[26] Matricaria recutita (Chamomile) has anti-depressant,[34] anxiolytic,[35-37] anti-inflammatory,[35,36,180-182] antioxidant,[35,180,181] sedative (calming),[36,37,183] analgesic[180,182] and antispasmodic[35,36] properties. Chamomile has beneficial effects in depression[34] anxiety,[183] irritability,[36] and for relaxation[37] and sleep.[182] Melissa officinalis (Lemon Balm) has numerous actions and uses including improving mood[43-45] and anxiety,[40,44,45] improving memory[44,45] and cognition,[43,44] and for sleep.[41,45] Lemon Balm has antispasmodic,[184] digestive,[184] and carminative[184] properties. Passiflora incarnata (Passionflower) has numerous actions, including anti-anxiety,[34,38-42] analgesic,[185] anti-spasmodic,[42,185] and sedative properties.[38,185,186] Passionflower is used to reduce anxiety,[34,39-42,186] depression,[42] stress,[42] nervousness,[186] irritability,[186] and insomnia.[41,42,185,186] Rhodiola rosea (Rhodiola) is an adaptogen[187] herb that has been found to enhance endurance,[187] resilience,[187] and work performance.[187,188] Rhodiola improves burnout-related symptoms[187] and has neuroprotective[189,190] properties. Withania somnifera (Ashwagandha) has numerous actions and uses, including mood enhancement,[33] and reduces stress,[31,32,191] anxiety,[31-33,40] and depression.[33] Ashwagandha has nootropic effects,[31] improving memory,[33,192] cognition,[32,192] concentration,[33] attention,[192] endurance and stamina,[193] Ashwagandha has tonic,[32] adaptogen,[31-33,191] anti-inflammatory,[31-33,191] antioxidant,[30-33] and immune modulating[31-33] properties.

Self-care and lifestyle medicine

Lifestyle medicine applies various environmental, behavioural, and psychological principles to enhance physical and mental wellbeing.[46] It aims to improve quality of life through healthy eating,[46,194] active living,[194] physical activity,[46] relaxation,[46] recreation,[46] engagement in meaningful activities,[46] social interaction and networking,[46] meditation,[47,195-197] mindfulness-based techniques,[46] work-rest balance,[46] sleep,[46] and emotional resilience.[194]

Physical activity

Physical activity and exercise are very important for overall health[50] and daily physical activity is important for maintaining health for people of all ages.[11] Physical activity is associated with overall wellbeing[198] and decreased risk of heart disease,[50] type 2 diabetes,[50] stroke,[50] and mortality.[50,199] Exercise shows improvements in cardiometabolic health via lowering blood pressure[199] and improvements in lipid profile and glucose tolerance.[198] Physical activity has also been found to prevent or reduce the development of osteoporosis.[198] Research shows that physical activity improves psychological wellbeing and mental health,[199] such as depression,[200,201] anxiety,[201] overall emotional health,[198] and cognition.[198]

Meditation

Meditation has been found to improve stress,[47,195,202] anxiety,[47,195] depression[47,195-197] and mood,[47] reduce pain, chronic pain, chronic pelvic pain, fibromyalgia, migraine,[47] heart rate variability,[203] post-traumatic stress disorder,[197] improve cognition, [47,202,204,205] working memory,[204] attention,[202-204] creativity,[203] self-awareness,[202] present-moment awareness,[202] and quality of life.[47,196] Meditation and meditation techniques can be applied in everyday situations as well as in stressful situations.[195]

Sleep

Good restful sleep is essential for overall good health.[206] Lack of sleep has been associated with increased risk of mortality,[48,206] obesity,[206,207] weight gain,[207] type 2 diabetes,[48,206,208] cardiovascular disease,[48] coronary heart disease,[206] metabolic syndrome,[206] decreased insulin sensitivity,[208] altered glucose homeostasis,[209] impaired glucose tolerance,[208] hypertension,[206] impaired cognition,[48,49] lowered attention,[49] impaired memory,[49] depression,[206] and diminished motivation.[48]

Nature

Going out into nature and forest bathing have positive effects on physical and mental health. Some of these positive effects include enhancing immunity, managing chronic diseases, regulating mood, and reducing anxiety and depression.[210]

Conclusion

In conclusion, self-care is a multifaceted concept that involves various health-related activities individuals engage in to improve and maintain their overall health and wellbeing. Numerous factors, obstacles, and difficulties (both changeable and unchangeable) significantly influence the establishment of an individual's self-care routines, including multiple health conditions, depression, lack of family support, low self-esteem, and financial constraints. To improve the effectiveness and results of self-care practices, it is crucial to recognise and eliminate the different factors, barriers, and challenges that may impede self-care efforts. Essential nutrients like B vitamins, Vitamin C, Vitamin D, Vitamin E tocotrienols, Vitamin K2, Omega-3, Calcium, Chromium, Iodine, Magnesium, Zinc, water, and hydration are crucial for maintaining overall health and wellbeing. Additionally, herbal medicines such as Ashwagandha, Brahmi, Chamomile, Lemon Balm, Passionflower, Rhodiola, and Saffron support self-care practices. Furthermore, incorporating lifestyle interventions like physical activity, meditation, quality sleep, and spending time in nature can significantly contribute to a holistic approach to self-care. The practice of self-care is important in everyday life. Health professionals, such as naturopaths and nutritionists, play a major role in educating people on self-care practices and providing ongoing support.

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For a full list of references, please email the Editor: **editor@atms.com.au**

Key to prescribing and studying *homoeopathic materia medica*

The Stages Template: Part 2

Shilpa Bhourasker

This article is the second part of Shilpa Bhouraskar's article on how to study and master the homoeopathic materia medica based on her Stages template. Part 1 of this article was published in the Journal of the Australian Traditional Medicine Society, 30(2): 87-90.

Introduction

In Part 1 of this article, we looked at how to study and master the materia medica at Stage 1 and 2 based on my Stages Template. Now, in Part 2, we will dive further and understand the remedy at Stage 3 and Stage 4.

I've spent the last two decades in homoeopathy, and went on to build an entire template and methodology around simplifying remedy understanding for practice based on four Stages. I am presenting this method to you here in this two-part article.

Materia medica understanding: Stage 3

What is stage 3 information?

Stage 3 is the breakthrough stage. It's where the concept of holism comes in. This is where we derive the fundamental causative factors in a remedy. You also start to understand the generals, or common symptoms, that emerge across multiple locations or regions of the body. In a way we are looking for a linkage, or a connection, between the different parts of the body that the remedy targets. This way, the remedy picture and its effects come together as one whole. At this Stage, we put together the constitution or the personality of the patient that it works the best on from clinical use.

To summarise: The holistic concept of understanding our remedies starts with Stage 3. At Stages 1 and 2, a remedy proving is just a bunch of pathologies, affinities and local symptoms that are scattered across the proving data. The Stage 3 understanding of remedies helps us to prescribe remedies for the patient as a whole, regardless of the diagnosis.

Stage 3 remedy examples

Let us dive deeper into the remedies we used in our earlier examples and understand them at Stage 3.

China

China has the fundamental causative factor of 'Not been well since malaria' through clinical confirmation. We have this whole state of a broken-down constitution who has a weak tummy and easily haemorrhages. Everything started from malaria. If you have a strong causative factor remedy that links multiple pathologies and multiple diagnoses, that's the Stage 3 information.

Lachesis

Lachesis creates a state of toxicity. You can clinically confirm a patient who feels full of poison with insane jealousy and suspicion; has rapid onset malignancy, sepsis and disintegration; and shows purple-blue skin with thin dark haemorrhaging.

Merc Sol

Merc Sol creates violent thoughts, impulsiveness and hurriedness, and then you can clinically confirm that the personality of Merc is violent, impulsive and hurried. You start creating the image of a person in your mind that has the Merc personality. This is also Stage 3 information.

Where Do You Find Stage 3 Information?

Most of our popular classical books and repertories have been written by Stage 3 authors. The three leading old masters who built upon Hahnemannian homoeopathy at Stage 3 are Boenninghausen, Kent and Boger. Then we have the contemporary

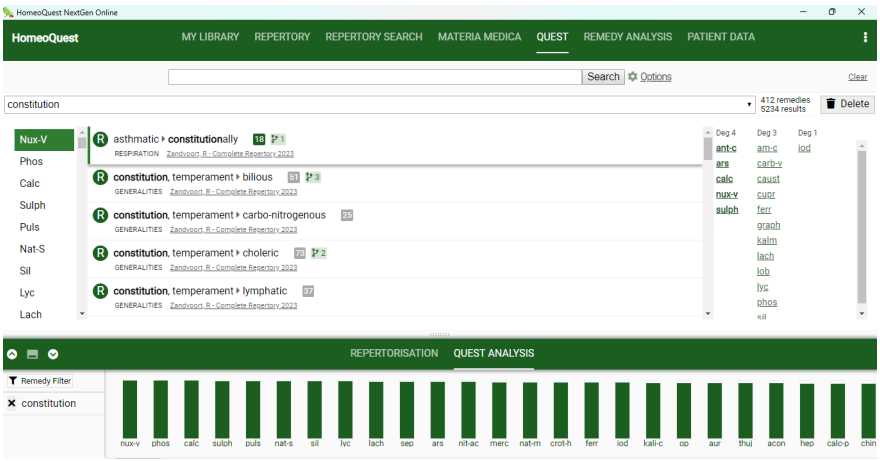


Image 13.1

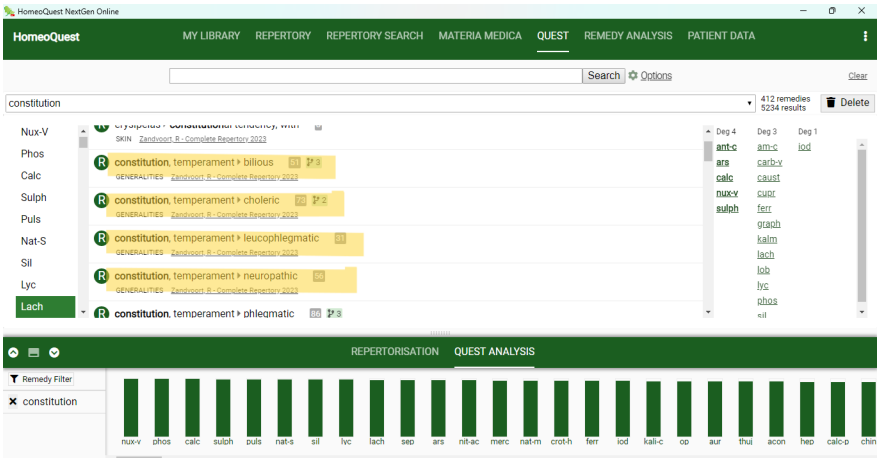


Image 14.1

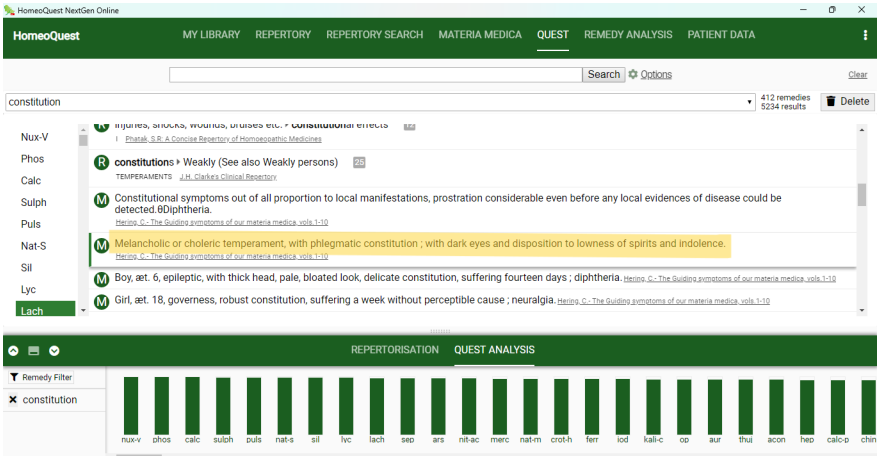


Image 15.1

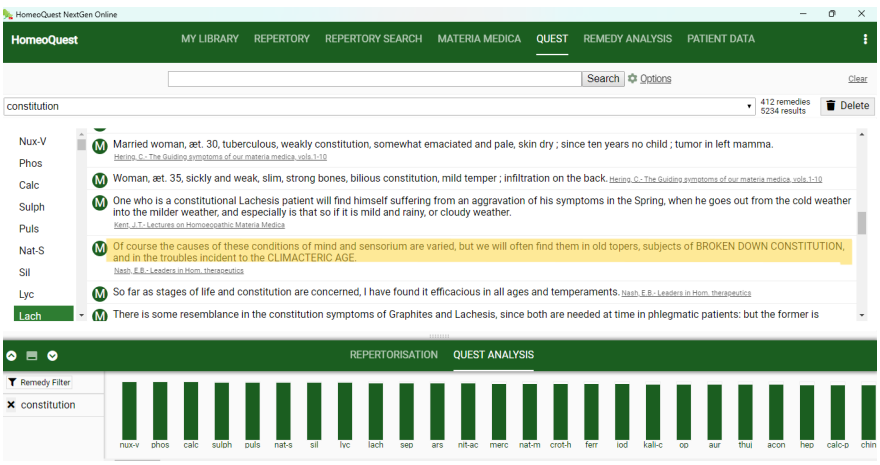


Image 16.1

masters such as Vithoulkas, Sankaran, Jan Scholten etc. They have taken the understanding of Stage 3 to the next level in light of newer developments in understanding psychology, taxonomy and more.

Stage 3 books and materia medica

Stage 3 constitution

One key question so many beginners and students ask is: How do we find the constitution of a patient or a person, and where do we find the information in the materia medica? I am again using technology to help us with this, in order to search and analyse the constitutional information in the remedies from our database. I am using the Quest function in HomeoQuest to do this. You should be able to do a similar analysis from most good software programmes. [Image13.1]

Remember: Not all remedies will have elaborate constitutional information. It is distilled through active clinical use. Hence, first we look at the top remedies that have good constitutional information in our database by searching for 'constitution'.[Image14.1]

Lachesis

We specifically check the constitutional-type rubrics for Lachesis that have been documented by various authors in the repertories. You can see that Lachesis has a 'bilious', 'choleric', 'leucophlegmatic' and 'neuropathic' constitution. [Image15.1]

Next, let's see what the materia medica authors have written about Lachesis: 'Melancholic or choleric temperament, with phlegmatic constitution; dark eyes and disposition to lowness of spirit and indolence'. [Image16.1]

Nash writes, 'Broken down constitution, and troubles in the climacteric age'. You can now put this together to erect a picture of the Lachesis constitution at all ages, across all walks of life and in all disease conditions.

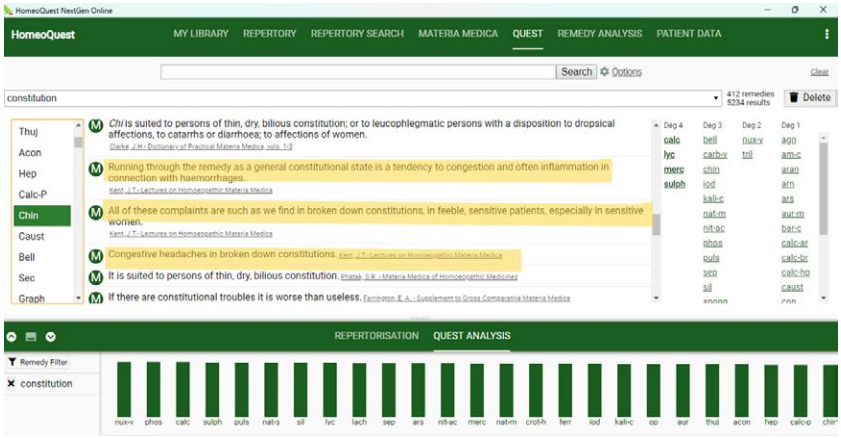
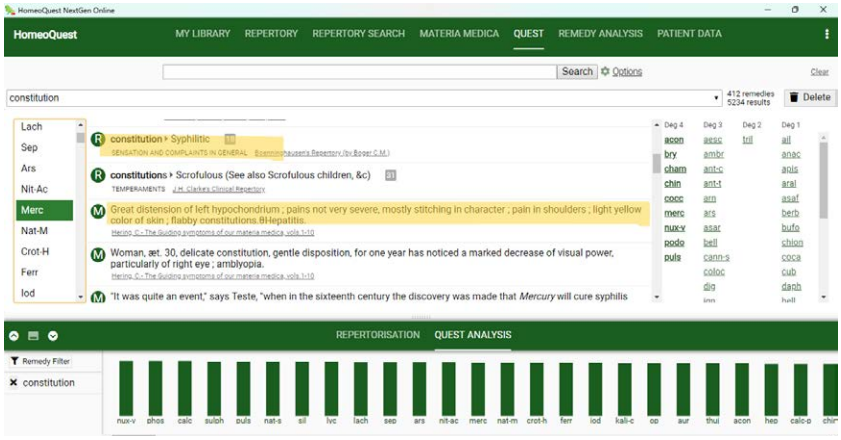


Image 17.1



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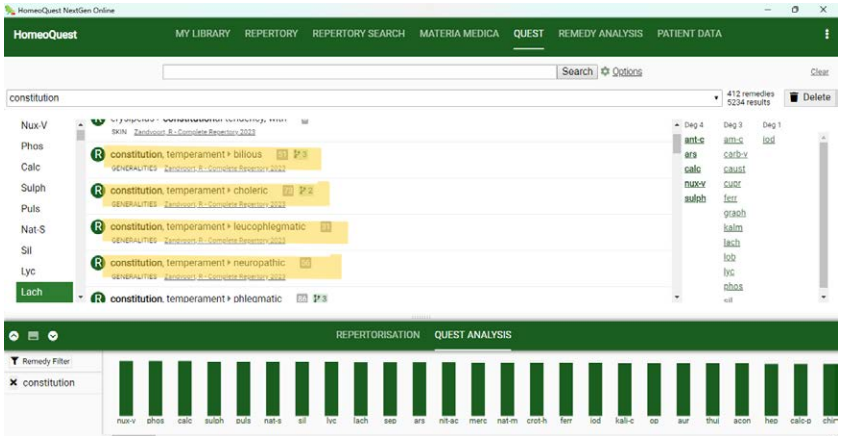

Image 19.1

China

Let's see what Kent[1] writes: [Image17.1]

'All of these complaints are in broken-down constitutions and in feeble, sensitive patients, especially in sensitive women.' Again, 'Congestive headaches in broken-down constitutions'. A 'constitutional state is a tendency to congestion ... inflammation in connection with haemorrhages'.

Merc Sol [Image18.1]

Look at the different types of constitutional states in which Merc is really useful. There is a dominant 'syphilitic constitution'. Hering writes: 'Great distension of left hypochondrium; pains not very severe ... pain in shoulders; light yellow colour; of flabby constitutions; and hepatitis'. [Image19.1]

Kent[1] writes, 'Merc constitution is just as changeable and sensitive to heat and cold', meaning it is 'used in testing the temperature'. Further, he states, 'Two types of constitutions need it: the syphilitic and the rheumatic or gouty. He has a rheumatic constitution ... always sweating, worse while sweating and from the extremes of heat and cold'. You can see how different authors bring different perspectives to the constitutional state of a remedy, based on their own clinical use. This is your Stage 3 information when it comes to the constitutional types. This is where you find and extract information from different authors to create a picture or image in your mind, so you can identify it when a patient walks into your clinic.

