

Journal of the
**Australian
Traditional
Medicine
Society**

To Flex
or Extend?

The Lumbar Spine

An anatomical
evaluation of
skin scar tissue

Long-term use of
supplemental Lysine
- is it safe?

Burns and
their management
using homoeopathy

Nutraceuticals for
**Chronic
Inflammatory Diseases**

*Lindsay Brown discusses
inflammation suppression*

ISSN 1326-3390





The Australian Traditional-Medicine Society Limited (ATMS) was incorporated in 1984 as a company limited by guarantee ABN 46 002 844 233.

ATMS HAS THREE CATEGORIES OF MEMBERSHIP

Accredited member
Associate member
Student membership is free

MEMBERSHIP AND GENERAL ENQUIRIES

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LIFE MEMBERS

Dorothy Hall* - bestowed 11/08/1989
Simon Schot* - bestowed 11/08/1989
Alan Jones* - bestowed 21/09/1990
Catherine McEwan - bestowed 09/12/1994
Garnet Skinner - bestowed 09/12/1994
Phillip Turner - bestowed 16/06/1995
Nancy Evelyn - bestowed 20/09/1997
Leonie Cains - bestowed 20/09/1997
Peter Derig* - bestowed 09/04/1999
Sandi Rogers - bestowed 09/04/1999
Maggie Sands - bestowed 09/04/1999
Freida Bielik - bestowed 09/04/1999
Marie Fawcett - bestowed 09/04/1999
Roma Turner - bestowed 18/09/1999
Raymond Khoury - bestowed 21/09/2002
Bill Pearson - bestowed 07/08/2009
* deceased

HALL OF FAME

Dorothy Hall - inducted 17/09/2011
Marcus Blackmore - inducted 17/09/2011
Peter Derig - inducted 17/09/2011
Denis Stewart - inducted 23/09/2012
Garnet Skinner - inducted 22/09/2013

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Tribute to Alan Jones

It is with much sadness that I write these words in regards to the passing of Alan Jones.

Alan was a founding member of ATMS - his membership number was 03. Alan was one of the five original signatory's to the ATMS Constitution signed on the 4/9/1984 with Dorothy Hall, Roy Hand, Christine Berle and Garnet Skinner. The signing was witnessed by Marie Fawcett, ATMS's original and long standing Company Secretary.

Without the wisdom, insight, dedication and strength of pioneers such as Alan, ATMS may not have been created three decades ago. In 1988 when I initially commenced my ATMS directorship, Alan was the ATMS president. I learnt a great deal from Alan. The inaugural president was Dorothy Hall and after Dorothy stepped down, Alan took on this important role as President from 1988 to 1992.

Alan was a professional Homoeopath who brought his passion, experience and expertise to his much loved modality. May I take this opportunity to send my sincere condolences to Alan's family on behalf of the ATMS Board, past and present ATMS staff, the ATMS membership, and the Australian Homoeopathic community.

Thank you Alan for being one of my teachers, may you rest in peace.

Yours faithfully
Maggie Sands

ATMS President | Life member number 28

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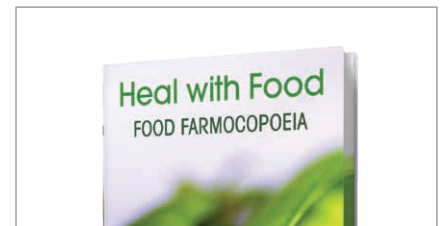
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“It’s great for all of us as practitioners to reflect on why we do what we do and where our passion lies as we work in a truly amazing industry. An industry that often challenges the norm and an industry that is being embraced more and more by the general public.”

President’s Message

Maggie Sands | ATMS President | Life member number 28

Dear Colleagues,
As 2013 draws to a close it is a good time to reflect on the past year but also to reflect on the journey we take to become a natural medicine practitioner. I am sure you will agree the journey of the natural medicine practitioner is in totality, on a road less travelled and less understood by many. Although our practitioner numbers have held strong for decades, our practices are challenged more than ever in these current times. With this in mind it is important that we stay committed and remain a strong community, striving to assist fellow humans, many with serious and challenging health and quality of life issues.