Stage 3 generals

Now let's look at how to get the other Stage 3 information beyond just constitutional types.

The fundamental part of Stage 3 is to understand the 'generals'. This happens through the process of 'generalisation'.

Analogy

How Does Analogy Work?

One of the first homoeopaths who proposed how to derive the general symptoms from the proving information was Boenninghausen. He proposed doing this through the concept of analogy. Analogy is an extremely important tool because the proving information is not always complete. You don't always get a remedy proved to such an extent that you can define all the generals coming together. Most provings are incomplete with patchy, disjointed, scattered information. Analogy is quite a powerful concept, because you can actually start putting together different particulars and local symptoms to find a common thread or red line running through them.

An Example of Using Analogy

Let's take an example of how Boenninghausen created his repertory. If you look at the proving of Lachesis from Allen's Encyclopaedia of Pure Materia Medica 2, you will find that Lachesis has created tensive pains in the head. It has created pressive pains in the right orbit. It has also created painful pressure in the abdomen.

ciples."

Hahnemann, comparing the mentality of the two drugs, says, " Although the positive effects of *Ignatia* have a great resemblance to those of *Nux vomica* (as might be inferred from the botanical relationship between the two plants) yet the emotional disposition of patients for whom *Ignatia* is serviceable differs widely from that of the patients for whom *Nux* is of use."

He tells us that *Ignatia* is not suitable for persons in whom anger, eagerness, or violence is predominant, but for those who are subject to rapid alternations of gaiety and disposition to weep, or in whom we notice the emotional states indicated by its symptoms, provided that the other corporeal morbid symptoms resemble those that this drug can produce.

" Even in a high potency *Ignatia* is a main remedy in subjects who have no tendency to break out violently, or to revenge themselves, but who keep their annoyance to themselves : in whom

Image 20.1

What can you infer from this? Lachesis has the general symptom of pressure, constriction, tension and tightness in different parts of the body or in general. This is called 'analogy'.

This is what you first infer, and then confirm, in clinics. Then you will find that Lachesis has actually cured tightness in the knee even though in the provings, there was not any such tightness in the knee documented. But because you inferred it and clinically proved it, Lachesis is now seen in the general rubric 'tightness' based on Boenninghausen's analogy. This is where you start getting creative – but remain grounded through clinical data – to document this information.

Group Analysis

Another powerful tool for generalisation is group analysis, or the study of remedies by groups or by kingdom. It is defined as follows: If a symptom is present in three or four remedies belonging to the same group, then it becomes a general. Group analysis is not just a contemporary concept given by Jan Scholten or Sankaran. In fact, it was first proposed by Hahnemann.

How does group analysis work?

I want to take you back to Hahnemann's example on how he presented the concept of group analysis when he was talking about Ignatia and Nux Vomica. In Homoeopathic Drug Pictures by Margaret Tyler,[3] she talks about how Hahnemann compared the mentality of the two remedies Ignatia and Nux Vomica. [Image20.1]

Hahnemann mentions here that he compared them because it could be 'inferred from the botanical relationship between the two plants' that there are quite a few common symptoms to both of them. But 'the emotional disturbances of' people 'for whom Ignatia is serviceable differs widely from that of' people 'for whom Nux is of use'. This understanding is very important, because this is the most common mistake I see new practitioners make when using group analysis. And it's wonderful to see how Hahnemann overcomes it. He is saying that although the positive effects of Ignatia are similar to that of Nux Vomica because they belong to the same botanical family, 'Ignatia is not suitable for people in whom anger, eagerness or violence is predominant, but for those who are subject to rapid alternations of gaiety and disposition to weep, or in whom we notice the emotional states. 'Even in a high potency, Ignatia' has 'no tendency to break' into violence 'or revenge themselves, but keep their annoyance to themselves.' Their 'vexatious occurrence is to dwell in the mind, and ... cause grief'. Hahnemann is saying here that Ignatia has emotional disturbances, disposition of anger and vexation just like Nux Vomica. However, it is much milder in its expression and much more suppressed in its manifestation. It dwells, it silently grieves, it sighs. On the other hand, Nux is quite violent and quite expressive. This is a subtle difference but a key difference between Nux and Ignatia, even though the other generals are the same.

The generalisation common to both remedies from the same group is the tendency to anger, vexation, annoyance and aggravation. But where Nux is violent, Ignatia is mild and suppressed and sobbing. That is the key. Remember: Group analysis will give you the common general symptoms of a remedy, but you will need to use it in correlation with the proving data to find the specific generals. Together they will give you the real perspective and the real depth and balance of your remedy understanding.

The beauty is that once you know the generals of a group, you can apply it to every other remedy in that group – even the unknown ones. You suddenly are able to master dozens of other remedies from the Loganiaceae family, which is the Nux Vomica family, because they share a common set of indications. All you need to know are those one or two peculiar symptoms of each individual remedy to differentiate and prescribe them.

For me, group analysis has helped me expand my knowledge of materia medica ten or twenty times in such a short time. And until you have used this tool, you will not believe how powerful it is. It's one of the best leverages of your materia medica.

Where to find group analysis information?

Direct provings are the most useful way to get information on the generals in a drug. But again, you will need to use the concepts of analogy and generalisation through Boenninghausen's method. There are homoeopaths like Dr Sankaran, Dr Jan Scholten, Dr Mahesh Gandhi, Dr Michael Yakir and many more who have already done the work for you. They have sorted out the generals, they have looked at the clinicals, they have looked at the common symptoms in a group or a kingdom and they have created materia medicas based only on group analysis. That is the basis. You can do it yourself and confirm it, or you can look at the work of other people who have done the hard work for you.

It is this creative aspect that you need to own and connect to, so that you can find that holistic essence or the overview of a remedy. Yes, there is a chance and a warning here that it can go into flights of fantasy; you need to be grounded and understand the proving, and compare and filter your findings with the proving, to get the best results. But this is the beauty and the strength and the power of homoeopathy once you start working at Stage 3 and using these new tools.

Materia Medica understanding: Stage 4

What is Stage 4 information?

Then we come to Stage 4, which takes it to another level. The connections go much deeper than in Stage 3.

In Stage 3, we were trying to connect different parts of a remedy together into one whole. But in Stage 4, you go beyond mind and body. You even go beyond the different parts of a remedy and particulars. You go right to the energetic and the source level. There is no separation between mind and body.

Stage 4 remedy examples

China

At Stage 3, we found 'not been well since Malaria' – that is, a syndrome of malaria causing different problems mentally and physically in the person. But if we go further at Stage 4, in China we see a common link right at a sensory level of overstimulation. This is followed by weakness and exhaustion and occurs periodically. This is beyond mind and body. This is the common general energetic disturbance of China. However, there is something interesting in that this disturbance is common to the entire family of plants that China belongs to, which is the Rubiaceae (Coffee) family. All remedies in the Rubiaceae family have overstimulation followed by complete collapse and exhaustion.

But what is the difference? This is the key to using this information at Stage 4 accurately. China has periodic or intermittent attacks of overstimulation followed by collapse and exhaustion. No other remedy in the Rubiaceae family has this. So, this "periodicity" is what really sets China apart. How do I know? I especially love Boger's Synoptic Key 4 here. Boger can define the mentals, the physicals and the pathology generals in one or two key words for each remedy.

When you look at China, 'intermittency' is the keynote word for this remedy in Boger's synoptic key.

Merc Sol

Merc Sol shows a strong sense of power and control over others and oneself. This is Stage 4 information and is the common connecting link. This power is not just mind, but also body. This control is not just mind, but also body. This is common to all Row 6 elements. This is the group analysis of the Gold series. But what differentiates Merc from other Row 6 elements?

Your materia medica's Stage 4 information is incomplete if you do not differentiate a specific remedy within the group; and what differentiates Merc is this tendency to completely destroy and abuse the power. Merc has complete loss of control, complete paralysis and complete insanity of the mind, body and soul. This is unique to Merc. No other remedy in the Gold series has this destruction at every level.

Where do you find stage 4 information?

You will find this information in almost all Stage 3 books.

Drug Provings

Remember that all the group analysis information, and all the analogical information, at Stage 4 has been derived from drug provings. That is the first place practitioners at Stage 4 go to derive that information. But there is also creativity and intuition, as well as grounded clinical experience, involved in order to derive this information accurately. That's what you will need to learn and master.

Source

Then you need to understand the source of that remedy. Sometimes it comes in a circle where the source fills in the gaps about a remedy. You cannot disconnect the source and the natural habitat from the remedy. The remedy takes its essence and its energy into the provings and you cannot just delete out that information. It's a part of the whole remedy picture.

Stage 4 books and materia medica

Similar to Stage 3, I cannot over-emphasise the importance of understanding good group analysis. It is crucial for deriving and mastering information at Stage 4. As you know, many authors in the materia medica world have given us their derivations on Stage 4 group analysis. You have Sankaran, Jan Scholten, Mahesh Gandhi and Michael Yakir in the contemporary world, and they have done phenomenal original work on remedies in Minerals, Animals, Plants, Sarcodes, Nosodes and Imponderables kingdoms and subkingdoms. Dr Ghanshyam and his team have done a lot of work on collecting this information and confirming it with the original provings. Many of my materia medica teachers, while teaching us at medical school, provided invaluable keynotes based on their clinical hospital work even before the contemporary authors published these books. There is a lot of information out there.

Group analysis

Now I will show you a very simple way of deriving group analysis yourself, using technology through group analysis of the Rubiaceae family. I am using the remedy analysis function of HomeoQuest software to do this, but you can do the same using any software of your choice.

Filtering

Start by selecting the remedies in the Rubiaceae family. [Image21.1]. I'll use some advanced filtration because we want precise, peculiar rubrics at Stage 4. [Image22.1]

First, I select the remedy count to be at least three, which means we want at least three remedies from the Rubiaceae family in our rubrics. Then we choose the rubric size to be less than fifty. This will give us small-to-moderate size rubrics.

What do you get after analysis? You get a variety of rubrics from different repertories, across all sections, that have three or more remedies from the China family.

Look at these interesting ones: 'desires, full of'; 'desires, full of, insane'; and 'ideas, abundant'.[Image23.1]

There is also 'joy, ailments from'; 'excessive joy'; 'plans, makes many'; and 'restlessness, nervousness'. So, these are all the mental symptoms.

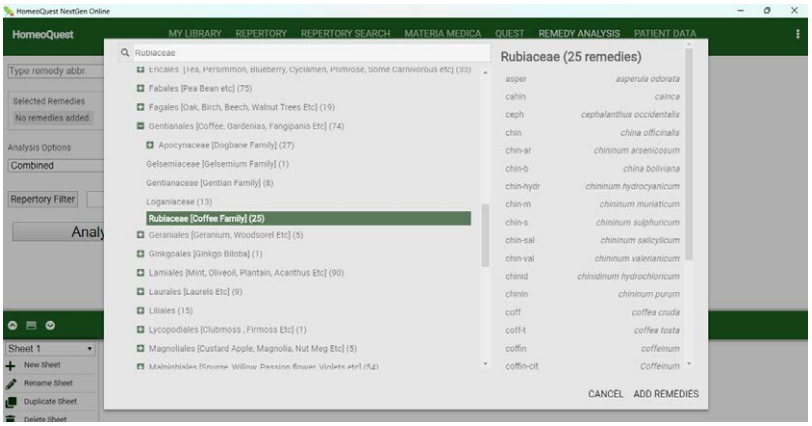

Image 21.1

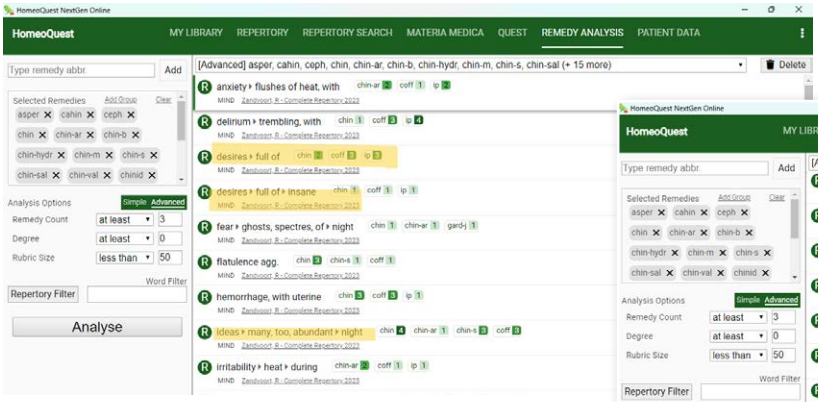

Image 22.1

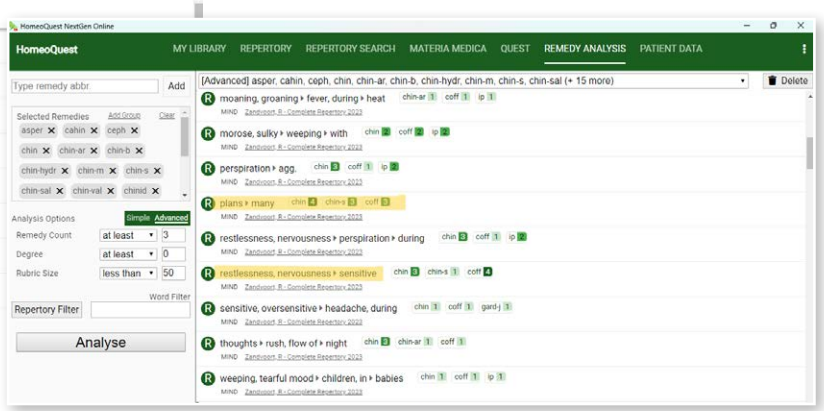

Image 23.1

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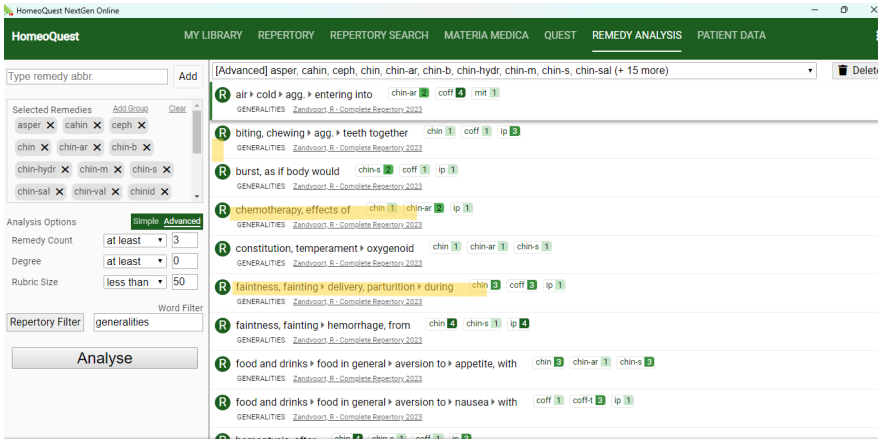

Image 24.1

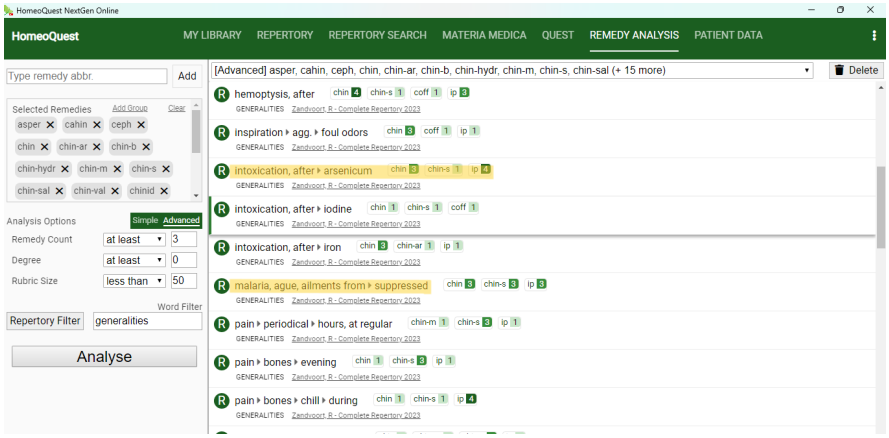

Image 25.1

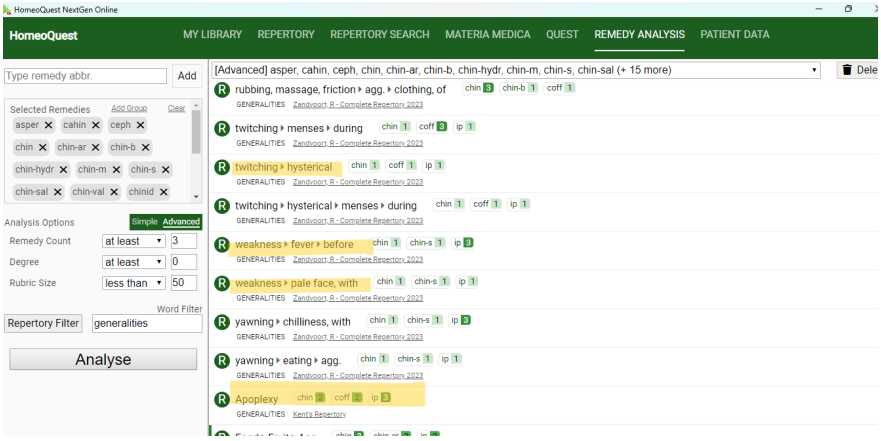

Image 26.1

Physical general symptoms

To get these, I add the word filter 'generalities' so that you will get the physical generals.[Image24.1]

Look at this: 'burst, as if body would'; 'chemotherapy, effects of', which is an interesting one; 'faintness, delivery, parturition, during'.[Image25.1]

'intoxication, after'; 'malaria, from suppressed'. [image26.1]

Lots of 'twitchings'; lots of 'exhaustion (weakness) 'weakness' with fever, pallor; 'apoplexy'; 'bodily restlessness'; and so on.

If you look at these lists of rubrics both mental and physical, those are your key generalities at Stage 3. You have this sense of buoyancy; lots of desires; intellectually, lots of ideas; emotionally, joy and desires. Both the mind and the intellect, the emotions and the intellect, are overstimulated. Physically, this overstimulation has completely exhausted them. You have the faintness; you have the intoxication; you have the weakness and the exhaustion and the restlessness.

You can see what's happening at the core at Stage 4. The mind is overactive and the body is overactive from lots of stimulation, and they are completely exhausted. That is an analogical derivation at Stage 4.

When you're looking at Stage 3, you are only using mentals: someone with lots of ideas who makes big plans. They are rushing and restless and buoyant. They are weak and faint easily. They are drained after exhausting fevers. But at Stage 4, what you see is beyond mind and body. You see a core of overstimulation which leads to complete exhaustion, something that you can put in just four or five words. Can you see the synthesis and distillation we're talking about here? Stage 4 takes that one step further than Stage 3. It is looking at mind and body information, but going beyond that.

Remedies

Now you look at individual remedies to differentiate them from others in the same group. You look at China, and you can see that China is all about periodicity. You look at Coffee, and you can see that Coffee is a completely burnt out, shattered and crushed state. It is overstimulated to the state of developing severe symptoms of breakdown. That is the differentiation between China and Coffee. China has intermittent states of overstimulation, while Coffee is very burnt out. It is completely exhausted and drained. That severity is a keynote of Coffee that is not found in China. These are simple fine-tuning processes that you need to understand in order to learn remedies in depth at Stage 4.

Conclusion

This is how you actually study remedies across all Stages from 1 through 4. That is the beauty of being able to understand your materia medica in these different components. Being able to look at the whole, and switching these hats, is the key. That is what will take you further.

You have to remember that not all of the remedies will have all of the information at all of the Stages. This distillation and mastery is not going to happen in one single sitting; it is a learning in progress. And then the understanding of the remedy develops further through clinical use and through the study of patient cases. It is going to expand as you gain experience as well.

But I can confidently say that if you do this homework and make an honest attempt to master at least ten of your favourite remedies, you will have a pretty solid understanding of not just those ten remedies but their entire group. This will expand your materia medica to master a hundred remedies, because each group will have at least ten remedies.

No other system of learning materia medica is going to give you this tremendous leverage, and I promise you will never, ever look back. That is exactly how I built my own materia medica from hundreds to suddenly thousands of remedies. I would really love to know your takeaways from this, so feel free to tell me how this information applies to your practice. You can email me at **shilpa@homeoquest.com.** I would love to hear from you.

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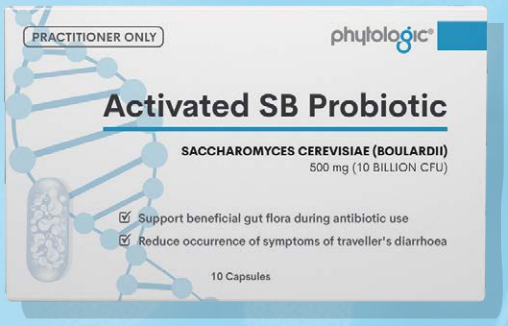

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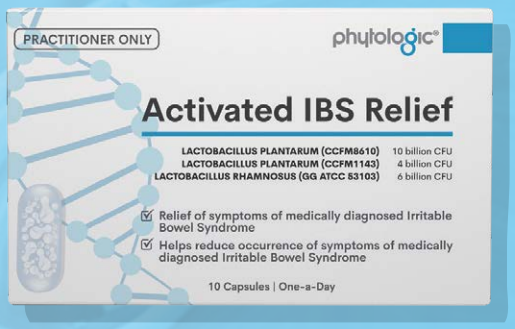

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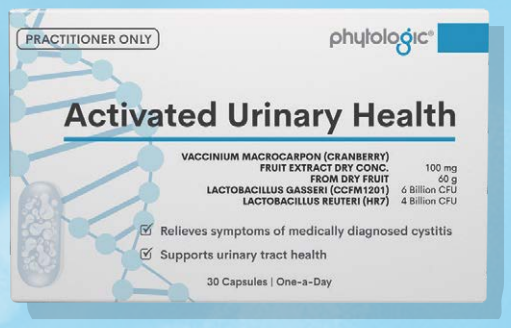

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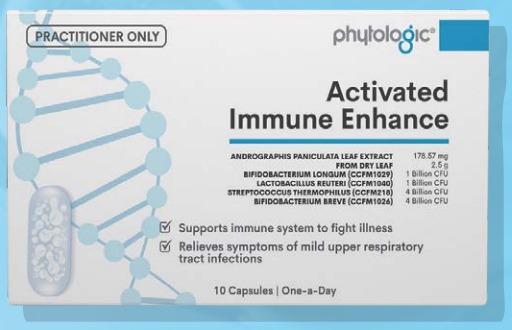

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Research in Homeopathy: *An update*

Robert Medhurst | BNat ND DNutr DRM DBM DHom

In 2010, the UK Parliament's Science and Technology Committee, a group which consisted of a farmer, a professor of chemistry, an analytical chemist, a chemical plant operator, an IT expert, an immunologist, and two people with connections to a group called Sense About Science, declared that homeopathy "does not work beyond the placebo effect".[1] Sense About Science is a UK-based organisation that publicly states that "homeopathy has repeatedly been found to be no better than the placebo controls in clinical trials".[2] Inspired by this outcome, in 2015 the Australian government's National Health and Medical Research Council, an organisation with no expertise in homeopathy, stated that, "there are no health conditions for which there is reliable evidence that homeopathy is effective".[3] As at March 2018, the advice from the US Food and Drug Administration implied that homeopathic products "may harm consumers who choose to treat serious diseases or conditions with such products, and consumers may be forgoing treatment with a medical product that has been scientifically proven to be safe and effective".[4]

While it may be interesting to speculate on why these organisations can't appear to find any good evidence for the efficacy of homeopathy, nonetheless, it does exist, it's easy to find, and it's abundant. Following are extracts from notable studies that have been published recently in peer-reviewed journals.

Human Research

1. Pannek J, et al. Usefulness of classical homeopathy for the prophylaxis of recurrent urinary tract infections in individuals with chronic neurogenic lower urinary tract dysfunction. J Spinal Cord Med. 2019;42(4):453-9. This prospective study looked at the effects of constitutional homeopathy for the prevention of recurrent urinary tract infections (UTI) in patients with spinal cord injury (SCI) in Switzerland. Participants with ≥3 UTI/year were treated either with a standardised prophylaxis alone or in combination with homeopathy. The number of UTI's, general and specific quality of life (QoL), and satisfaction with homeopathic treatment were assessed prospectively for 1 year. A total of 35 people were enrolled in the study, with 10 allocated to a control group and 25 receiving adjunctive homeopathic treatment. The median number of self-reported UTI's in the homeopathy group decreased significantly, whereas it remained unchanged in the control group. The domain incontinence impact of the QoL improved significantly, whereas the general QoL did not change. The satisfaction with homeopathic care was high.

2. Banerjee K, et al. Homeopathy for allergic rhinitis: A systematic review. J Alt and Compl Med, 2017;23(6):426-44. The aim of this study was to evaluate the effectiveness of homeopathy in the treatment of seasonal or perennial allergic rhinitis (AR). Randomized controlled trials evaluating all forms of homeopathic treatment for AR were included in a systematic review (SR) of studies published up to and including December 2015. Two authors independently screened potential studies, extracted data, and assessed risk of bias. Primary outcomes included symptom improvement and total quality-of-life score. Treatment effect size was quantified as mean difference (continuous data), or by risk ratio (RR) and odds ratio (dichotomous data), with 95% confidence intervals. A meta-analysis was performed after assessing heterogeneity and risk of bias. Eleven studies were eligible for SR. All trials were placebo-controlled except one; six trials used the treatment approach known as isopathy, but they were unsuitable for meta-analysis due to problems of heterogeneity and data extraction. The overall standard of methods and reporting was poor: A total of 8/11 trials were assessed as "high risk of bias", and only one trial on isopathy for seasonal AR possessed reliable evidence. Three trials of variable quality (all using Galphimia glauca for seasonal AR) were included in the meta-analysis: nasal symptom relief at 2 and 4 weeks favoured homeopathy compared with placebo; ocular symptom relief at 2 and 4 weeks also favoured homeopathy. The single trial with reliable evidence had a small positive treatment effect without statistical significance. A homeopathic and a conventional nasal spray produced equivalent improvements in nasal and ocular symptoms. The authors urged caution in the interpretation of these results but said that the use of either Galphimia glauca or a homeopathic nasal spray may have small beneficial effects on the nasal and ocular symptoms of AR.

3. Klein-Laansma CT, et al. Semi-individualized homeopathy add-on versus usual care only for premenstrual disorders: A randomized, controlled feasibility study. J Alt Compl Med. 2018;24(7):684-93. This European study compared the add-on effect of homeopathic treatment and usual care, with usual care alone for women suffering from premenstrual syndrome and premenstrual dysphoric disorder (PMS/PMDD) using a multi-centre, randomized, controlled pragmatic trial with parallel group design. The study was carried out in general and private homeopathic practices in the Netherlands and Sweden, and in an outpatient university clinic in Germany. Sixty women diagnosed as having PMS/PMDD, based on prospective daily rating by the daily record of severity of problems (DRSP) during a period of 2 months, were included and randomized to receive usual care plus homeopathy (UC+HT) or usual care (UC) for 4 months. The homeopathic medicine was selected according to a previously tested prognostic questionnaire and electronic algorithm. Usual care was as provided by the women's general practitioner according to their preferences. Before and after treatment, the women completed diaries (DRSP), measures of self-assessed well-being, and other questionnaires. After 4 months, relative mean change of DRSP scores in the UC + HT group was significantly better than in the UC group.

In-Vitro Research

1. Samadder A. et al. The potentized homeopathic drug, Lycopodium clavatum (5C and 15C) has anti-cancer effect on hela cells in-vitro. J Acupunct Meridian Stud. 2013;6(4):180-7. The purpose of this study was to evaluate whether homeopathically prepared Lycopodium 5C (LC5C) and 15C (LC15C) had any effect upon HeLa cells (a commonly used cell cancer line). Cells were exposed to LC-5C, LC-15C or to 30% succussed ethanol (control). The drug-induced modulation in the percent cell viability, the onset of apoptosis, and changes in the expressions of Bax, Bcl2, caspase 3, and Apaf proteins in inter-nucleosomal DNA, in mitochondrial membrane potentials and in the release of cytochrome-c were analysed by utilising different experimental protocols. Results revealed that the administration of LC-5C and LC-15C had little or no cytotoxic effect in normal peripheral blood mononuclear cells, but caused considerable cell death through apoptosis in HeLa cells, which was evident from the induction of DNA fragmentation, the increases in the expressions of protein and mRNA of caspase 3 and Bax, and the decreases in the expressions of Bcl2 and Apaf and in the release of cytochrome-c. Thus, the homeopathics LC-5C and LC-15C demonstrated the capacity to induce apoptosis in cancer cells, signifying their possible use as supportive medicines in cancer therapy.

2. Ahn KH, et al. Anti-proliferative effect of Klimaktoplan® on human breast cancer cells. Arch Gynecol Obstet. 2013;288(4):833-8. This study investigated the effects of a combination of potentised substances (Klimaktoplan) referred to by the authors as a "homeopathic product" on the proliferation of breast cancer (MCF-7) and non-malignant mammary epithelial cells (MCF-10A). MCF-7 and MCF-10A cells were cultured in 312.5, 625, and 1,250 μg/ml Klimaktoplan. 17-Beta estradiol (E2) and medroxyprogesterone 17-acetate (MPA) were used for comparison with Klimaktoplan. E2 only (0.001, 0.01, and 0.1 μM), and the combination of E2 (0.001, 0.01, and 0.1 μM) and MPA (0.01, 0.1, and 1 μM) were tested. Control cells for Klimaktoplan and E2 groups were treated with dimethylsulfoxide (DMSO), and DMSO + ethanol was used for the combination group. Cellular proliferation was evaluated by the formation of insoluble formazan after incubation of 4 days. The results showed that Klimaktoplan had a concentration-dependent anti-proliferative effect on breast cancer cells at 625 and 1,250 μg/ml, while not affecting the proliferation of non-malignant mammary cells at any tested concentration.

3. Toliopoulos IK, et al. Stimulation of natural killer cells by homoeopathic complexes: An in-vitro and in-vivo pilot study in advanced cancer patients. Cell Biochem Funct. 2013;31():713-8. The research team involved here evaluated the effects of five combinations of potentised substances, referred to here as "homeopathic complexes", on the functional activity of natural killer cells (NKCs) in advanced cancer patients. These complexes were Coenzyme Compositum, Ubichinon Compositum, Glyoxal Compositum, Katalysatoren and Traumeel. Experimental procedures included in-vitro and in-vivo trials. The in-vitro trials were performed in NKCs isolated from 12 healthy volunteers and incubated with the five complexes. The in-vivo trials were performed in 15 advanced cancer patients supplemented for 3 months. All five complexes significantly increased the cytotoxic activity of the NKCs at the lowest NKCs/target cell ratio 12:1 ($p < 0{\cdot}05$). The order of activity was: Ubichinon Compositum, Glyoxal Compositum, Katalysatoren, Traumeel, and Coenzyme Compositum. In the advanced cancer patients, the complexes significantly increased NKCs cytotoxic activity.

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The Mitochondrial Maestro

How ubiquinol supports the health of mitochondria and impacts all body systems

Stephanie Berglin | DipNut, DBM, BAComms, Nutritionist, Herbalist, Writer, Editor, Researcher

Recent research has revealed that the pervasive issue of mitochondrial dysfunction is an underlying factor in a multitude of chronic disease states; from cardiovascular diseases, neurodegenerative disorders, type 2 diabetes, obesity, chronic fatigue syndrome and infertility, with its impacts being seen across the spectrum of human health.[1-6] Therefore, an understanding of chronic disease requires knowledge about mitochondria for diagnostic and therapeutic purposes. Results of a number of studies have also shown that restoration of mitochondrial function via a variety of diet and lifestyle factors, including targeted supplementation, can delay the onset and slow the progression of chronic disease development.[1,7]

What are mitochondria?

Life depends on energy and energy is produced by the mitochondria in cells. Therefore, maintaining healthy mitochondrial function is crucial for the health and functioning of the entire body, particularly organs and tissues with high energy demands such as the heart, brain, liver and muscles. Mitochondria are complex organelles, of which hundreds to thousands are found in all cells in the body. Inside the mitochondria, the Krebs cycle uses molecules nicotinamide adenine dinucleotide + hydrogen (NADH) and flavin adenine dinucleotide (FADH2) that carry high-energy electrons to the electron transport chain (ETC) in the mitochondrial membrane, where ubiquinol facilitates electron transport (see Figure 1). The ETC uses these electrons to produce adenosine triphosphate (ATP), the energy currency of the cell, through a process called oxidative phosphorylation (OXPHOS).

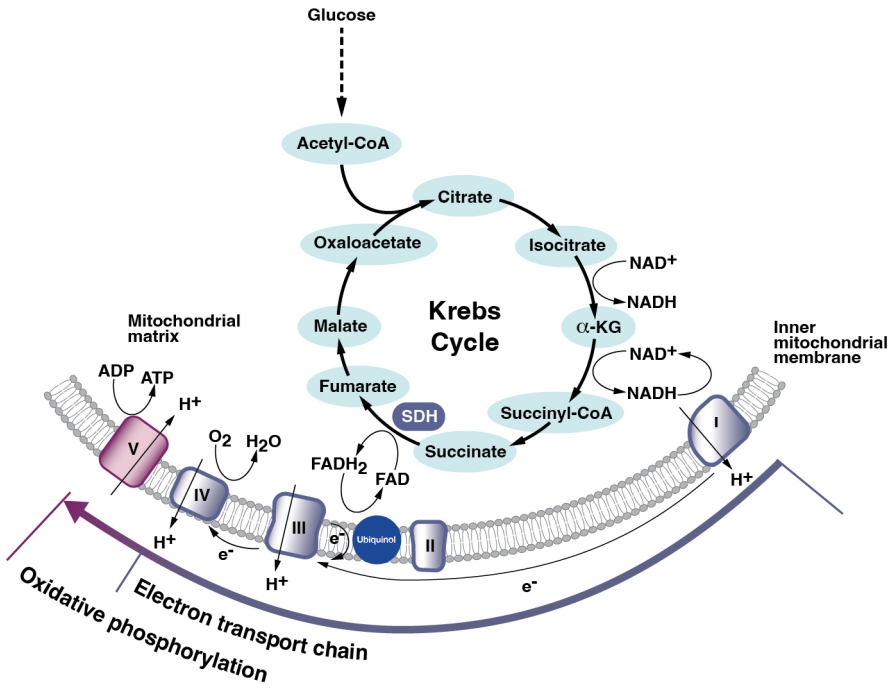

Figure 1. Krebs Cycle

It is estimated that the average cell uses 10 billion ATP a day,[8] which equates to 40kg of ATP being used by the body each day.[9] Of that, the mitochondria produce approximately 90% of the biochemical energy that cells need to survive.[10]

The mitochondria must function continuously to produce the large amounts of ATP needed to sustain life. Organs with the most intense energy requirements are where mitochondria are concentrated to ensure their optimal function. Mitochondria not only generate energy but also play vital roles in cellular processes such as calcium storage, iron homeostasis, production of hormones and neurotransmitters, regulation of apoptosis (programmed cell death) and modulation of immune responses.[7,11]

What is ubiquinol?

Coenzyme Q10 (CoQ10) is an endogenous, fat-soluble, antioxidant nutrient found in abundance in the phospholipid bilayer of the inner membrane of the mitochondria present in virtually every human cell in the body (except red blood cells), where it acts as a membrane stabiliser and cofactor for the production of ATP. CoQ10 is found in two forms – ubiquinone and ubiquinol. Ubiquinol is the reduced, active form used in the body (see Table 1 and Figure 2).

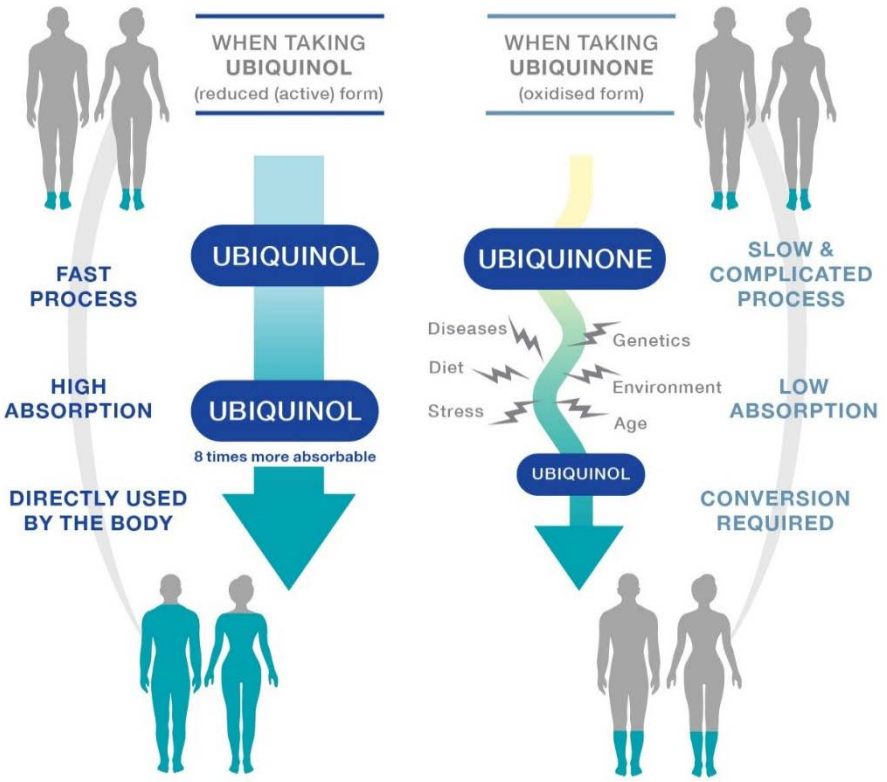

Figure 2. Understanding Coenzyme Q10

Benefits of ubiquinol

Ubiquinol is critical to mitochondrial function and, as most cellular functions are dependent on an adequate supply of ATP, ubiquinol is essential for the health of all human tissues and organs.[32] Therefore, ubiquinol is essential to optimal health during our lifespan. In addition to its role in energy production, ubiquinol is unique in that it is the only endogenously synthesised lipid-soluble antioxidant in human cells. Due to its redox property, ubiquinol has a direct free radical scavenging effect and serves as a powerful antioxidant.[33] Ubiquinol efficiently protects membrane phospholipids from peroxidation as well as mitochondrial DNA and membrane proteins from free-radical-induced oxidative damage. This type of damage can result in reduced cell repair and a higher risk of cell death.[34]