At the ATMS AGM at Tweed Heads recently I spoke about who we are, what we do and why we do what we do. I am sure we all have our own natural medicine practitioner journey story as many of us are drawn to assist others from our own personal life challenges which may have been physical, emotional, mental and or spiritual. Most practitioners I know have a personal story that has led them to take this journey and as a community this assists to bind us in our common intent and purpose. At the AGM I asked

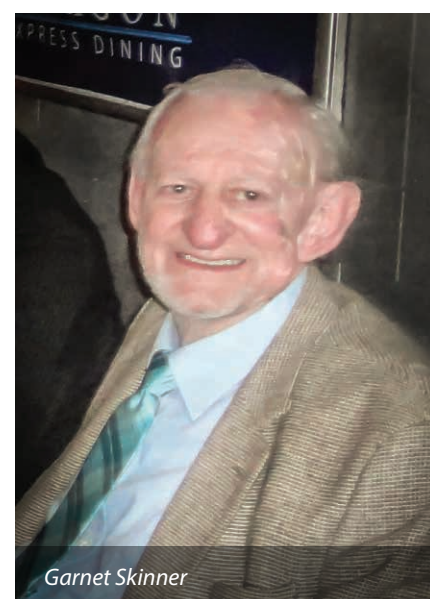
those present if they believe in what they do. The answer was unanimously yes! I then asked, ‘How much do you believe in natural medicine?’ I pose this question to you as you read this now, as it truly is a time to strengthen our belief in ourselves as practitioners, our industry, our practices and the benefits of natural medicine that we share with our clients, family and friends.

One of my favourite sayings is ‘The only way to do great work is to love what you do’ by Steve Jobs (now sadly deceased). It’s great for all of us as practitioners to reflect on why we do what we do and where our passion lies as we work in a truly amazing industry. An industry that often challenges the norm and an industry that is being embraced more and more by the general public. I suggest this is an actual reflection of so many people gaining good health outcomes from our services. It is essential that through ongoing challenges we personally reflect on our intent, ignite our passion and unite as like-minded people. I strongly believe that the work we do and the services we provide will override the challenges presented to us if we collectively focus on our combined intent to assist humanity. There is always strength in numbers. To assist us grow the strength, thanks again for asking

your clients and contacts to join the ‘Friends of ATMS’ site on our homepage www.atms.com.au. We need members’ support to grow the ‘Friends of ATMS’ site to add strength and spread the word of natural medicine.

Hall of Fame award recipient 2013

It was a great honour to award Garnet Skinner the Hall of Fame award at the AGM. For those who may not know Garnet, he was one of the original driving force members who



Garnet Skinner

was signatory to the inaugural ATMS constitution on 7th September, 1984 along with Dorothy Hand (Hall), founding president and Hall of Fame recipient, Roy Hand (Dorothy's husband), Alan Jones (past president) and Christine Berle. The document was witnessed by Marie Fawcett (past company secretary for 24 years). Garnet is a very special human being and a deeply knowledgeable man. Now in his 80's, he has been a pioneer in natural medicine and taught many natural medicine practitioners throughout Australia. Garnet's ATMS membership number is 004. We sincerely thank Garnet for his contribution to ATMS and his passion for the advancement of natural medicine in Australia. Garnet, you will be remembered for all you have given to so many.

Community spirit to assist fellow members affected by recent fires

During October many areas of NSW were severely affected by fires. An appeal for assistance was launched on both the ATMS facebook page and via direct email on Wise and Well. The response from ATMS members to assist other fellow members who suffered in the fires was heart-warming. As president and on behalf of the ATMS Board of Directors, the CEO and office staff we sincerely thank those members who have donated a treatment to a fellow practitioner who may need a helping hand to deal with the trauma that can arise from such a potentially devastating experience. This is a real community effort and a reflection of unity of spirit amongst like-minded people and ATMS members. Thank you again to all who have rallied to assist others in need.

United States Senate Resolution regarding Naturopathic Medicine

On 10/9/13 the senate on the US considered and resolved that:

1. there would be an annual Naturopathic Medicine week 7-13 October,

2. the value of naturopathic medicine in providing safe, effective and affordable health care be recognized,
3. the people of the US be encouraged to learn about naturopathic medicine and the role that naturopathic physicians play in preventing chronic and debilitating illnesses and conditions.