Ubiquinol participates in the regeneration of other antioxidants, such as vitamins C and E.[7] Research also highlights its role in modulating gene expression and mitochondrial function and signalling, with important implications in the senescence process and cell death.[35] Depletion of ubiquinol has a significant impact systemically on metabolic regulation, brain function, immunity and regulation of inflammatory pathways, linking it to the pathogenesis of a range of disorders.[1-6,36]

Table 1. Forms of coenzyme Q10: Ubiquinol vs Ubiquinone

Ubiquinol	Ubiquinone
Reduced (active) form of CoQ10	Oxidised form of CoQ10
Accounts for 96% of the total CoQ10 pool in human plasma[12,13,14]	Accounts for the remaining 4% of the total CoQ10 pool in human plasma
Synthesised and directly used by the body[15]	Socio-economic status, social support, relationship conflicts, loneliness, neighbourhood conditions, and exposure to violence or discrimination.
No conversion required	Needs to be converted into ubiquinol in the small intestine and liver to exert activity,[16] via a complex, 17-step process[2,17]
Higher bioavailability[18-21]	Poorer availability
8 times more absorbable[12,15,16,22-24]	Lower absorption
Best supplemental form for those over 30 years of age, with reduced ability to convert ubiquinone to ubiquinol within the body[7,25-28]	Effective in those under 30 years of age
Best supplemental form for those with increased exposure to oxidative stress, experiencing disease states, such as type 2 diabetes, impaired immunity, and cardiovascular, neurological and liver diseases, or taking cholesterol lowering medications[29-31]	Effective in those not exposed to increased levels of oxidative stress or with increased metabolic demands

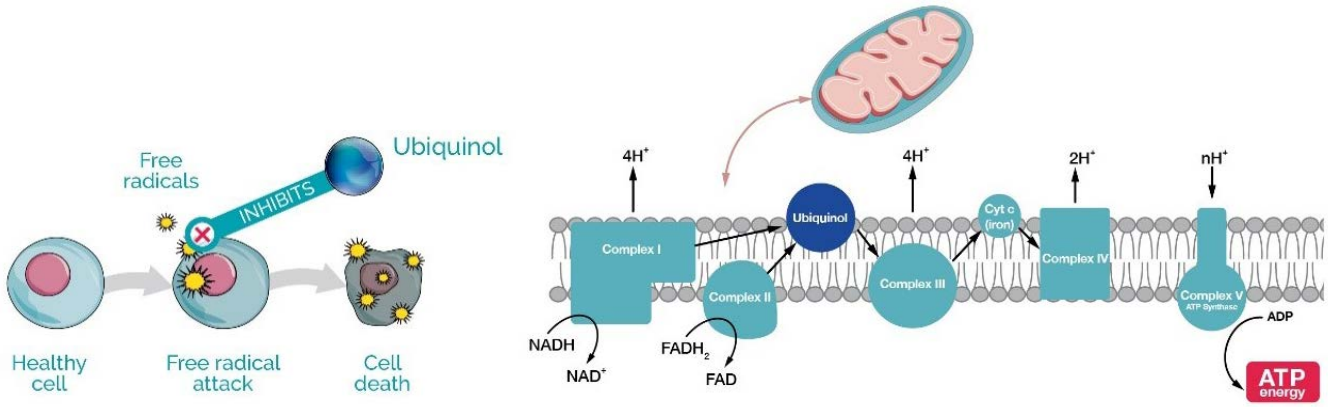

Figure 3. Actions of ubiquinol: antioxidant activity and cellular energy production

Mechanisms of action

Ubiquinol is integral to mitochondrial function and integrity, and exerts its actions in the body via two main properties (see Figure 3).

Antioxidant activity, scavenging reactive oxygen species (ROS) and free radicals produced during metabolic processes, thereby preventing lipid peroxidation and oxidative stress that can damage mitochondrial DNA, proteins and lipids.

Cellular energy production to produce ATP, through its role in the electron transport chain (ETC) in a series of complexes located within the inner mitochondrial membrane.

Ubiquinol provides multifaceted actions and benefits across key body systems (see Figure 4).

Impacts on ubiquinol production in the body

Unfortunately, the production of ubiquinol declines with age and prolonged stress, due to lifestyle, diet or environmental factors, as does the ability to convert ubiquinone to ubiquinol within the body.[7,25,26-28] This impaired production and conversion is believed to contribute to age-related declines in cellular energy production and function, as well as increased oxidative damage with reduced antioxidant protection.[37] Ubiquinol production starts to decrease after 20 and, by 80 years of age, the myocardial concentration of ubiquinol has reduced by around half.[28-30]

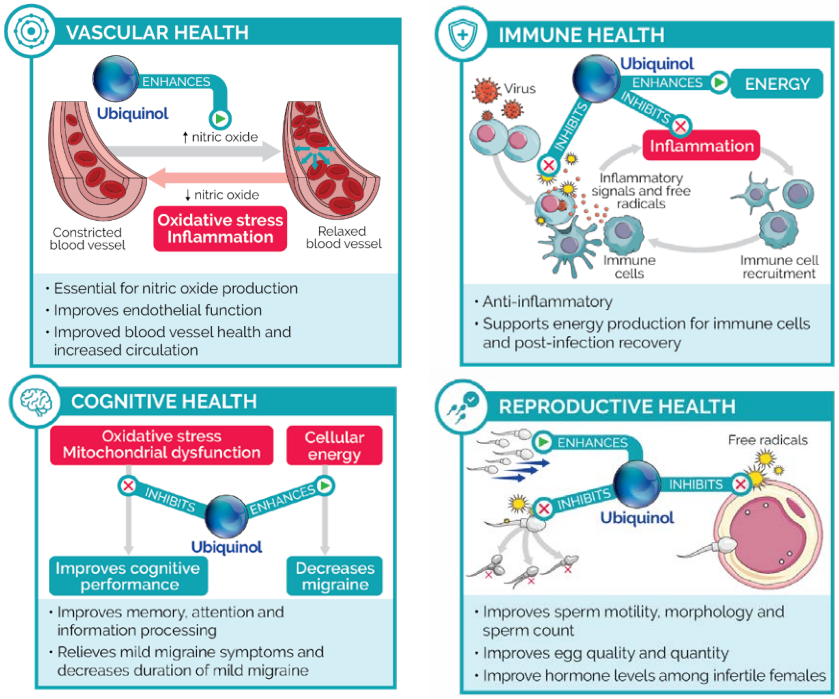

Figure 4. Actions of ubiquinol in body systems

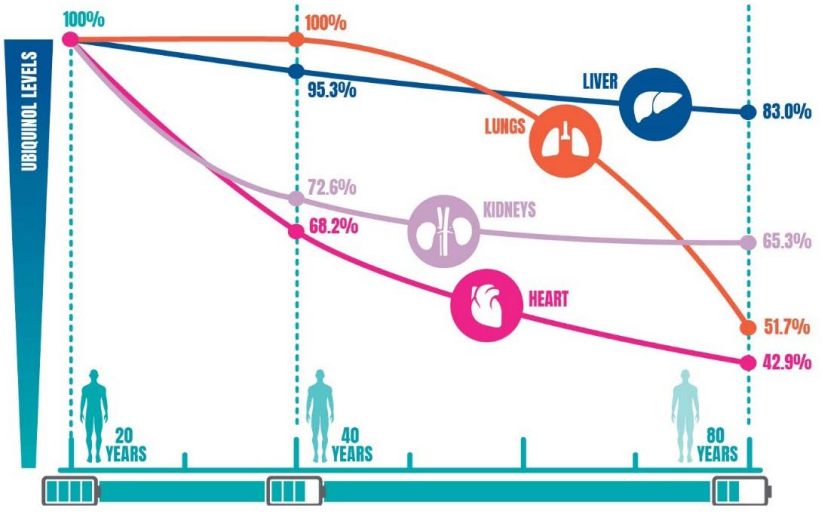

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Figure 5. Coenzyme Q10 and ubiquinol as adjunctive therapy

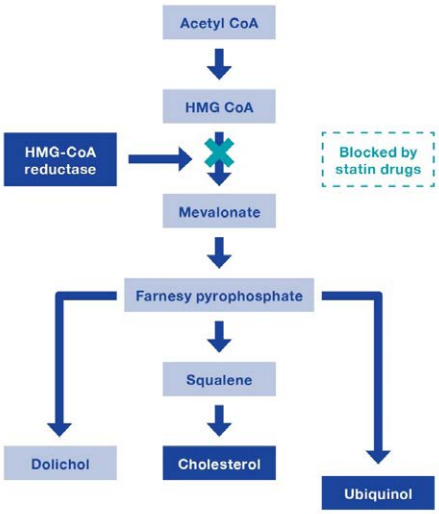

Figure 6. Effect of statin drugs on ubiquinol

Other factors that decrease ubiquinol levels include:

- oxidative stress
- decreased intake
- increased metabolic demand
- disease states, such as type 2 diabetes, impaired immunity, and cardiovascular, neurological and liver diseases
- cholesterol lowering drugs.

This combination of increased oxidative stress, low-level systemic inflammation and reduced antioxidant capacity are major drivers in accelerated ageing and age-related disease development.[25] Coenzyme Q10 and ubiquinol have been used as adjunctive therapy in heart failure (see Figure 5).

Cholesterol-lowering medications

Statin medications lower cholesterol by inhibiting the enzyme HMGCoA reductase that produces cholesterol (see Figure 6). However, this enzyme is also required for the production of ubiquinol.[17,38] Statin use has been shown to decrease plasma ubiquinol by 45%.[31]

Multiple studies have demonstrated that statin medications reduce plasma levels of ubiquinol, and that side-effects of fatigue and myalgia, commonly seen in statin therapy, may be a result of ubiquinol depletion. Studies have also demonstrated that oral supplementation of ubiquinol alongside statin medications can still effectively raise serum levels and will work to negate some of the harmful drug effects.[31,39-45] (See Table 2 for a list of benefits of ubiquinol on a range of conditions.)

Table 2. Benefits of ubiquinol on a range of conditions

	Condition	Daily dose	Benefit	Refs
Statin-related	Statin-associated cardiomyopathy	300 mg	Support for those on long-term statin therapy.	46
	Statin-associated fatigue and myalgia	30-200 mg	Replaced depleted plasma ubiquinol levels caused by statins and helped alleviate the associated side-effects. Negated pain by 53.8% and muscle weakness by 44.4%.	17,3 8-40, 47,48
Cardiovascular	Cardiovascular disease increased risk, aged 40-65 years	100-300 mg	Decreased oxidative stress and inflammation, and susceptibility to CV disease by supporting levels of myocardial ubiquinol that decline with age.	1,18, 29,38, 49
	Cardiovascular disease	300-600 mg	Replenished low levels of ubiquinol found in up to 75% of patients with CVD.35 Improved endothelial function, reducing CV risk in people both with and without established CVD by 10-25%.50 Improved peripheral endothelial function in heart failure with reduced ejection fraction.	19,35, 50-52
	Dyslipidaemia	100-200 mg	Ameliorated dyslipidaemia-related endothelial dysfunction, after 8 weeks.	49,53
	Hypertension	60-200 mg	Effective antihypertensive action, lowering systolic and diastolic blood pressure.	49, 54-56
Energy-related	Fatigue	100-150 mg	Over 12 weeks, demonstrated an anti-fatigue effect in healthy individuals experiencing fatigue in daily life.	57
	Chronic fatigue syndrome (CFS)	150 mg	Improved CFS symptoms, sleep quality and arithmetic task performance in 12 weeks.	58
	Exercise performance and recovery	200-300 mg	Improved clinical parameters (decreased body mass index, percent body fat, and systolic and diastolic blood pressures) and enhanced physical performance by increasing aerobic capacity, as well as decreased oxidative stress and increased plasma nitric oxide, known to improve muscle recovery after strenuous exercise.	59-62
Fertility	Fertility – men	150-400 mg	Improved sperm health parameters – concentration, morphology and motility.	63-65
	Fertility – women	100-150 mg	Decreased oxidative stress, improved the secretion of FSH and LH among infertile females and improved occurrence of clinical pregnancies.	66,67
Immunity	Asthma	100 mg	Blood levels are reduced in asthma patients and supplementation improved airflow over 4 weeks.	68,69
	Influenza (acute)	Dose not defined in trials	Ubiquinol levels are significantly lower in 48% of patients with acute influenza infection. Supplementing increased levels and improved recovery from infection.	70,71
	Post/Long-COVID-19	200 mg	Improved mitochondrial health and accelerated recovery from infection.	72-74
Metabolic	Type 2 diabetes and metabolic syndrome	100-300 mg	Increased ubiquinol levels that are deficient in T2DM and had beneficial effects on serum insulin levels.	75-77
	Weight management	200 mg	Increased ubiquinol levels, found to be reduced in obese individuals, and reduced oxidative stress and inflammatory processes that are increased in those who are overweight.	78-80
Nervous system	Cognitive health	100 mg	Improved memory, attentiveness and work processing ability in the middle-aged and elderly.	81,82
	Migraine	400 mg	Decreased frequency, severity and duration of migraine attacks over 12 weeks, via improved mitochondrial function and positive effect on factors involved in the pathophysiology of migraines.	83
	Stress and sleep disorders	100 mg	Over 8 weeks, reduced stress and improved sleep-related problems in those with increased stress and therefore higher energy requirements.	84-87
Women's health	Menopause	100 mg	Improved the general health, mood, skin and quality of life of postmenopausal women, via antioxidant activity, over 12 weeks.	88
Dietary	Vegan/ vegetarian diet	Dose not defined in trial	Increased the plasma concentrations of ubiquinol, found to be significantly lower in those on vegetarian/vegan diets, reducing the risk of age-related diseases.	89

Cautions and contraindications [90-92]

- CoQ10/ubiquinol is present naturally in the human body. Supplements are generally well-tolerated with only minor and infrequent adverse effects, including mild insomnia, stomach upset, nausea, vomiting and diarrhoea.

These effects may be minimised if doses >100 mg are divided into two or three daily doses.

- There have been no reports of significant adverse side-effects of oral supplementation at doses as high as 3000 mg/day for up to 8 months, 1200 mg/day for up to 16 months and 600 mg/day for up to 30 months.

- According to the observed safe level (OSL) risk assessment method, evidence of safety is strong with doses up to 1200 mg/day of CoQ10.

- During pregnancy, the use of CoQ10 supplements (100 mg twice daily) from 20 weeks' gestation was found to be safe.

- Because reliable data in lactating women are not available, supplementation should be avoided during breastfeeding.

- CoQ10 is chemically similar to menaquinone and might have vitamin K-like procoagulant effects, which could decrease the effects of warfarin. However, this has been reported in only 4 cases of concomitant use with warfarin.

Patients on warfarin should consult the healthcare provider managing their anticoagulant therapy. If to be used concomitantly, blood tests to assess clotting time (prothrombin time; PT/INR) should be monitored frequently, especially in the first two weeks.

Stephanie Berglin is a practising nutritionist/herbalist in Maroubra, Sydney, where she also contracts to leading natural health supplement companies including Kaneka Ubiquinol™. Kaneka Corporation is the sole global supplier of evidence-based Kaneka Ubiquinol™, supported by 100+ scientific studies, 80+ patents and 45+ years of research for mitochondrial health.

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Meet the Expert:
Interview with Professor Kerry Bone

Interviewer | Stephen Clarke

Professor Kerry Bone has written seven text books on herbal medicine and authored more than 40 scientific papers on herbal medicine research. He is on the editorial board of the journal Phytomedicine. He is Adjunct Professor at Northeast College of Health Science in New York. He maintains a busy herbal practice in Toowoomba, Queensland.

Tell me about your background – why did you choose to become a natural medicine practitioner?
I developed an interest in natural medicine during my university years. A few of my friends were studying medicine and I realised that appealed to me more than my then current course, which was chemistry. Also, I had developed an interest in yoga and had become aware of natural medicine, so it seemed like a logical step to start studying naturopathy.

Where did you study?
Initially part time at the Southern School of Naturopathy, but when the subjects I needed to do were only available during the day I decided that I should look more broadly at my education options if I was going to give up my well-paid job as a research scientist. Following advice from a medical doctor to study overseas and do more of a specialty, I then began 18 months of letter writing and eventually found the School of Herbal Medicine in the UK, which suited my needs perfectly.

Did your education prepare you well for your professional career?
Yes, it was an excellent course because it focused on clinical herbal medicine and I was very well taught in straight medicine as well.

Why did you choose herbal medicine?
As per my answer above, it was really about finding the right specialist course, which happened to be in herbal medicine. I later realised that, given my chemistry background, this suited me perfectly. But at the time I was also looking into other courses such as Chinese medicine and homoeopathy. I did in fact study homoeopathy while I was in the UK for one year while I was doing the herbal medicine course.

You have been in practice for over 35 years. What has kept you in practice? Has your practice changed over the course of your career? If so, in what ways?
By 2025 I will have been in continuous practice in Toowoomba for 40 years! What's kept me in practice all these years is the concept of service. To me there is no greater reward than helping someone solve a problem that is impacting on their lives, in this case a health issue. The corollary of that of course is that I have seen some amazing outcomes with the use of simple natural treatments.

The greatest way my practice has changed over 39 years, and it is a really big change, is the availability of so many more herbs and indeed herbs of much better quality than at the beginning of my career. Also, now we have much more evidence to both inform and back up our choice of treatments. And this applies not just to herbs of course, but to supplements and also to our much greater understanding of the many factors that drive human disease. By way of example, the microbiome was little thought about 39 years ago. We didn't have Ginkgo biloba in Australia and the Echinacea root that was being sold at the time was a substitute from a completely different species.

Do you have a referral network with other natural medicine practitioners/ other health practitioners?
Not really. If I can't help someone, I certainly do refer them on though. Of course, I have maintained a great network of colleagues through my work in manufacturing and education. When COVID came along I realised I needed to extend my lines of communication, and so I am now active on social media with a Facebook page and a YouTube channel for starters.

What is your opinion about the integration of natural medicine with mainstream medicine?
I think that natural medicine can complement mainstream medicine in so many ways for the benefit of patients. However, this is being hampered by vested interests and a lack of education on the part of mainstream doctors.

Would you like to see natural medicine practitioners working more closely with mainstream medical or other health practitioners?
I do hope to see a situation in the future, like currently in China, where every locality has a clinic where both natural and mainstream medical practitioners are working together in the interests of their local community.

What are your thoughts on the reputation and acceptance of natural medicine?
Sadly, I feel we still have a long way to go. When I embarked upon my career in natural medicine more than 40 years ago, the criticism that our treatments lacked scientific evidence was largely valid. This is not the case now, and yet our greater acceptance hasn't happened. I can only put this down to the operation of vested interests and a lack of awareness, but it is very disappointing to me.

Evidence-based medicine has its place. I mean one area where scientific investigation of natural remedies is proving to be very useful is the new and novel applications that are being discovered and backed up by clinical evidence. I feature such studies regularly on my Facebook page, and to me this is advancing the profession with new treatment options. But we need to understand that evidence-based medicine as it is currently practised, which is more a drug company driven agenda, can never offer us insight into the individual patient. So we can use our philosophy, training, experience and skills to identify the therapeutic targets, and then clinical evidence can tell us which arrows are sharp enough to fire at those targets. This is the whole basis of the Functional Herbal Therapy approach, which is the topic of my latest book.

In addition to your practice, you are well known for your prolific writing both in peer-reviewed and professional association journals and for your textbooks, including the very popular 'Principles and Practice of Phytotherapy'. How did this interest in writing develop?
I'm an academic type who did extremely well in my studies, so it was natural for me to start researching about herbs and then putting that information together into textbooks. In terms of my role in writing research papers, I believe that this is an important element of how we can advance the profession both in terms of knowledge and status.

You have directed the research program at MediHerb for many years. What are your thoughts about research in natural medicine (e.g., the role of research, funding, research capacity among natural medicine practitioners)?
As I said above, basically I believe it is absolutely vital that we continue to do research. Unfortunately, the bias in the system means that natural medicine studies are generally not well funded. So here companies should step in and do as much as they can and that has certainly been my driver in directing the research at MediHerb.

And you raise an interesting point that natural medicine practitioners are a hugely valuable research resource. Some of our recent research projects at MediHerb are reflecting this.

Further on this theme, during the Pan Pharmaceuticals fiasco I was interviewed by the ABC as part of their Background Briefing programme. They raised the topic, challenging me, of the evidence behind natural medicine. I responded that yes of course we are now growing our evidence base and have accumulated a large number of clinical studies. However, I added that the real evidence, the evidence that really mattered, was that being generated at the coalface by the thousands of natural therapists around this country helping people who could not be helped by conventional medicine. I also believe we need to be capturing this better.

What is your view of the current state of natural medicine in Australia today and where do you think natural medicine is heading?
I think we have some headwinds. I am not someone who usually subscribes to conspiracy theories, but I do believe there is now an active campaign happening at many levels in our community to discourage people from using natural medicines, seeking to damage the reputations of practitioners and the remedies that they use. To some extent I believe we have become victims of our own success. There is more awareness of what we have to offer, and we have the evidence now, so we are seen as a significant threat to the vested interests in mainstream medicine and big pharma.

In contrast, I think our profile among young people is less than it has been in the past. I hear, for example, that Bastyr University in the United States is struggling to reach enrolment targets.

I further think that the TGA is more bureaucratic now and does not look upon natural treatments as favourably as it has in the past. This is resulting in some recent examples of the profession not being regarded as being sufficiently important to stop the unnecessary loss of certain herbs, for example bearberry, Artemisia species, damiana, meadowsweet and so on. It was a big impost on the industry to prepare submissions to make these herbs available again. The reasons why these herbs became unavailable were not valid, but we did not have a strong enough voice apparently for the TGA to treat our profession respectfully.

On the other hand, biomedical science is validating out approach on a daily basis. Some of the advice from authoritative bodies, for say prevention of cancer or dementia, reads like it is straight out of a natural therapy textbook. This, together with new research on uses of herbs and supplements, will help make us even more clinically effective. In time, science will give us the new Ginkgo or the new curcumin, and I find this hugely exciting.

With the ability to better identify people at risk from the major diseases of ageing, people will more and more seek preventative treatments that are safe and

effective. Herbs and supplements will come to the forefront here as long as the vested interests don't hold sway.

What are the biggest issues facing natural medicine today?

It is all about the goal of becoming acknowledged as a legitimate form of medical care, especially in preventative and lifestyle medicine. We need to help journalists and politicians understand us better because they are key people who can influence our progress, or not. Our value to the community is hugely underestimated by these groups of people.

Also, we have no coverage from health funds at present and all attempts to change this appear to have failed. This is a travesty of natural justice which is unfair both to practitioners and patients. And yet we haven't been able to influence this. It is a clear signal that our contribution to healthcare in Australia is deemed to be insignificant by politicians.

This loss of health fund cover is even more relevant now, as with the recent inflation shock our medicines and overheads are more expensive and this must be passed on to our patients, who are already struggling with the rising cost of living.

Also some rare but significant safety issues are emerging, such as herb-induced liver damage and fatal allergic reactions to herbs. We need to be able to manage these risks in a responsible way without losing access to key herbs.

"SOME OF THE ADVICE FROM AUTHORITATIVE BODIES, FOR SAY PREVENTION OF CANCER OR DEMENTIA, READS LIKE IT IS STRAIGHT OUT OF A NATURAL THERAPY TEXTBOOK. THIS, TOGETHER WITH NEW RESEARCH ON USES OF HERBS AND SUPPLEMENTS, WILL HELP MAKE US EVEN MORE CLINICALLY EFFECTIVE."

How do you suggest that these issues be addressed?

This requires the input of people wiser than me. But here are a few ideas. We firstly need to get more positive stories in the media, perhaps championed by a Michael Mosley type of media personality. Lobbying politicians at all levels is a must, and it needs to be done comprehensively and consistently. And some way we need to have the media carry more stories on all the positive clinical trials, rather than focusing on the few negative ones, as they do. Journalists drink the drug company Kool-Aid (see my recent Grumpy Old Herbalist videos), but they treat our studies with indifference or scepticism. Why is that?

We can also all help to convey the good news about natural medicine via social media; I am working hard on this aspect myself.

Are there any other comments you'd like to make?

The strong interest in medicinal cannabis and psychedelic mushrooms shows that a good story can completely change thinking. These examples also challenge the prejudice that medicinal plants are just an expensive placebo. We should be singing off the same songsheet for other highly effective herbal remedies.

But there is also more to this phenomenon. There is a host of highly active plants that we currently cannot use, such as Rauwolfia, Iboga and Mitragyna. I believe future research will show just how valuable and superior these plants are compared to synthetic drugs. We need to set up some mechanism so we can access these plants to use in our clinics.

Fair Dismissals: *What is a Fair Dismissal?*

Ingrid Pagura | BA, LIB

Many of you would be familiar with the term 'unfair dismissal' and understand that it means that the dismissal was objectively considered to be harsh, unjust and unreasonable.

Hopefully, everyone now knows the steps an employer should follow to make sure they don't leave themselves open for an unfair dismissal claim. Every employer must have:

- A valid reason based on the employee's capacity or conduct
- Warned the employee of any issues with their capacity or conduct, and about any unsatisfactory performance before being sacked on that basis
- Given the employee an opportunity to respond to any alleged issues with their capacity or conduct
- Allowed the employee to have a support person in any dismissal-related discussions.

There are other procedural issues as well: for example, it must have been preceded by a minimum employment period, and it cannot have been a genuine redundancy. For more information, please see Fair Work Australia Small Business Fair Dismissal Code.

I thought it would be useful to look at when a dismissal could be fair and warranted. Usually, if the employee has engaged in serious and wilful misconduct, this may be enough to validate their termination. Please note however, that each situation is unique, and the following are just some categories of misconduct. Always seek legal advice about your own circumstances.

There are three elements that usually point towards serious misconduct:

- The conduct was wilful or deliberate and inconsistent with the employment continuing.
- The conduct caused serious and imminent risk to the health or safety of a person.
- The conduct caused serious and imminent risk to the reputation, viability or profitability of the employer's business.

Generally, it isn't enough to show that the conduct was intentional; there also needs to be the element of harm or risk. So, what are some examples of serious misconduct?

- Theft
- Fraud
- Assault
- Intoxication
- Refusal to carry out a lawful and reasonable instruction that is consistent with the employee's employment contract.

The alleged serious misconduct must be the real reason for the sacking. The employer must have proof of the conduct, and it cannot be obtained by illegal means.

However, even in these situations, if the sacking is deemed to be a harsh response to their conduct, the employee may still have a valid case. For example, in the case of fraud, if the amount in question was only small, or was taken by mistake, going straight to a dismissal without any warning may seem harsh. In the case of theft, stealing a pen would not be seen as serious misconduct, though stealing boxes of pens for resale might.

An employee sacked for fighting in the workplace or assaulting someone, is usually deemed to have engaged in serious misconduct, as violence is never tolerated in a workplace and is a breach of the Work Health and Safety Act, in that it puts others at risk of harm. Again, there must be proof of this conduct, and that there were no extenuating circumstances that would render dismissal over it harsh. Some examples of extenuating circumstances would be acting in self-defence, a long period of service with no prior misbehaviour, or that the act was a one-off incident.

An employee may be sacked if their conduct or capacity affects the safety and welfare of other employees: for

example, their behaviour caused a hazard that led to another worker being injured. However, in these situations it is also necessary to look at the severity of the breach. Was it intentional or inadvertent, what are the workplace policies on safety procedures, how much training had the employee had, and whether they were a supervisor and as such had a higher responsibility to lead by example.

What if a worker were sacked for misconduct that doesn't fall into the serious misconduct category? Can this still be a fair dismissal? Yes it can, but again, the employer must show they have followed the principles outlined above.

Sacking for misconduct usually occurs when the employee breaches company policy or a reasonable and lawful direction of their employer. It can be a valid termination if all employees have faced these same consequences. If the employee can show that others were treated more leniently for the same misconduct, then there may be a problem. You must show that the employee was aware of the policy in place and the consequences of a breach. Some examples could be failing to wear a uniform as required, for example closed in shoes, drinking while on duty, downloading inappropriate materials on a work computer and using a mobile phone while on duty, when expressly prohibited.

Can what an employee does out of hours be a valid reason to terminate them? Not usually, unless it can be shown that the conduct caused serious damage to the employment relationship: for example, publicly criticising your business on social media, wearing your uniform while committing a crime or driving a business vehicle dangerously.

What if the employee can no longer perform the inherent duties of their position? This is called incapacity. An employee is expected to be able to complete the duties they were hired to do, not additional tasks they may have been given. Here again, it would depend on the nature of their incapacity. For example, is it temporary or is the employee never likely to return to work? Generally, if it is unlikely they will ever return to work after 3 months' absence this might be a valid termination; but if the incapacity is temporary, and the employee indicated that they expected to return to work, it won't be seen as incapacity.

An employee may be sacked for abandoning their employment. An employee is deemed to have abandoned their employment if they stop attending their workplace, without an explanation or valid excuse. This can be proven if it is shown that a reasonable person, in the employer's position, would see the employee's behaviour as renouncing their employment.

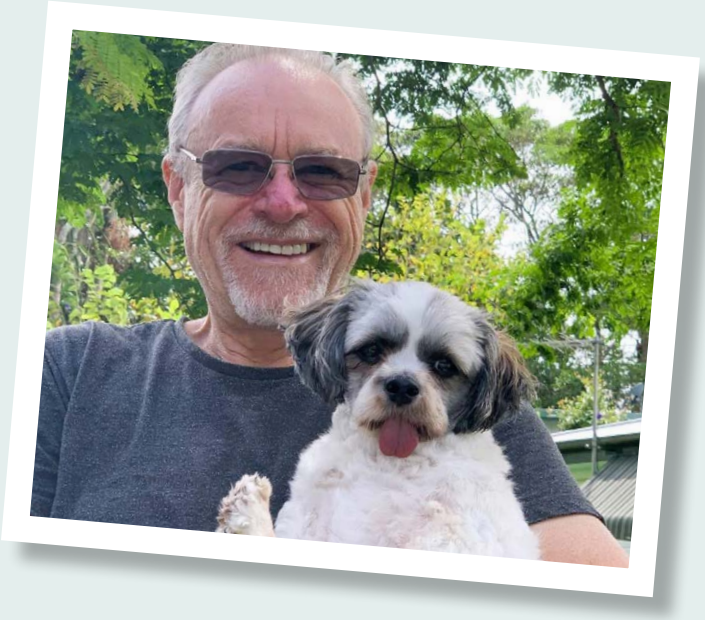
An employee may be made redundant from their employment, essentially meaning that they are no longer required in their employment. A redundancy is genuine if:

- The employer no longer required the person's job to be performed by anyone because of changes in the operational requirements.
- The employer has complied with any obligation in a modern award or enterprise agreement that applied to the employment to consult about the redundancy.
- The employee could not have reasonably been redeployed, either within the company they already worked for, or for an associated entity of the employer.

Even though you may have valid reasons for terminating an employee, it is best practice to follow the guidelines set out above. Always have a valid reason and proof. Always talk to your employees and warn them. Always give them an opportunity to respond and remedy the situation. Always keep records of these discussions.

Going straight to a dismissal, even if fully justified, may lead you to an unfair dismissal claim. They may not be successful, but it will cost you time and money and take you away from the important work of running your business. Seek legal advice if you are uncertain and use the resources found on the Fair Work Commission website: https://**www.fwc.gov.au.**

Vale: Emeritus Professor Stephen Myers



Dr Airdre Grant

Life unfolds for us all in mysterious ways. Sometimes the unfolding is thrilling, other times it brings sobering news. News that makes us reflect on the impermanence and preciousness of life. Stephen Myers was good friend of mine and on the 27th June 2024, he, passed away in Lismore Base Hospital.

People come into our life at different times and for different moments. Some have a lasting impression. Stephen was a person whose presence in the world had impact, as a friend, mentor, teacher, naturopath and academic and researcher. He was a leader in the world of complementary medicine and instrumental in bringing greater acceptance and inclusion of that modality into the mainstream.

Once the tributes started flowing in, I found that there was much more to the man than I knew. I learned about Stephen's social activism, which started early. He was instrumental in the 70's when Friends of the Earth was getting established in Australia. His work included tracking the Ranger Uranium Inquiry, being involved in the anti-woodchip native forests campaign in NSW and the first national meeting at French Island in 1974. Also he was pivotal in setting up Friends of the Earth in NSW.

Above: This photo was taken at the Friends of the Earth office in MacArthur Place, Carlton, Victoria. Circa 1974. Stephen is pictured third from left.

He related once how his interest in natural medicine began, in those heady days of activism and social change. He had moved to Darwin to work in the environment movement and taken with him some natural medicines and a biochemistry textbook. Over the course of time there he became something of a barefoot healer, doing 'footpath' consultations. It was then that he knew he wanted to study natural medicine in earnest.

He went to Melbourne to study naturopathy at Southern School of Natural Therapies (SSNT) in 1979. He was profoundly influenced by his studies there, including doing clinical placement under the watchful eye of natural therapies pioneer, Alf Jacka.

Stephen further deepened his commitment to healing, by studying Western medicine at the highly selective, evidence-based program at Newcastle University. He went on to complete a PhD in clinical pharmacology (in cardiovascular health). Armed with these hard-earned credentials, he was well placed for the work of designing the first university-based degree in naturopathy at Southern Cross University in Lismore, NSW. Things began to merge and he became the Head of the School of Natural and Complementary Medicine there. Between 1995-2001 he led the development and implementation of the Bachelor of Naturopathy program which has since graduated 500 colleagues. This was a very exciting moment in the history of natural medicine and one that has changed the lives of many graduates and staff. At last complementary medicines were getting the recognition and resources they need to be taken seriously in the world and Stephen was in the thick of it.

His work continued. He founded Australia's first naturopathic and complementary medicine Research Centre at Southern Cross (NatMed) and was also actively involved at NICM Health Research Institute, serving on the Research Committee as an Adjunct Professor and researcher.

Stephen's commitment to the integration and acceptance of complementary medicine in Australia was huge. He just kept plugging away. In his work, he raised $8 million in research funding, supervised higher degrees. He did numerous presentations, attended conferences, wrote many publications including three books, 13 book chapters and 145 peer reviewed research papers.

In life, much of our efforts go unsung, but in 2004 he was awarded the prestigious Lady Cilento Award by the Complementary Healthcare Council for his significant contribution to the field of complementary medicine.

He didn't stop there and went on to be an internationally recognised expert and consultant to industry, government and the tertiary sector in herbal medicine, nutraceuticals, therapeutic foods and the public health of complementary medicine.

Stephen Myers was hugely influential in the world of complementary medicine. He worked always toward a goal of recognition and inclusion and he did it through raising educational standards, teaching others how to write and to research and by always being inclusive and supportive of his colleagues. The community has benefitted, directly (through improvements in professional training and higher degree supervision) and indirectly (well qualified and confident practitioners) from his life's work and lifelong commitment to complementary medicine.

Stephen was a very loyal friend and deeply devoted to his marvellous wife, Lily Cubrilo, and to his family. He combined pragmatism with a humour, was a keen cook, and dog lover. We would walk together on the beach at Evans Head, where he lived, and discuss recipes, politics, the state of the world, important philosophical issues such as whether cars should be allowed to drive on beaches and usually end up remarking on the excellence of his dog George.

He will be much missed by friends, family and colleagues.

Above: Stephen with his wife Lily Cubrilo

PRACTITIONER PROFILE

Angela Davison

What has kept you practising for 30+ years?

Passion and results. I had a mixed practice from 1988 treating people and horses then in 2000 I dropped the humans (I could refer them on to excellent practitioners!). I'm driven to find solutions for the individual, excitement, the magic moments when you've helped to turn around a gloomy prognosis. I love helping horses to make positive lasting shifts both physically and mentally. Spurs me on. It's what I do – it's what I am.

What have been the most important changes to natural medicine in your career?

Mainstream recognition and perception of natural therapies – a definite shift in universal consciousness in the year 2000. Easier access to quality research material. Higher standards of education within the profession.

How do you envisage natural medicine developing over the next 30 years, or, what changes in natural medicine would you most like to see?

Unless all natural medicine associations unite under one umbrella I'm afraid big pharma will take over total control. Practitioners of ingestive therapies will then be unable to access their raw tools of trade – this has already started. Natural medicine will be diluted. Unite and be strong – the public deserves this.

What advice do you have for today's emerging practitioners?

Don't get stuck in the scientific box – it can be limiting. Don't disregard empirical knowledge. Do appreciate that what suits one individual may not suit another who may appear to present with similar symptoms/dis-ease.

Always take detailed case notes – build a good referral base.

Be open, read the literature, be across the information from scientific research, but don't believe evidence-based medicine is everything. You can poke holes in every double blind crossover study – it's all useful information for the practitioner but it will never be all.

Experience is the best teacher. Seek out an experienced practitioner to be your mentor – not someone who holds all the academic qualifications but has little or no practical experience.

Everything you have learned and worked hard for to achieve practitioner status is a brilliant base from which you will grow. Always ask questions and never dismiss your intuition.

Enjoy your chosen path!

Angela Davison specialises in Herbal Medicine and Flower Remedies

Regulation Report

Chantel Ryan | Chair, Regulatory Committee

ATMS wins trademark legal battle against Dietitians Association of Australia

ATMS has successfully defended a trademark claim by the Dietitians Association of Australia, which sought to trademark the term 'Accredited Nutritionist'. On behalf of its members, ATMS has been fighting against registration of this trademark since 2021. We finally had a court hearing in April and are delighted to report that the court ruled in our favour, ensuring that the term "Accredited Nutritionist" remains accessible to our members.

See **https://jade.io/article/1081289?at.hl=Australian+Traditional+Medicine+Society+Ltd** for the full court decision.

NTREAP Update -timeline extended

Following National Therapies Review stakeholder update teleconferences with the Health department in May and June, the expectation is that the final report for the 16 modalities will be submitted to the Health Minister in September 2024. From there, the Minister should be in a position to make recommendations on updating the status of these modalities for health funds. Should the outcomes be positive, ATMS will launch an advocacy campaign to expedite the rule change, ensuring that recommendations are actioned as quickly as possible.

For more information see **https://www.health.gov.au/topics/private-health-insurance/private-health-insurance-reforms/natural-therapies-review-2019-20**.

ATMS updates its Record Keeping Policy

ATMS recently updated its Record Keeping Policy by simplifying and modernising some of the language and adding new requirements and recommendations to reflect online record-keeping and cyber-security. The information regarding dispensing records will be moved into a separate Dispensing Policy, which will be released soon.

ATMS updates its Infection Control Policy

The Infection Control Policy was recently updated to broaden its application and simplify and modernise the language. It also now refers to the updated government recommendations pursuant to the NHMRC's Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019) **https://app.magicapp.org/#/guideline/Jn37kn**. The policy summarises the Standard Precautions that may apply to our members in clinic. ATMS encourages all members to make themselves familiar with the policy, the NHMRC Guidelines and any Australian Standards applicable to their modality to ensure their practice is compliant.