Amazing news! Simply inspiring, so let's spread this news with clients, family, friends and politicians. If you would like a copy of the resolution send a request to admin@atms.com.au or it's easy to find on the Internet.

Board innovation

The Board, with renewed spirit and focus, have been working hard in numerous areas and projects to advance the practices of ATMS members and natural medicine. Several new committees are well under way, including the new Regulatory Committee chaired by Director Raymond Khoury and the Media Watch Committee chaired by Director Stephen Edey. Please note inaugural articles from both committee chairs are in this journal. Much has been happening in the area of regulation and ATMS is proud to demonstrate industry leadership in a variety of current challenges.

The CEO Trevor Le Breton and myself have been meeting with stakeholders in various states to further develop and enhance relationships. Now that ATMS has accredited its 30th modality Polarity Therapy, we are focused on working with smaller associations who support single therapy modalities and assisting them with various matters that can arise, in particular association governance. The ATMS Board has an inclusive policy to assist all natural medicine stakeholders when and where possible and to develop mutually beneficial relationships to assist the advancement of natural medicine in Australia.

Recently ATMS was proud to announce that its membership number had hit an

outstanding 12,000. Truly amazing - that's 12,000 like-minded people! A special thank you to all the ATMS office staff and Trevor CEO who do their best to serve all the membership. The office is made up of a remarkable high spirited team. With 30 modalities, 12,000 members and 30 colleges there is a lot going on all the time. With the new-look refurbished office and new staff uniforms the office is looking more professional than ever.

I take this opportunity to offer a heartfelt farewell to Cherie Walkerden. Cherie has been a driving force at the office for some 14 years. Many members will know Cherie for her can-do personal approach to members. The Board offer Cherie enormous thanks for her dedication and the spirit she has brought to her position as office manager. You will be missed, Cherie and we wish you happiness and fulfillment for the next part of your journey.

Along with the Continuing Education Committee chaired by Stephen Edey, the CEO and I are looking at ways to reinvent the ATMS Continuing Education program, offering a wider variety of events with greater national coverage to allow all members greater opportunity to be involved in professional education development and to accrue the annual 20 mandatory CE points.

In November ATMS hosted a special free seminar targeted at Asian massage practitioners at the Sydney Institute of Traditional Chinese Medicine in Sydney's Chinatown regarding health funds. The seminar was facilitated by myself with the assistance of the CEO and two members, who are graduates from the college and who translated the presentation into both Chinese and Korean to assist those in attendance to have a full understanding of health fund regulations. Special guest for the evening was Peter Dunn, the Medibank National Manager. ATMS is endeavouring to educate Asian practitioners in regard to aspects of what is required for health fund status and to advise Asian members that all associations have a zero tolerance

PRESIDENT'S MESSAGE

policy to health fund compliance issues. A special thank you to ATMS director Daniel Zhang for his invaluable assistance in working with the Chinese practitioner community.

Also in November a meeting of current ATMS committee chairs was called. Current chairs include David Stelfox, Chair of Academic Review Committee, Antoinette Balnave, Chair of Finance Audit and Compliance Committee, Raymond Khoury, Chair of both Complaints Committee and Regulation Committee, and Stephen Eddey, Chair of Continuing Education and Media Watch Committees. The purpose of the meeting was to focus on each Committee's plan for 2014 and how it aligns with the overall ATMS Strategic Plan. The Board of ATMS predominantly moves projects forward via its committee work. This important meeting sets the focus for the year ahead. After the committee plans were created they were then voted on

by the full Board at the December Board meeting. Each committee has a very different focus and intent, however all are essential areas that provide service to the membership, move our association forward and show leadership to the natural medicine industry.

The Marketing Committee consisting of CEO Trevor Le Breton, Alanna Hinds from Hindsight Marketing and myself meet on a regular basis to move the branding of ATMS forward. There is much ground to cover but projects are well underway with the new fresher, healthier ATMS look.

Before finishing my report for this journal a personal thank you for being a part of the ATMS community. We have members in every corner far and wide of this great nation and together we are part of the health solution and health revolution. Believe in what you do, focus on the intent of your work and together we are a sizeable force.