AHPRA National Law Amendment

A series of changes to national law come into effect in July, including new powers to prevent unregistered practitioners from treating patients, and making it possible for a practitioner's alternative name to be listed on the register alongside their legal name.

The new changes complete a series of reforms to the Health Practitioner Regulation National Law agreed by all health ministers aimed at strengthening public protection and improving the operation of the National Registration and Accreditation Scheme.

You can read more about the new changes as well as find information about all the changes over the past two years at **https://www.ahpra.gov.au/About-Ahpra/Ministerial-Directives-and-Communiques/National-Law-amendments.aspx**.

Acupuncture and TCM

***YE M, Zhang L, Yuan A.*-H, Xie H-Y, Xi Y, Yang J.** Rules of acupoint selection in treatment of cancer-related insomnia with acupuncture and moxibustion based on data mining technology. Zhen ci yan jiu (Acupuncture research). 2024; 49(7): 726–735. Doi: 10.13702/j.1000-0607.20240085.

Objectives: To analyze the rules of acupoint selection in treatment of cancer-related insomnia with acupuncture and moxibustion by data mining technology.

Methods: The articles of cancer-related insomnia treated with acupuncture and moxibustion were searched from CNKI, Wanfang, VIP, SinoMed, PubMed, WOS, Cochrane, and Embase databases, from the inception of each database to January 5, 2024. The prescription database of acupuncture and moxibustion for cancer-related insomnia was established. The descriptive analysis was conducted on the use frequency, meridian tropism and distribution of acupoints. Using SPSS Modeler 18.0 Apriori algorithm, the association rules of acupoint prescriptions were analyzed. With Cytoscape3.9.1 software used, the complex network diagram was plotted, and the cluster analysis of high-frequency acupoints was performed by SPSS26.0 software.

Results: Forty-one articles were included, and 67 prescriptions were extracted with 89 acupoints involved, and the total use frequency was 447 times. The top 4 acupoints of the high use frequency were Baihui (GV20), Sanyinjiao (SP6), Shenmen (HT7) and Shenting (GV24). The included meridians were the governor vessel, the spleen meridian, the bladder meridian, the conception vessel, the heart meridian and the stomach meridian. The selected acupoints were mostly distributed on the head, the neck and and the upper and lower limbs. The special acupoints of the high use frequency included the five-Shu points, the crossing points and yuan -primordial points. Regarding acupoint combination, GV24, SP6, HT7, and GV20 were highly correlated. The three effective clusters were categorized among the top 12 acupoints of the high use frequency.

Conclusions: In treatment of cancer-related insomnia with acupuncture and moxibustion, the principle focuses on supporting the healthy qi , eliminating pathogens, regulating yin and yang , promoting the circulation of the governor vessel for regulating the spirit, and tranquilizing the mind. The core acupoint prescription may includes GV24, SP6, HT7 and GV20; combined with Zusanli (ST36) and Yintang (GV4 +) to enhance the therapeutic effect.

***Klocke C, Rhein K, Cramer H, Kröger B, Wetzel AJ, Vagedes J, Mauch H, Beißner F, Joos S, Valentini J.* A randomized controlled trial of acupuncture and receptive music therapy for sleep disorders in the elderly-ELAMUS: study protocol.** BMC complementary medicine and therapies. 2024; 24(1): 295. Doi: 10.1186/s12906-024-04581-4.

Background: Globally, the demographic shift towards an aging population leads to significant challenges in healthcare systems, specifically due to an increasing incidence of multimorbidity resulting in polypharmacy among the elderly. Simultaneously, sleep disorders are a common complaint for elderly people. A treatment with pharmacological therapies often leads to side effects causing a high potential for dependency. Within this context, there is a high need to explore non-pharmacological therapeutic approaches. The purpose of this study is to evaluate the effectiveness of acupuncture and music therapy, both individually and combined as a multimodal therapy, in the treatment of sleep disorders in individuals aged 70 years and older.

Methods: We conduct a confirmatory randomized controlled trial using a two-factorial study design. A total of n = 100 elderly people receive evidence-based standard care information for age-related sleep disorders. Beyond that, patients are randomly assigned into four groups of n = 25 each to receive acupuncture, receptive music therapy with a monochord, multimodal therapy with both acupuncture and music therapy, or no further therapy. The study's primary outcome measurement is the improvement in sleep quality as assessed by the Pittsburgh Sleep Quality Index (PSQI) (global score), at the end of intervention. Additionally, depression scores (Geriatric Depression Scale), health-related quality of life (Short-Form-Health Survey-12), neurovegetative activity measured via heart rate variability, and safety data are collected as secondary outcomes. Using a mixed-methods approach, a qualitative process evaluation will be conducted to complement the quantitative data.

Discussion: The study is ongoing and the last patient in is expected to be enrolled in April 2024. The results can provide valuable insights into the effectiveness of non-pharmacological interventions for sleep disorders among the elderly, contributing to a more personalized and holistic approach in geriatric healthcare.

Trial Registration: German Clinical Trials Register (DRKS00031886)

***LI H, Ye XF, Su YS, He W, Zhang JB, Zhang Q, Zhan LB, Jing XH.* Mechanism of acupuncture and moxibustion on promoting mucosal healing in ulcerative colitis.** Chinese Journal of Integrative Medicine. 2024; 29(9): 847–856, 2023. Doi: 10.1007/s11655-022-3531-x.

The latest guideline about ulcerative colitis (UC) clinical practice stresses that mucosal healing, rather than anti-inflammation, is the main target in UC clinical management. Current mucosal dysfunction mainly closely relates to the endoscopic intestinal wall (mechanical barrier) injury with the imbalance between intestinal epithelial cells (IECs) regeneration and death, as well as tight junction (TJ) dysfunction. It is suggested that biological barrier (gut microbiota), chemical barrier (mucus protein layer, MUC) and immune barrier (immune cells) all take part in the imbalance, leading to mechanical barrier injury. Lots of experimental

studies reported that acupuncture and moxibustion on UC recovery by adjusting the gut microbiota, MUC and immune cells on multiple targets and pathways, which contributes to the balance of IEC regeneration and death, as well as TJ structure recovery in animals. Moreover, the validity and superiority of acupuncture and moxibustion were also demonstrated in clinic. This study aims to review the achievements of acupuncture and moxibustion on mucosal healing and analyse the underlying mechanisms.

Aromatherapy

WENG, Y.-X. Wang HC; Chu YL; Wu YZ; Liao JA; Su ZY. Essential oil from Citrus depressa peel exhibits antimicrobial, antioxidant and cancer chemopreventive effects. Journal of the Science of Food and Agriculture. 2024; 10(7), 3982–399. Doi: 10.1002/jsfa.13280

Background: Many diseases may be caused by pathogens and oxidative stress resulting from carcinogens. Earlier studies have highlighted the antimicrobial and antioxidant effects of plant essential oils (EO). It is crucial to effectively utilize agricultural waste to achieve a sustainable agricultural economy and protect the environment. The present study aimed to evaluate the potential benefits of EO extracted from the discarded peels of Citrus depressa Hayata (CD) and Citrus microcarpa Bunge (CM), synonyms of Citrus deliciosa Ten and Citrus japonica Thunb, respectively.

Results: Gas chromatography-mass spectrometry analysis revealed that the main compounds in CD-EO were (R)-(+)-limonene (38.97%), γ-terpinene (24.39%) and linalool (6.22%), whereas, in CM-EO, the main compounds were (R)-(+)-limonene (48.00%), β-pinene (13.60%) and γ-terpinene (12.07%). CD-EO exhibited inhibitory effects on the growth of common microorganisms, including Candida albicans, Escherichia coli, Pseudomonas aeruginosa and Staphylococcus aureus. However, CM-EO showed only inhibitory effects on E. coli. Furthermore, CD-EO exhibited superior antioxidant potential, as demonstrated by its ability to eliminate 1,1-diphenyl-2-picrylhydrazyl and 2,2'-azinobis-3-ethylbenzthiazoline-6-sulfonate free radicals. Furthermore, CD-EO at a concentration of 100 μg mL -1 significantly inhibited 12-O-tetradecanoylphorbol-13-acetate-induced cancer transformation in mouse epidermal JB6 P+ cells ($P < 0.05$), possibly by up-regulating protein expression of nuclear factor erythroid 2-related factor 2 and its downstream antioxidant enzymes, such as NAD(P)H:quinone oxidoreductase 1, heme oxygenase-1 and UGT1A.

Conclusion: These findings suggest that CD-EO exhibits inhibitory effects on pathogenic microorganisms, possesses antioxidant properties and has cancer chemopreventive potential.

Turkmenoglu A, Ozmen D. **Allergenic components, biocides, and analysis techniques of some essential oils used in food products.** Journal of Food Science. 2024; 86(6): 2225–2241. Doi: 10.1111/1750-3841.15753.

Nowadays, almost 300 essential oils (EOs) are commonly traded in the world market, with a prediction to be worth over $14 billion in 2024. EOs are natural preservatives for food products in order to reduce the activity of pathogenic microorganisms, therefore their use as an antioxidant or a preservative in foods has been encouraged. They are not only considered as antimicrobial or flavoring agents, but are also incorporated into food packaging materials. There are several types of EOs which have been approved as food additives by the Food and Drug Administration. Hence, it is important to use safe EO products to minimize possible adverse effect risks such as nausea, vomiting, necrosis, nephropathy, mucous membrane, and skin irritation. This review article gives information about some EOs that are used in the food industries and the types of some allergenic compounds and biocides which could make the EOs hazardous or may cause allergenic reactions in the human body. Besides, some analysis techniques of possible allergenic compounds or biocides in EOs were introduced and supported with the most relevant studies. The overall conclusion from the study is that pregnant women, patients taking drugs (e.g., diabetics) or the having a history of allergy are the most prone to be affected from EO allergenic components. As regards to biocides, organochlorine and organophosphorus types of pesticides that are carried over from the plant may be found mostly in EOs. The most common allergic reaction is skin sensitization and irritation if the EO components are oxidized during storage or transportation. Moreover, drug interactions are one of the other possible adverse effect. Hence, determination of biocides and possible allergenic component concentrations is an essential factor when they are used as a preservative or flavoring agent. The most prominent analysis techniques are gas and liquid chromatography because most of the allergens and biocides are mainly composed of volatile components.

Practical application: Determining of the essential oil's content will be crucial if oils are used for food preservation or flavoring because they may have some hazardous effects, such as nausea, vomiting, necrosis and nephropathy. Therefore, after applying them to the food products, consumers (especially pregnant women) should be informed about their concentration levels and their possible adverse effects are taken into account when they are consumed over toxic limit. For this reason, we reviewed in our study that some allergenic components, biocides and toxic limits of EOs to be used in food products. In addition to this, recent analytical techniques have been explained and discussed which methods are suitable for analysis.

Wang PH, Lin HW, Nguyen TT, Hu CJ, Huang LK, Tam KW, Kuan YC. **Efficacy of aromatherapy against behavioral and psychological disturbances in people with dementia: A meta-analysis of randomized controlled trials.** Journal of the American Medical Directors Association. 2024; 105199. Doi: 10.1016/j.jamda.2024.105199.

Objectives: Behavioral and

psychological symptoms of dementia (BPSD) are common in people with dementia. Aromatherapy may reduce the frequency and severity of BPSD. We conducted a systematic review and meta-analysis of randomized controlled trials (RCTs) to evaluate the efficacy of aromatherapy in relieving BPSD and improving functional ability in people with dementia.

Design: Systematic review and meta-analysis.

Setting and Participants: Patients with dementia receiving aromatherapy.

Methods: A literature search was conducted using PubMed, Embase, and Cochrane Library for RCTs published before March 2024 comparing aromatherapy with control treatments in patients with dementia.

Results: There were 15 trials involving 821 patients. Overall, significant reduction in BPSD was observed after 1 month of aromatherapy treatment. Among 15 trials, 9 reported the Cohen-Mansfield Agitation Inventory (CMAI) score, and 7 evaluated the Neuropsychiatric Inventory (NPI) score. The meta-analysis showed significant improvement in CMAI score (weighted mean difference [WMD] -6.31, 95% CI -9.52 to -3.11) and NPI score (WMD -8.07, 95% CI -13.53 to -2.61) in patients receiving 3 to 4 weeks of aromatherapy compared with the control group. Four of the 15 trials reported improvement in depressive mood and 3 trials reported no significant improvement in functional ability.

Conclusions and Implications: In conclusion, aromatherapy is a safe and viable nonpharmacologic treatment to improve BPSD in people with dementia and its combination with massage showed higher efficacy.

Complementary and alternative medicine

Hoenders R, Ghelman R, Portella C, Simmons S, Locke A, Cramer H, Gallego-Perez D, Jong M. **A review of the WHO strategy on traditional, complementary, and integrative medicine from the perspective of academic consortia for integrative medicine and health.** Frontiers in Medicine. 2024; 11: 1395698. Doi: 10.3389/fmed.2024.1395698.

Despite important progress in modern medicine, widely regarded as an indispensable foundation of healthcare in all highly advanced nations and regions, not all patients respond well to available treatments in biomedicine alone. Additionally, there are concerns about side effects of many medications and interventions, the unsustainable cost of healthcare and the low resolution of chronic non-communicable diseases and mental disorders whose incidence has risen in the last decades. Besides, the chronic stress and burnout of many healthcare professionals impairs the therapeutic relationship. These circumstances call for a change in the current paradigm and practices of biomedicine healthcare. Most of the world population (80%) uses some form of traditional, complementary, and integrative medicine (T&CM), usually alongside biomedicine. Patients seem equally satisfied with biomedicine and T&CM, but in the field of T&CM there are also many challenges, such as unsupported claims for safety and/or efficacy, contamination of herbal medicines and problems with regulation and quality standards. As biomedicine and T&CM seem to have different strengths and weaknesses, integration of both approaches may be beneficial. Indeed, WHO has repeatedly called upon member states to work on the integration of T&CM into healthcare systems. Integrative medicine (IM) is an approach that offers a paradigm for doing so. It combines the best of both worlds (biomedicine and T&CM), based on evidence for efficacy and safety, adopting a holistic personalized approach, focused on health. In the last decades academic health centers are increasingly supportive of IM, as evidenced by the foundation of national academic consortia for integrative medicine in Brazil (2017), the Netherlands (2018), and Germany (2024) besides the pioneering American consortium (1998). However, the integration process is slow and sometimes met with criticism and even hostility. The WHO T&CM strategies (2002-2005 and 2014-2023) have provided incipient guidance on the integration process, but several challenges are yet to be addressed. This policy review proposes several possible solutions, including the establishment of a global matrix of academic consortia for IM, to update and extend the WHO T&CM strategy, that is currently under review.

Makoni L, Manduna IT, Mbiriri AL. **A review of whole-medical systems and holistic care approach for type 2 diabetes and associated metabolic syndrome.** Journal of Integrative Medicine. 2024; 22(3): 199–209. Doi: 10.1016/j.joim.2024.04.001.

Whole-person care and holistic care approach has been proposed for complementary and integrative health care for type 2 diabetes mellitus. However, some doubts still exist on the feasibility of replicating processes followed in clinical trials and observational studies in real-world settings. This narrative literature review summarized and assessed existing clinical evidence (clinical trials, observational studies, and case reports) describing holistic and integrated care approach in adult and adolescent individuals with type 2 diabetes mellitus in clinical practice. The goal was to highlight existing evidence for implementation and outcomes of whole-medical systems and holistic integrated care approach for type 2 diabetes mellitus. A nonsystematic literature search was performed on Google Scholar, PubMed, Web of Science, ProQuest and ScienceDirect to identify clinical evidence from different parts of the world, evaluating the use of whole-medical systems and/or holistic care interventions in clinical practice for management of type 2 diabetes mellitus. Relevant keywords were used in the search. Data were analyzed using content analysis and simple descriptive statistics (percentages). Most of the studies (64%) were mainly conducted in Eastern countries (India, China and Israel) while

36% of the studies were conducted in the Western countries (USA, Netherlands, Canada and Mexico). Lifestyle medicine and integrated naturopathy were shown to be the commonly used whole-medical systems for type 2 diabetes mellitus management. Significant improvements in type 2 diabetes parameters, medication use, other symptoms, and overall feeling of wellness were observed in all studies. This review study revealed limited utilization and/or documentation of whole-medical systems or holistic care treatments for type 2 diabetes mellitus in regions of the world other than eastern countries. Lifestyle medicine, naturopathy, yoga, Ayurveda and traditional Chinese medicine were shown to be effective for type 2 diabetes mellitus, either as an alternative or as a complementary therapy.

Herbal medicine

Li N, Liang Y, Zhang L, Xu C, Wang L. **Neolignans in Magnolia officinalis as natural anti-Alzheimer's disease agents: A systematic review.** Ageing Research Reviews. 2024; 99: 102398. Doi: 10.1016/j.arr.2024.102398.

Background: Magnolia officinalis, a traditional herbal medicine widely used in clinical practice, exerts antibacterial, anti-tumor, anti-inflammatory, antioxidant, and anti-aging activities. Neolignans are the main active ingredients of M. officinalis and exert a wide range of pharmacological effects, including anti-Alzheimer's disease (AD) activity.

Objective: To summarize the published data on the therapeutic effect and mechanism of neolignans on AD in vivo and in vitro.

Methods: PubMed, Web of Science, Google Scholar, and Scopus were systematically reviewed (up to March 1, 2024) for pre-clinical studies.

Results: M. officinalis-derived neolignans (honokiol, magnolol, 4-O-methylhonokiol, and obovatol) alleviated behavioral abnormalities, including learning and cognitive impairments, in AD animal models. Mechanistically, neolignans inhibited Aβ generation or aggregation, neuroinflammation, and acetylcholinesterase activity; promoted microglial phagocytosis and anti-oxidative stress; alleviated mitochondrial dysfunction and energy metabolism, as well as anti-cholinergic deficiency; and regulated intestinal flora. Furthermore, neolignans may achieve neuroprotection by regulating different molecular pathways, including the NF-κB, ERK, AMPK/mTOR/ULK1, and cAMP/PKA/CREB pathways.

Conclusions: Neolignans exert anti-AD effects through multiple mechanisms and pathways. However, the exact targets, pharmacokinetics, safety, and clinical efficacy in patients with AD need further investigation in multi-center clinical case-control studies.

Li Z, Li Y, Liu C, Gu Y, Han G. **Research progress of the mechanisms and applications of ginsenosides in promoting bone formation.** Phytomedicine. 2024; 129: 155604. https://doi.org/10.1016/j.phymed.2024.155604

Background: Bone deficiency-related diseases caused by various factors have disrupted the normal function of the skeleton and imposed a heavy burden globally, urgently requiring potential new treatments. The multi-faceted role of compounds like ginsenosides and their interaction with the bone microenvironment, particularly osteoblasts can promote bone formation and exhibit anti-inflammatory, vascular remodeling, and antibacterial properties, holding potential value in the treatment of bone deficiency-related diseases and bone tissue engineering.

Purpose: This review summarizes the interaction between ginsenosides and osteoblasts and the bone microenvironment in bone formation, including vascular remodeling and immune regulation, as well as their therapeutic potential and toxicity in the broad treatment applications of bone deficiency-related diseases and bone tissue engineering, to provide novel insights and treatment strategies.

Methods: The literature focusing on the mechanisms and applications of ginsenosides in promoting bone formation before March 2024 was searched in PubMed, Web of Science, Google Scholar, Scopus, and Science Direct databases. Keywords such as "phytochemicals", "ginsenosides", "biomaterials", "bone", "diseases", "bone formation", "microenvironment", "bone tissue engineering", "rheumatoid arthritis", "periodontitis", "osteoarthritis", "osteoporosis", "fracture", "toxicology", "pharmacology", and combinations of these keywords were used.

Results: Ginsenoside monomers regulate signaling pathways such as WNT/β-catenin, FGF, and BMP/TGF-β, stimulating osteoblast generation and differentiation. It exerts angiogenic and anti-inflammatory effects by regulating the bone surrounding microenvironment through signaling such as WNT/β-catenin, NF-κB, MAPK, PI3K/Akt, and Notch. It shows therapeutic effects and biological safety in the treatment of bone deficiency-related diseases, including rheumatoid arthritis, osteoarthritis, periodontitis, osteoporosis, and fractures, and bone tissue engineering by promoting osteogenesis and improving the microenvironment of bone formation.

Conclusion: The functions of ginsenosides are diverse and promising in treating bone deficiency-related diseases and bone tissue engineering. Moreover, potential exists in regulating the bone microenvironment, modifying biomaterials, and treating inflammatory-related bone diseases and dental material applications. However, the mechanisms and effects of some ginsenoside monomers are still unclear, and the lack of clinical research limits their clinical application. Further exploration and evaluation of the potential of ginsenosides in these areas are expected to provide more effective methods for treating bone defects.

Jin X, Wang Z, Ma J, Liu C, Bai X, Lan Y. **Electronic eye and electronic tongue data fusion combined with a GETNet model for**

the traceability and detection of Astragalus. Journal of the Science of Food and Agriculture. 2024; 104(10): 5930–5943. Doi: 10.1002/jsfa.13450.

Background: Astragalus is a widely used traditional Chinese medicine material that is easily confused due to its quality, price and other factors derived from different origins. This article describes a novel method for the rapid tracing and detection of Astragalus via the joint application of an electronic tongue (ET) and an electronic eye (EE) combined with a lightweight convoluted neural network (CNN)-transformer model. First, ET and EE systems were employed to measure the taste fingerprints and appearance images, respectively, of different Astragalus samples. Three spectral transform methods - the Markov transition field, short-time Fourier transform and recurrence plot - were utilized to convert the ET signals into 2D spectrograms. Then, the obtained ET spectrograms were fused with the EE image to obtain multimodal information. A lightweight hybrid model, termed GETNet, was designed to achieve pattern recognition for the Astragalus fusion information. The proposed model employed an improved transformer module and an improved Ghost bottleneck as its backbone network, complementarily utilizing the benefits of CNN and transformer architectures for local and global feature representation. Furthermore, the Ghost bottleneck was further optimized using a channel attention technique, which boosted the model's feature extraction effectiveness.

Results: The experiments indicate that the proposed data fusion strategy based on ET and EE devices has better recognition accuracy than that attained with independent sensing devices.

Conclusion: The proposed method achieved high precision (99.1%) and recall (99.1%) values, providing a novel approach for rapidly identifying the origin of Astragalus, and it holds great promise for applications involving other types of Chinese herbal medicines.

Massage, myotherapy and other bodywork

Sagheer ZS, Dawood HA. **Effectiveness of foot massage on selected physiological parameters among patients with acute coronary syndrome.** Current Problems in Cardiology. 2024; 49(11): 102780. https://doi.org/10.1016/j.cpcardiol.2024.102780

Background: Acute coronary syndrome characterizes the spectrum of myocardial ischemia states, which include non-ST elevated myocardial infarction (MI), and angina.

Objective: The aim of the present study is to determine the effectiveness of foot massage on selected physiological parameters among patients with acute coronary syndrome.

Methods: A quasi-experimental study was conducted in Karbala Center for Cardiac Diseases and Surgery from December 25th, 2023, to May 7th, 2024. A nonprobability purposive sampling consisted of 60 patients with acute coronary syndrome in the intervention group were instructed to performed four-step foot massage similarly 5 min for each foot. While patients in the control group just received routine medical treatment. The physiological parameters were checked in the two groups before, after 5 min, and 10 min after the foot massage. The study instrument consisted of two main parts: part one included patient's socio demographics and clinical data, and the second part was used to assess the physiological parameters. Statistical tests were conducted using the software SPSS, version 24, with a level of significance of 5 % (p value <0.05).

Results: That are a significant statistical differences between the mean of the selected physiological parameters readings for the study group except reading of pulse pressure, while there is no significant statistical difference between the mean of the readings of the selected physiological parameters for the control group except the reading of heart rate.

Conclusion: The study found that the foot massage is effective for improving the blood pressure, heart rate, mean arterial pressure.

Hou Y, Liu F, Lin N, Gao S. **Systematic review and meta-analysis of repetitive transcranial magnetic stimulation (rTMS) for activities of daily living in Alzheimer's disease.** Neurological Sciences: Official Journal of the Italian Neurological Society and of the Italian Society of Clinical Neurophysiology. . 2024. Doi: 10.1007/s10072-024-07709-z.

Objective: This systematic review of randomized controlled trials (RCTs) was conducted to assess the effect of repetitive transcranial magnetic stimulation (rTMS) on activities of daily living (ADLs) in Alzheimer's disease (AD) patients.

Data Sources: Ten databases were retrieved for pertinent Chinese and English literatures published up until January 2024.

Review Methods: All RCTs of rTMS for ADLs in AD were included in this meta-analysis. Two researchers independently selected the literatures, retrieved the data of included literatures, accessed risk-of-bias of literatures with the Cochrane Collaboration's quality criteria and then cross-checked. Meta-analysis was carried out with Cochrane's Review Manager (RevMan, version 5.4). The PRISMA guidelines were followed in this systematic review.

Results: The 37 literatures involving 2461 patients with AD were included in this study. Compared with the control groups received the interventions such as routine pharmacotherapy, cognitive training, ect., with/without sham-rTMS, the experiment groups received the interventions of the control groups and rTMS. The findings were as follows: ADL scale [mean difference (MD) = -3.92, 95%CI (-4.93, -2.91), P < 0.00001]; Barthel Index (BI) [MD = 9.75, 95% CI (6.66, 12.85), P < 0.00001]; Modified Barthel Index (MBI) [MD = 5.43, 95% CI (3.13, 7.73), P < 0.00001]. The differences were statistically significant for all indicators.

In 29 studies, rTMS stimulation sites were located in the dorsolateral prefrontal cortex (DLPFC).

Conclusion: The rTMS could improve the ADLs in AD patients, and the DLPFC was a frequently used stimulation site of the rTMS for AD treatment.

Nemati D, Munk N, Kaushal N. **Identifying behavioral determinants and stage of readiness for performing knee massage among individuals with knee osteoarthritis: An observational study.** Journal of Integrative Medicine. 2024; 22(1): 54–63. Doi: 10.1016/j.joim.2024.01.006

Objective: Patients who experience knee osteoarthritis or chronic knee pain can alleviate their symptoms by performing self-knee massage. Understanding the readiness and types of determinants needed to facilitate self-knee massage is needed to design effective, theory-informed interventions. The primary objective of this study was to apply the transtheoretical model of behavior change to identify how factors, which include the type of knee condition and pain level, predict an individual's readiness to adopt self-knee massage. The secondary objective employed the capability, opportunity and motivation-behavior (COM-B) model to identify relevant determinants that are predictive of an individual's readiness to undertake self-knee massage.

Methods: An observational study design was used to recruit individuals with knee osteoarthritis (n = 270) and chronic knee pain (n = 130). Participants completed an online survey that assessed the transtheoretical model of behavior change stages, COM-B determinants (capability, opportunity and motivation), along with self-administered massage behavior. Multivariate analysis of covariance and structural equation modeling were used to test the primary and secondary objective, respectively.

Results: Participants who had knee osteoarthritis scored higher on the action stage compared to those with chronic pain (P = 0.003), and those who experienced greater level of pain scored higher in the contemplation (P < 0.001) and action phases (P < 0.001) of performing knee massage compared to those with milder pain. The COM-B structural equation model revealed self-administered knee massage to be predicted by capability (β = 0.31, P = 0.004) and motivation (β = 0.29, P < 0.001), but not opportunity (β = -0.10, P = 0.39). Pain level predicted motivation (β = 0.27, P < 0.001), but not capability (β = 0.09, P = 0.07) or opportunity (β = 0.01, P = 0.83). Tests for mediating effects found that determinants of COM-B (motivation and capability) mediate between pain level and self-administered massage behavior (β = 0.10, P = 0.002).

Conclusion: Clinicians and researchers can expect that patients diagnosed with knee osteoarthritis or who have chronic knee pain are ready (action stage) or are considering the behavior (contemplation stage) of self-knee massage. Individuals who report having knee osteoarthritis or chronic knee pain should be coached to develop the skills to perform self-knee massage and helped to develop the motivation to carry out the therapy.

Nutrition

Oboza P, Ogarek N, Wójtowicz M, Rhaiem TB, Olszanecka-Glinianowicz M, Kocełak P. **Relationships between Premenstrual Syndrome (PMS) and diet composition, dietary patterns and eating behaviors.** Nutrients. 2024: 16(12). Doi: 10.3390/nu16121911

Premenstrual Syndrome (PMS) is a disorder between gynecology and psychiatry which includes cognitive, affective, and somatic symptoms from mild to severe. The most severe form of PMS is premenstrual dysphoric disorder (PMDD) and it is considered a form of depressive disorder. An association between diet composition and the occurrence of PMS and its severity have been suggested. As such, this manuscript discusses the relationships between diet composition, dietary patterns and eating behaviors, and PMS. PubMed, Embase, Cochrane, and Web of Science databases were searched for related studies up to 18 January 2024. A text search with the following keywords singly or in combination was conducted: "Premenstrual syndrome", "Nutrition", "Diet composition", "Dietary patterns", and "Eating behaviors". Studies published so far showed that low intake of simple carbohydrates, fats, salt, and alcohol, and high of fresh, unprocessed foods rich in B vitamins, vitamin D, zinc, calcium, and omega-3 fatty acids may help prevent the onset of PMS and reduce the severity of its symptoms. However, further studies are needed to formulate definitive recommendations for the use of vitamins, micronutrients and other dietary ingredients supplementation in women with PMS to improve functioning, overall well-being, and physical health. Large, randomized, double-blind clinical trials across diverse populations are necessary to formulate clear recommendations for supplementation in women with PMS.

Turnwald B, Fishbach A. **Intuitive advertisers: Emotionality in communication about unhealthy food.** Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association. 2024; 43(3): 184–193. Doi: 10.1037/hea0001327.

Objective: This research tests whether people use more emotion-based language when communicating with one another about unhealthy foods than healthy foods. This matters because emotion-based language is more persuasive.

Method: In three observational studies, we analyzed the emotionality in 1,000 online recipe descriptions, 4,403 food reviews, and 1,184 celebrity social media posts. In two experiments (N = 398), we analyzed the emotionality when people are prompted to persuade someone to consume an unhealthy food compared with a healthy food. In one experiment (N = 192), we tested persuasiveness as a function of emotionality.

Results: Speakers use more emotionality when communicating about less healthy foods. People's tendency to

focus more on long-term benefits when communicating about healthy (vs. unhealthy) foods mediated the effect of food type on emotionality. Emotionality, in turn, increases persuasiveness for healthy foods.

Conclusions: People use emotionality in communicating about unhealthy (vs. healthy) foods.

Zuk E, Nikrandt G, Chmurzynska A. **Dietary choline intake in European and non-European populations: Current status and future trends-a narrative review.** Nutrition Journal. 2024; 23(1): 68. Doi: 10.1186/s12937-024-00970-0.

Background: Choline is a nutrient necessary for the proper functioning of the body with a multidimensional impact on human health. However, comprehensive studies evaluating the dietary intake of choline are limited. The aim of this narrative review is to analyze current trends in choline intake in European and non-European populations. The secondary aim was to discuss possible future choline trends.

Methods: The search strategy involved a systematic approach to identifying relevant literature that met specific inclusion criteria. Observational studies and randomized clinical trials were searched for in PubMed and Scopus databases from January 2016 to April 2024. This review includes the characteristics of study groups, sample sizes, methods used to assess choline intake and time period, databases used to determine intake, choline intakes, and the main sources of choline in the diet. The review considered all population groups for which information on choline intake was collected.

Results: In most studies performed in Europe after 2015 choline intake did not exceed 80% of the AI standard value. The mean choline intake for adults in different European countries were 310 mg/day, while the highest value was reported for Polish men at 519 mg/day. In non-European countries, mean choline intakes were 293 mg/day and above. The main reported sources of choline in the diet are products of animal origin, mainly eggs and meat. The available data describing the potential intake of these products in the EU in the future predict an increase in egg intake by another 8% compared to 2008-2019 and a decrease in meat intake by about 2 kg per capita from 2018 to 2030.

Conclusions: In the last decade, choline intake among adults has been insufficient, both in Europe and outside it. In each population group, including pregnant women, choline intake has been lower than recommended. Future choline intake may depend on trends in meat and egg consumption, but also on the rapidly growing market of plant-based products. However, the possible changes in the intake of the main sources of choline may lead to either no change or a slight increase in overall choline intake.

HEALTH FUND UPDATE

Health Fund	Acupuncture	Chinese Herbal Medicine	Counselling	Hypnotherapy	Myotherapy	Nutrition	Remedial Massage (Certificate IV)	Remedial Massage (HLT Diploma or higher level qualification)	Remedial Therapies (No longer ATMS Accredited)	Traditional Chinese Remedial Massage (HLT Diploma or higher level qualification)
Australian Health Management	✓	✓				✓		✓		
Australian Regional Health Group										
ACA Health Benefits Fund	✓	✓			✓		✓	✓	◆	●
Defence Health	✓				✓			✓	◆	●
GMHBA *(Geelong Medical)*	✓	✓			✓			✓	◆	●
Frank Health Fund & Health.com.au	✓	✓			✓			✓	◆	●
Health Care Insurance Limited	✓	✓			✓		✓	✓	◆	●
HBF	✓	✓		✓	✓	✓		✓	◆	
Health Partners		✓			✓		✓	✓		
HIF *(Health Insurance Fund of WA)*	✓	✓			✓		✓	✓	◆	●
Hunter Health *(previously known as Cessnolck DHBF)*	✓	✓			✓		✓	✓	◆	●
Latrobe Health Services	✓				✓		✓	✓	◆	●
MDHF (Mildura District Hospital Fund)	✓				✓	✓	✓	✓		
AIA Health *(previously known as MyOwn Health)*	✓				✓			✓	◆	
Navy Health Fund	✓	✓			✓		✓	✓	◆	●
Nurses & Midwives Health	✓	✓		✓	✓		✓	✓		●
Onemedifund	✓	✓			✓		✓	✓	◆	●
Peoplecare Health Insurance	✓	✓			✓		✓	✓	◆	●
Phoenix Health Fund	✓				✓	✓	✓	✓	◆	●
Police Health Fund (including Emergency Services)	✓	✓			✓		✓	✓	◆	●
Queensland Country Health	✓	✓			✓	✓	✓	✓		●
Reserve Bank Health Society	✓	✓			✓		✓	✓	◆	●
RT Health				✓						
See-u by HBF (previously CUA)					✓					
St Lukes	✓	✓			✓		✓	✓	◆	●
Teachers Health	✓	✓		✓	✓		✓	✓	◆	●
Teachers Union Health	✓				✓		✓	✓	◆	●
Transport Health	✓	✓			✓		✓	✓	◆	●
Westfund	✓	✓			✓	✓	✓	✓	◆	●
Australian Unity	✓	✓		✓	✓	✓		✓		
BUPA	✓	✓						✓		✓
CBHS Health Fund	✓	✓			✓		✓	✓		✓
Doctors Health Fund								✓		
HCF	✓	✓			✓			✓		
Medibank Private	✓	✓	✓	✓		✓		✓		✓
NIB	✓	✓			✓	✓		✓		

✓ *Therapy covered by Fund*

Please note that this table is only a guide to show what funds cover ATMS accredited modalities. If the modality that you are accredited for is not listed, this means that no health fund covers the modality. The only exceptions are Chiropractic and Osteopathy. ATMS accreditation in a modality does not guarantee provider status as all funds have their individual set of strict eligibility requirements. Please see our website www.atms.com.au or contact our office for current requirements. Rebates do not usually cover medicines, only face to face consultations. For further rebate terms and conditions, patients should contact their health fund. Policies may change without prior notice.

◆ ARHG are only recognising Remedial Therapists who are accredited for this modality and were approved for ARHG Provider status under their old criteria.

● ARHG are recognising Chinese Massage, however the eligibility requirements and provider number is exactly the same as Remedial Massage. See ARHG Health Fund Information for further information.

PROVIDER TERMS AND CONDITIONS ARE LOCATED ON THE ATMS WEBSITE UNDER THE HEALTH FUNDS TAB.

The Four Pillars to remain current with Health Fund Registration

1. Maintain ATMS Membership
2. Maintain current First Aid
3. Maintain current Professional Indemnity Insurance (Chinese Medicine practitioners require a minimum of $5 million and Remedial Massage practitioners require a minimum of $2 million)
4. CPE (continuing professional education) (ATMS accepts completed CPE that enhances clinical practice however Health Funds require CPE to be modality specific)

Acupuncture and Chinese Herbal Medicine practitioners must hold current AHPRA registration

Working With Children

Practitioners working with under 18's MUST hold a current WWC (Working With Children Check) in their practising state. Please send ATMS a copy to **info@atms.com.au**

Additionally to holding a current WWC, ATMS require that the parent of the child or guardian MUST be present during the consultation.

Current renewal certification is essential

Please forward all renewals ASAP to prevent disruption of your health fund provider registration: renewals of your insurance, first aid, AHPRA registration and WWC to **info@atms.com.au** as ATMS must hold a current copy at all times for health fund compliance.

*Lapsed membership, insurance or first aid, or non-compliance with CPE, will result in a member being removed from the health funds list. As health funds change their provider eligibility requirements at any given time, upgrading qualifications may be necessary to be re-instated with some health funds.

Clinical Records

Please note that whilst there is no law or regulation requiring patient clinical notes to be taken in English, many of the major health funds do require patient clinical notes to be taken in English. **Failure to do this will be a breach of the Health Funds Terms and Conditions and may result in the practitioner being removed as a provider for that health fund.**

Receipting Information

- Medibank/AHM do not accept handwritten receipts (As of April 2021), they must be electronic.
- Sample receipt can be found on our website in the Health Fund tab
- Receipts must be numbered.
- Only one modality per day can be claimed by a client.

Treating Family, Partners and Business Partners of the Clinic

Health Funds do not permit the payment of benefits if the treated member is a partner, dependent, parent, sibling, or business partner of the servicing provider.

By definition, a provider can only perform one initial consultation with a member. Initial consultations attract a higher benefit than a subsequent consult. Only one 'initial consult' is allowed for any patient per condition.

Health Fund Clinic address requirements

It is **MANDATORY** that you provide the full clinic address with the street number, street name, suburb, state, and post code, phone number and email address. No PO Boxes acceptable. All updates are forwarded to the health funds by ATMS.

***Note Medibank have a limit of 3 clinic addresses for Remedial Massage practitioners and Bupa have a limit of 4 clinic addresses regardless of the modality.**

Sharing provider numbers is fraud and against the law

An Accredited member must never allow anyone to use their provider details, as this constitutes health fund fraud. Health fund fraud is a criminal offence which may involve a police investigation and expulsion from the ATMS Register of Members.