President Maggie Sands meeting with former Director Kevin Watkins on recent trip to Adelaide

Wishing you and your loved ones a relaxing and joy-filled break and a time to renew and refresh spirits. Family and community are essential components of our own health as 'Individually we are a drop but together we are an ocean'.

My very best regards,

Maggie Sands | ATMS President



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REVIEW OF THE ATMS CONSTITUTION

“An Invitation To All Members To Participate In The Consultative Process”

The ATMS Board of Directors invites all members to participate in the upcoming review of the Society's Constitution.

The Constitution was compiled in 1984, and although a few changes have been made over the years, it is essentially the same Constitution.

Organisational structures and corporate governance best practice have changed considerably in the last 29 years. In order to bring the Constitution in line with best practice, a review is underway.

The draft Constitution will be released for member comment in early 2014. There will be a 30 day consultative period for members to offer suggestions and changes. The draft will be posted on the ATMS website and sent via Wise-n-Well. Members who do not have Internet access may now request a copy by telephoning the ATMS office on 1800 456 855, and a copy will be sent when it is available.

At the end of the consultative period, members' comments will be considered and changes adopted accordingly.

An Extraordinary General Meeting of members will be held on the 26th March, 2014 at a venue to be announced to adopt the new Constitution.

All members are encouraged to participate in the review process. The Constitution belongs to the members, and the new Constitution should reflect the members' views.

More information about the Constitution will be released in due course.



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LEADER OF THE NATURAL MEDICINE INDUSTRY



CEO's Report

Trevor Le Breton | Chief Executive Officer

Welcome to the December 2013 edition of JATMS.

A time to reflect

This edition marks twelve months since the Board appointed me as your CEO. During that time we have seen many changes both at Board and in recent times some staff changes. However, one thing that has not changed is the commitment from our President Maggie Sands, the management team and the remainder of the Board to continue to work on all aspects of ATMS so that we remain the leaders of natural medicine.

We currently have ten, very active committees, working through reviewing standards, refining processes for members and developing our brand and what it stands for. We are also working closely with external stakeholders so that ATMS and its members have a strong, passionate voice in a variety of discussions which presently face our industry.

AGM

Sunday 22nd September at the Twin Towns Resort Tweed Heads marked the day and venue for our 29th AGM. It was a privilege to meet with so many members, and those who made the effort

to attend would agree that the day was a mixture of celebrating the past, but importantly gaining a greater appreciation of where we are heading in the future. Congratulations to foundation member Garnet Skinner on being inducted into the Hall of Fame, a fitting reward for a lifetime of dedicated service to our industry.

Therapeutic Goods Administration (TGA)

As reported previously the TGA proposed changes to the advertising requirements for practitioner-only products, potentially impacting the ongoing livelihood of our ingestive members (naturopaths, homoeopaths, herbalists and nutritionists). On 25th August ATMS hosted a forum on the issue attended by National Manager for TGA, Professor John Skerritt. A transcript of the forum can be located on the ATMS website or by contacting the office. Since then our Regulatory Committee and I have met with Professor Skerritt and his team to understand their requirements for the future. In keeping with our leadership role in industry ATMS hosted a meeting of ingestive stakeholders on Friday 25th October. From this meeting a draft discussion model has been developed which outlines the minimum educational requirements and the manner in which

associations would agree to administer members to ensure their access to advertising remains as they presently enjoy. More information will be available on this via our newsletter and website as discussions continue.

Association of Remedial Masseurs (ARM)

For some time ATMS has been in discussion with representatives from ARM about how members may apply to join other associations and continue to operate in practice in the event that ARM ceased to continue to operate. ARM have invited your President and I to a meeting of members on Sunday 3rd November, and by the time you receive this Journal it is our expectation that many former ARM members will have joined the other 7700 Remedial Massage members which ATMS presently represents.

The cost of operating for many associations is becoming an ever increasing concern, as too the ageing demographic for many groups putting financial pressure on their future viability. Your President and I have been in discussion with several other groups providing advice and support as they work through these troubled times. Should they find that they can no longer

provide relevant ongoing services to their members, we have offered to them that ATMS is available as a solution to their members' future needs.

Facebook

ATMS is fast becoming one of the most followed sites for people seeking information on natural medicine. In the past twelve months our 'follower' numbers have swollen by almost double to just below 4000. We know that not all members are followers, but encourage you to sign up for free, and receive regular information about our industry, ATMS specifically, and regular information on the 30 modalities that ATMS is now responsible for. Many people external to ATMS are regularly monitoring what we have to offer them and we encourage you, our members, to have your clients sign up to the Friends of ATMS site to get regular Facebook and email news on developments in our industry. As we engage further with Government the reforms we seek will require 'people power' weight of numbers. The more passionate support we have about the services you provide on a day to day basis, the more likely our message will be heard - sign up today. It's FREE!

ARE you really accredited?

This is a gentle reminder to all accredited members that in order for you to be eligible to retain your status and have your details forwarded to Health Funds you must be FINANCIAL, you must have a CERTIFICATE OF CURRENCY for both Public Liability and Professional Indemnity Insurance and a current First Aid Certificate. If any one of these three key pieces of information is missing you are NOT accredited and ATMS will be removing members from funds during December who do not meet these requirements. If in doubt, please check with our office immediately.

Constitution

For many months the management team and the ATMS Board of Directors have been reviewing the Society's Constitution. The present Constitution was compiled in 1984, and although

OUR MANAGEMENT AND BOARD HAVE SET OURSELVES AN AMBITIOUS TARGET OF 95% RETENTION AND TO THE END OF OCTOBER I AM PLEASED TO ANNOUNCE THAT WE SIT AT 95.8% AND HAVE OVERALL MEMBERSHIP GROWTH OF 2.1%, WITH OUR STUDENT MEMBER NUMBERS ALMOST DOUBLE THE SAME TIME AS LAST YEAR.

a few changes have been made over the years, it is essentially the same Constitution. Organisational structures and corporate governance best practice have changed considerably in the last 29 years. In order to bring the Constitution in line with best practice, the review is necessary. The draft Constitution will be released for member comment in early 2014. There will be a 30 day consultative period for members to offer suggestions and changes. The draft will be posted on the ATMS website and sent via Wise-n-Well. At the end of the consultative period, members' comments will be considered and changes adopted accordingly. An Extraordinary General Meeting of members will be held on 26 March 2014. All members are encouraged to participate in the review process. The Constitution belongs to the members, and the new Constitution should reflect the members' views.

Health funds and Associations

You will recall that in September Medibank removed 55 practitioners across 250 locations nationwide. Since that time ATMS has conducted a number of seminars on recording clinical records and been in discussion with Medibank about future requirements. A further meeting was held on 8 November, where Medibank and ATMS work through a list of requirements expected of the fund from associations in the administration of members. I remain confident that these issues will be resolved in the favour of our members before Christmas.

During October a meeting of key massage associations was organised by ATMS and AMT to discuss a range

of topics including education levels, behaviour and ethics within the massage sector with Medibank, HCF and representatives from the Industry Skills Council. It has become apparent that the funds have expectations of associations that in some cases outweigh the ability of some to comply with the requirements. I am pleased to say that what is being asked of ATMS is in the main what we have done for the past 29 years and will continue to do.

As a further step to ensure our members fully understand what is expected of them an event has been organised for late November to address requirements for recording clinical records, issuing receipts and processing of member payments.

As members have often stated it is a shame that a few make it so difficult for the rest, and to that end the Board have adopted a ZERO TOLERANCE policy to behaviour of members who blatantly are in breach of our CODE OF CONDUCT. Make sure you have a copy and understand how it applies to you.

Members should be reminded that your provider number is for your exclusive use, not to be shared and should be kept safely so others cannot access. Additionally this number cannot be used at multiple locations simultaneously. If you require further information on these points contact our offices immediately.

Membership

During October we introduced our 12,000th member to the Society - welcome Jessica Bateman #27911 from Tasmania who is accredited with ATMS for kinesiology.

CEO'S REPORT

On the financial front our goal is to increase revenue by some 12% over the 2013/14 financial year; and I am delighted to advise that we are well on track to achieving this KPI

One of the key measures of our success is our membership retention rate. Most associations can attract new members with offers; however it is far more expensive to attract a new member than to keep those who are already on our list. Our Management and Board have set ourselves an ambitious target of 95% retention and to the end of October I am pleased to announce that we sit at 95.8% and have overall membership growth of 2.1%, with our student member numbers almost double the same time as last year.