No health funds rebate on mobile services

Mobile Services are services at Hotels, Markets, Retreats or Corporate.

Home visits

Health Funds that do accept home visit services for rebates are: Aust Unity, CBHS, GU Health and NIB. Home Visit must be Stamped or pre-printed on the receipt.

Gift vouchers

Most Health Funds do not accept Gift Vouchers as the person receiving the treatment did not pay for the service. It is up to the Health Fund should they recognise it.

Being a provider implies acceptance of the terms and conditions for the health funds

It is of note that the health funds require practitioners to be in private practice. Some health funds will not recognise claims where accommodation, facilities or services are provided or subsidised by another party such as a public hospital or publicly funded facility. Rebates are only claimable for the face-to-face consultation (not the medicines or remedies); however, this does not extend to mobile work including markets, corporate or hotels.

Online or phone consultations are not recognised for health fund rebates

Please be aware that whilst a health fund may indicate that they provide a rebate for specific modalities, this rebate may only be claimable if the client has the appropriate level of health cover with that fund and has not exceeded any limits on how much they are eligible to claim back over a certain period of time.

Acupuncture & Chinese Herbal Medicine overseas qualification (health funds do not accept any other modality completed overseas)

Health Funds do accept overseas Acupuncture and Chinese Herbal Medicine qualifications. The below documents are required:

- VETASSES letter stating the qualification is equivalent/comparable to the Australian BA Health Science TCM/Acupuncture
- IELTS Overall Band Level 7 in English Competency (Bupa only)

Specific requirements for individual health funds

Australian Health Management (AHM)

Names and details of eligible ATMS members will be sent to AHM. Provider numbers will be populated in the ATMS member portal.

Hypnotherapy - HBF, RT Health, Nurses and Midwives

Names and details of eligible ATMS members will be sent for this modality each month.

Australian Unity

Names and details of eligible ATMS members will be sent to Australian Unity. ATMS members will need to contact Australian Unity initially on 1800 035 360 to register as a provider and to receive provider numbers.

BUPA

Names and details of eligible ATMS members will be sent to BUPA. Provider numbers will be populated in the ATMS member portal.

CBHS Health Fund Limited

Names and details of eligible ATMS members will be sent to CBHS. Use your ATMS member number as your provider number e.g ATMS23345.

For Acupuncture and Chinese Herbal Medicine services, please use your AHPRA number minus the 0's for e.g. if your AHPRA number is CMR0001731686 you would use CMR1731686 as your provider number.

Doctors Health Fund

Names and details of eligible ATMS members will be sent to Doctors Health Fund. Use your ATMS member number as your provider number for e.g., ATMS23345. Please note that Doctors Health Fund only covers Remedial Massage.

HCF

Names and details of eligible ATMS members will be sent to HCF. Use your ATMS member number as your provider number e.g., ATMS23345.

Medibank Private

Names and details of eligible ATMS members will be sent to Medibank Private. Provider numbers will be populated in the member portal as well as emailed directly to the practitioner as an attached letter. This letter is required for HICAPS Registration.

NIB including APIA, AAMI Health Insurance, Qantas Health Insurance & GU Health

Names and details of eligible ATMS members will be sent to NIB. Use your ATMS member number as your provider number e.g ATMS23345 except for GU Health. Members are required to contact GU Health directly on 1800 249 966 to register as a provider and to receive a provider number.

Australian Regional Health Group (ARHG) Refer to Health Funds Table for the individual funds listed under ARHG.

Details of eligible members are sent to ARHG.

The ARHG provider number is based on your ATMS number with additional lettering. To work out your ARHG provider number please follow these steps:

1 Add the letters AT to the front of your ATMS member number

2 If your ATMS number has five digits go to step 3. If it has two, three or four digits, you need to add enough zeros to the front to make it a five-digit number (e.g., 123 becomes 00123).

3 Add the letter that corresponds to your accredited modality at the end of the provider number;

A Acupuncture
C Chinese Herbal Medicine
U Nutrition
Y Myotherapy
R Remedial Massage
M Massage Therapy

For e.g., If your ATMS member number is 123 and accredited for Acupuncture, the ARHG provider number will be AT00123A.

▼ Special condition applies for Remedial Massage for the below funds under ARHG:

- Defence Health▼
- GMHBA ▼ (Including Frank Health Fund)
- HBF (Including GMF Health) ▼
- AIA Health ▼

ARHG -Chinese Massage

ARHG do not recognise Chinese Massage. They categorise it as Remedial Massage. For members that hold a Govt Accredited HLT Diploma of Chinese Remedial Massage HLT50102, HLT50107 or HLT50112 are required to use the 'R' status.

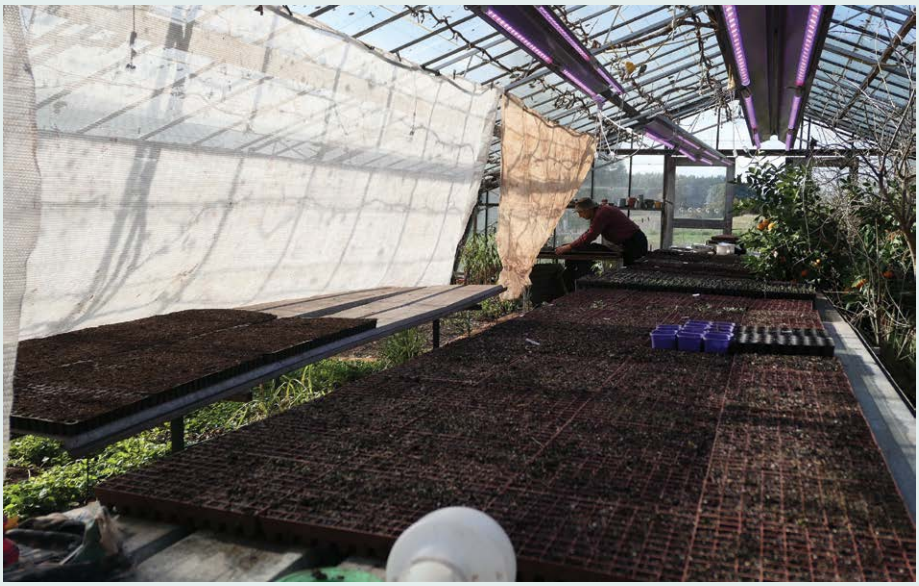
Most Funds recognise the 'R' status however there is a couple that prefer the M status, refer to the health funds table.

HICAPS

ATMS members who wish to activate these facilities need to register directly with HICAPS. HICAPS do not cover all health funds and modalities. Please go to **www.hicaps.com.au** or call 1800 805 780 for further information.

Herbal farming and manufacturing update

by Warren Morey | Herbalist and



Herbal identity is always a critical issue in Herbal manufacturing. All herbs used at PPC are independently tested by Southern Cross University, Analytical Research Laboratory. This TGA licenced testing laboratory are experts in their field. Failures are actually rare as we have well-developed Supplier Approval systems and well-established supply chains. It's usually new herbs where we need to be extra careful.

A question we regularly get asked is: Where is your Alcohol sourced? Our Alcohol is Australian Made from Australian Sugar Cane. It's GMO free. Marleen Herbs use Organic Ethanol sourced out of South America. It's also made from Sugar Cane and is of course GMO free as it's organically certified.

The engine room of PPC Herbs is the Percolator room. It's always busy and the percolators operate 24/7. The room has many safety features to ensure a safe production environment. It's been processing Barberry (Berberis vulgaris), Ashwagandha (Withania somnifera), Globe Artichoke (Cynara scolymus), Oat Seed (Avena sativa), California Poppy (Eschscholzia californica) and Witch Hazel (Hamamelis virginiana)

Farming Update by Ronald van de Winckel (Marleen Herbs)

In Tasmania we sow many of the medicinal plants around the 15th of August in the hothouse. Because there are so many herbs with different requirements for propagation, we need to arrange them in several groups: Sowing is done in trays to get little seedlings for transplanting in the field late October (Chamomile, Feverfew).

However, for some (Cardiospermum, Spilanthes) our unheated hothouse is still too cold, and sowing is delayed until mid-September. The advantage of transplanting seedlings above direct seeding is that competition with weeds will be less, but the little seedlings are more vulnerable to water stress.

We try to grow most herbs by "direct sowing "them in the field either early in August (Oats, Burdock, Echinacea) or later in September (Astragalus, Calendula) for the warmer demanding types.

Fertilizing medicinal plants is also not a one fits all approach, but at Marleen Herbs we grow our crops extensively, aiming at low kilogram yields, for we are of the opinion that stronger, slow growing plants, have better medicinal properties. This makes the issue of fertilising a bit easier since in our approach, only basic fertility of the soil needs to be maintained. This means a general application of lime and for some long living crops (Lavender, Rosemary) organic guano is applied. The main form of "fertilizer" comes from the 2 in 5-year crop rotation with nitrogen fixing crops (Clover) or green manure (Oats, Sunflower and Tick Beans) and of course we are lucky with our naturally rich fertile red soils. *Photo Credit: Emma van de Winckel.*

If you have further questions, please email ***warren.morey@ppcherbs.com.au***

ADVERTORIAL

Herbal and Nutritional Support for Healthy Thyroid Function

By BioMedica Nutraceuticals

Thyroid dysfunctions impair physical and mental health, and their incidence is increasing in western countries, in part due to exposure to insidious environmental pollutants and widespread chronic stress[1,2] Diseases of the thyroid are typically classified as thyroid dysfunction; hypothyroidism and hyperthyroidism, or as structural disease presenting as nodules, goitre and cancer.[3]

In Australia, hypothyroidism is decidedly more prevalent than hyperthyroidism (5.5% vs. 0.6% respectively) and subclinical hypothyroidism (sHT) is the most common thyroid dysfunction. Thyroid autoimmunity represents a significant concern with 10-15% of the population testing positive for thyroid antibodies, a known risk factor in the development of thyroid dysfunction.[3,4]

Withania somnifera (Withania)

Withania is frequently used for its adaptogenic properties; to regulate the hypothalamic-pituitary-adrenal (HPA) axis and increase resistance to stress. Clinical trials support the use of Withania extracts standardised to withanolides, for supporting multiple stress-related presentations,[5-9] which may explain its role in sHT.

An 8 week RDBPCT on W. somnifera, standardised to 5% withanolides (KSM-66) at a dose of 300mg BD, resulted in a normalising effects on thyroid indices in sHT patients. After 8 weeks, compared to baseline Withania treatment significantly: increased serum T4 by 19.6% ($p < 0.001$); increased serum T3 by 41.5% ($p < 0.0001$); and reduced serum TSH by -17.4% ($p < 0.0001$). The differences were also statistically significant compared to placebo.[10]

Nutritional support for the thyroid

Iodine

Iodine deficiency is the most common cause of hypothyroidism worldwide.[11] Iodine is essential for thyroid hormone synthesis and is well known for its role in thyroid function. Deficiency may lead to low T4 levels, hence adequate intake should be ensured to maintain healthy thyroid function.

Selenium

The thyroid gland contains the highest concentration of selenium per gram of tissue. Adequate selenium is required for the function of iodothyronine deiodinases (DIOs) and conversion of T4 to T3. Therefore, deficiency in selenium can lead to decreased DIO enzyme function, decreased synthesis of thyroid hormone, and increased TSH production due to lack of negative feedback control and stimulation of the HPA axis.[12]

Zinc

Preliminary evidence suggests that zinc may play a role in thyroid function by influencing aspects of peripheral thyroid hormone conversion.[13] Zinc also appears to be involved in the formation and mechanism of action of thyrotropin-releasing hormone and T3 binding to its nuclear receptor.[14,15]

Vitamin D

A deficiency of vitamin D has been linked to a number of autoimmune conditions, including autoimmune thyroid disease. Several studies have shown that low vitamin D status is correlated with the presence of both Hashimoto's thyroiditis and Grave's disease, as well as TPO antibodies.[1,2] Immunomodulatory and anti-inflammatory effects are likely to underlie the role of vitamin D in autoimmunity.[16]

Vitamin A

Vitamin A has been shown to regulate thyroid hormone metabolism and inhibit TSH secretion via downregulation of TSH-ß gene expression.[17,18] A deficiency of vitamin A may aggravate thyroid dysfunction caused by iodine deficiency, hence maintaining adequate intake is important.[19]

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Cancer strategy

By Yifan Yang | Sydney Institute of Traditional Chinese Medicine (SITCM)

It is common for families, relatives, and friends to hear about cancer patients. According to statistics from the World Health Organization, the number of cancer patients is indeed increasing year by year. In the past, cancer patients did not seek Traditional Chinese Medicine (TCM), but now more and more patients come to see TCM practitioners. Many cancer patients have been engaged on taking Chinese herbs for cancer support treatment.

The most common question asked by patients when seeing a TCM practitioners are: Do I need to see TCM? When can I take Chinese herbs? Is TCM effective? As for the general strategy on how to deal with cancer, we give a simple answer: Conventional medicine is the mainstay, and Chinese medicine is supplementary.

First of all, cancer requires Western medicine to diagnose, and Traditional Chinese medicine cannot diagnose it by taking a pulse. Due to the occurrence and development of malignant tumours, the treatment principle of Western medicine is to eliminate them, and the main methods are still surgical resection and radiotherapy and chemotherapy to eliminate cancer cells. Various new methods such as targeted therapy and immunotherapy, the general principle is still elimination. The advantage is to eliminate cancer tumours as soon as possible, but the disadvantage is that it has side effects and damages the body, and cancer metastasis and recurrence often cannot be effectively controlled.

Let's take a look at what kind of disease is cancer?

1. Chronic diseases: The World Health Organization recognizes cancer as a chronic disease. Acute leukemia in some children only accounts for a very small number, and most of them develop slowly over more than ten, twenty or thirty years. A patient said that she was diagnosed with breast cancer last week and the doctor is studying the possibility with chemotherapy or surgery. Our answer is: Please think back to how you have been through the past twenty years. Today's disease is the result of long-term accumulation. For specific chronic diseases, the unique advantages of long-term regulating of Traditional Chinese medicine are beneficial.

2. Geriatric diseases: The second distinctive feature of cancer is aging. The high incidence areas of cancer in the world are all long-lived countries, cities or regions. Australia has with very good living environment, it is still among the top ten countries in the world for cancer incidence, and its average life expectancy is long. To treat geriatric diseases, maintain health and resist aging, you may consider to choose a Traditional Chinese Medicine again for the supporting help.

3. Psychosomatic diseases: Cancer experts at home and abroad agree that cancer is a disease of both mind and body. They also believe that long-term mental stress and psychological and emotional effects will make cancer prone to occur and worsen. A good attitude and a positive mental state are also conducive to treatment and recovery. We know that surgery, radiotherapy, and chemotherapy in Western medicine are targeted at physical cancers, while the "opening four gates" in TCM acupuncture, such as XIAO YAO SAN herbal formula to soothe the Liver and relieve negative mental conditions, and AN SHEN DING ZHI WAN herbs to calm the mind, have been used for long years. The practical effect is that Traditional Chinese Medicine, which affects both body and mind, can alleviate mental and emotional diseases and other psychosomatic symptoms and signs.

4. Lifestyle diseases: Bad diet, bad lifestyle, long-term habits, continuous accumulation and over time, cancer might occur. For example, alcohol and meat are related to bowel cancer, emotions are related to breast cancer, smoking is related to lung cancer, pickles are related to gastric cancer, etc. There are a lot of principles in Chinese medicine about maintaining a good lifestyle, such as dietary precautions, regular work and rest, health maintenance in all seasons, Tai Chi, Qigong, etc., which are relatively strict and simple ones designed in accordance with the laws of natural health. of natural lifestyle.

There are in addition other factors, such as genetic, environmental pollution, susceptible groups, etc.

In addition, both Chinese and Western medicine have their own characteristics in the management of cancer. Western medicine uses standard medicines, and the same medicines are used to treat the same disease. However, Chinese medicine uses different prescriptions for the same disease, but different people use different prescriptions to treat patients, distinguishing the two concepts of disease and patient. This kind of Treatment tailored to the specific conditions of different individual patients reflects the rationality of medical thinking.

Therefore, as long as the cancer conforms to the above objective rules, the characteristics and advantages of TCM are appropriate. In essence, we regard cancer as a disease of both Chinese and Western medicine. It can also be compared to the body being the land and cancer being the poisonous weeds. Why do poisonous weeds grow? It turns out that the land changes first. The land has been abused for 30 years. It has become sour and hardened, the ditches are not clear, the fertilizer and water are uneven, and the various elements of the soil are unbalanced, so poisonous weeds grow. Pulling out the weeds doesn't fix the problem. If the land is not improved, the poisonous weeds will grow back later. This is why cancer often recurs. After a long period of herbal treatment, the general condition is improved. This is how TCM can improve the physical constitution and treats cancer patients.

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The ATMS CPE policy is based on the following principles:

- Easily accessible to all members, regardless of geographic location
- Members should not be given broad latitude in the selection and design of their individual learning programs
- Applicable to not only the disciplines in which a member has ATMS accreditation, but also to other practices that are relevant to clinical practice which ATMS does not accredit (e.g. Ayurveda, yoga)
- Applicable to not only clinical practice, but also to all activities associated with managing a small business (e.g. book-keeping, advertising)
- Seminars, workshops and conferences that qualify for CPE points must be of a high standard and encompass both broad based topics as well as discipline-specific topics
- Financially viable, so that costs will not inhibit participation by members, especially those in remote areas
- Relevant to the learning needs of practitioners, taking into account different learning styles and needs
- Collaborative processes between professional complementary medicine associations, teaching institutions, suppliers of therapeutic goods and devices and government agencies to offer members the widest possible choice in CPE activities
- Emphasis on consultation and co-operation with ATMS members in the development and implementation of the CPE program

ATMS members can gain CPE points through a wide range of professional activities in accordance with the ATMS CPE policy. CPE activities are described in the CPE policy document as well as the CPE Record. These documents can be obtained from the ATMS office (telephone 1800 456 855, fax (02) 9809 7570, or email **info@atms.com.au**) or downloaded from the ATMS website at **www.atms.com.au.**

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- **Courtney R. The damaging effects of stress overload and the therapeutic role of breathing practices for stress reduction and resilience**
- **Muscolino J. Palpating the anterior hip – Think hills and valleys**
- **McEwen B. The importance of self-care in everyday life**
- **Bhourasker S. Key to prescribing and studying homoeopathic materia medica: The Stages Template Part 2**
- **Medhurst R. Research in Homeopathy: An update**
- **Berglin S. The mitochondrial maestro: How Ubiquinol supports the health of mitochondria and impacts all body systems**
- **Pagura I. Fair Dismissals: What is a Fair Dismissal?**

As part of your critical reflection and analysis, answer in approximately 100 words the following questions for each of the three articles:

1. What new information did I learn from this article?
2. In what ways will this information affect my clinical prescribing/ techniques and/or my understanding of complementary medicine practice?
3. In what ways has my attitude to this topic changed?

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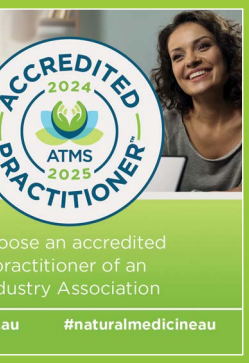

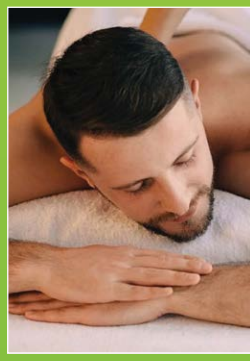

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