Board Matters

As is required under our present Constitution, an election took place at the September Board meeting prior to our AGM. It is my pleasure to announce that the existing Executive were returned unopposed. This is an endorsement of the renewed energy that the Executive have brought to ATMS since the commencement of the new Financial Year. Your Executive comprises Maggie Sands (President) and to support her, David Stelfox has been appointed Senior Vice-President and Stephen Eddey has stepped up to be our other Vice-President. Antoinette Balnave remains as Treasurer and Chair of the Finance Audit and Compliance Committee.

I would also like to acknowledge long standing Director and Life Member Sandi Rogers who has after two stints as President and several decades as a

Director decided to stand down from the position. Nominations for the forthcoming Board elections to be held in August 2014 will be called for in the new year.

Financials

On the financial front our goal is to increase revenue by some 12% over the 2013/14 financial year; and I am delighted to advise that we are well on track to achieving this KPI. Our overall goal is to ensure financial sustainability for the Society, and with high member retention, new member growth and consistent income from our other revenue streams this has been the cornerstone of our ongoing success.

Representatives update

The Board continue to work on a new model for representatives, taking on board the feedback that each of the former State Representatives provided. A workshop of representatives will be held once the final requirements have been agreed. However it is highly likely that a far greater number of people will be required to cover the broad geographic area that our membership extends.

Office administration/Staff

For those who were at the AGM you would have been saddened, as I was, to

announce that Cherie Walkerden had decided that after thirteen years that this will be her last with ATMS. Cherie will finish up on our last day of the year. Cherie has seen many changes in her time at ATMS and has at all times operated in a professional way. Personally I want to extend my gratitude to Cherie for her assistance as I settled into my new role. Thank you just doesn't say enough.

I am delighted to advise that internally Karen Fan has been promoted to the role of Health Funds and after a little negotiating Charlotte Kennedy will be returning to take on the role of Assistant Registrar, building us a strong membership-focussed team for the future.

As always for further information please do not hesitate to contact me directly.

On behalf of all the team at Meadowbank, we thank you for your ongoing support and we value your membership. Please have a very safe, peaceful and Merry Christmas and may the New Year deliver you everything you wish.

Take Care.

Trevor Le Breton | CEO



Staff at the ATMS office in Meadowbank. L-R: Cass Zogbee, Xiao Ling Wu, Nicole Crowley, Andrew Crowley, Heidi Drieschner, Adi Chettiar, Jackie Kassab, Sylvie Kassab, Trevor Le Breton, Jennie Hyde, Sue Dryden, Karen Fan

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To Flex *or Extend?*

Joseph Muscolino, DC

This article originally appeared in *Massage Therapy Journal* Fall 2013. It is reprinted with permission from the author.

When a client presents with a pathologic lumbar disc, there is a divide in the world of manual and movement therapy: Do we treat the client with flexion or do we avoid flexion and instead treat the client with extension? There are proponents for each method, and unfortunately these proponents often divide along rigid ideological lines, each one believing that their approach is the superior one. As is often the case, whenever two differing treatment approaches exist, usually both are valid. So how do we decide which method to use with the next client who presents with a pathologic disc?

As with all clinical orthopedic work, the answer lies in choosing the correct treatment approach based on the specific pathomechanics of the client's condition and the needs of the client at that moment. Not all pathologic disc conditions are the same, and therefore not all clients with a pathologic disc condition will respond the same. Making the best decision requires a clear understanding of biomechanics, which ultimately rests on a fundamental understanding of musculoskeletal anatomy and physiology, in other words, kinesiology.

Note: Because a pathologic disc is potentially a very serious condition, with possible permanent effects, it is important to refer any client who presents with this condition to a physician. Referral does not mean that the client cannot also be treated at the

same time by a massage therapist. A client with a pathologic disc condition can be under the supervision of a physician and also benefit from massage and other manual therapies.

The Lumbar Spine

The lumbar spine is composed of five vertebrae that sit on the base of the sacrum. Because in anatomic position the pelvis/sacrum is anteriorly tilted approximately 30 degrees, there is a natural lordotic curve to the lumbar spine. The healthy lordotic curve varies from individual to individual, but on average is approximately 40-50 degrees (Figure 1).

Lumbar Spinal Joints

At each segmental level of the lumbar spine, there are three joints: an intervertebral disc joint located anteriorly, and paired left and right facet joints located posteriorly. The disc joint is composed of three major parts: cartilaginous vertebral endplates that cap the bodies of the vertebrae, a fibrous annulus fibrosus that is located circumferentially between the vertebral bodies, and a thick gel-like nucleus pulposus in the center bounded by the fibers of the annulus fibrosus. The facet joints are synovial joints, located between the inferior articular processes of the superior vertebra and the superior articular processes of the inferior vertebra. Each facet joint is bounded by a fibrous joint capsule containing synovial fluid; and the joint surfaces are capped with articular cartilage.



FIGURE 1
THE LUMBAR SPINE HAS A NORMAL LORDOTIC CURVE OF APPROXIMATELY 40-50 DEGREES

Also located between each two adjacent vertebrae are two intervertebral foramina (IVFs), through which the spinal nerves from the spinal cord pass. An IVF is formed by a notch in each of the two adjacent vertebrae, that when placed together form the foramen for the entry/exit of the spinal nerve (Figure 2).

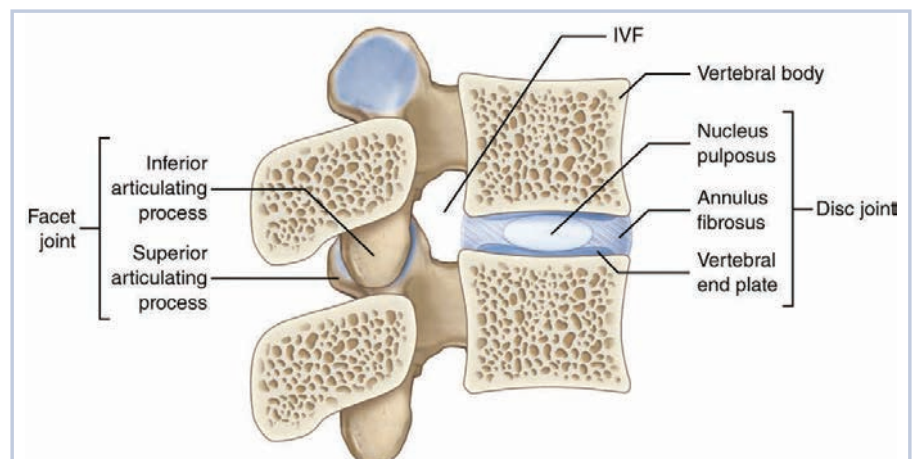


FIGURE 2
DISC AND FACET JOINTS OF THE SPINE.
INTERVERTEBRAL FORAMEN, IVF.

THE MORE SERIOUS CONSEQUENCES OF A PATHOLOGIC DISC ARE USUALLY DUE TO COMPRESSION OF NEURAL TISSUES. BECAUSE OF HOW STRESS FORCES ARE USUALLY PLACED ON THE INTERVERTEBRAL DISCS, BULGING AND HERNIATION MOST OFTEN OCCUR POSTEROLATERALLY.

Lumbar Joint Function

The degree of motion that exists in any region of the spine is primarily determined by the thickness of the discs, whereas the direction of motion best allowed is determined by the orientation of the facet joints. In the lumbar spine, the facet joints are oriented in the sagittal plane. For this reason, sagittal plane motions of flexion and extension occur freely in this region. From anatomic position, the lumbar spine allows approximately 50 degrees of flexion and approximately 15 degrees of extension. This totals 65 degrees of sagittal plane motion; quite impressive given that this motion occurs across only five segmental joint levels. In addition to motion, the

spine is a weight-bearing structure; the lumbar spine must bear the weight of the entire body above it. The disc joints bear approximately 80% of the weight; the facet joints bear the remaining 20%. It is important to note that as weight bears through the disc joint, the nucleus pulposus is compressed, pushing it outward away from the center and against the fibers of the annulus. Weight bearing also affects the facet joints by compressing their joint surfaces.

Pathologic Disc

When the intervertebral disc is healthy, the nucleus is confined within the fibers of the annulus fibrosus. However, the accumulation of physical stresses to the disc can weaken the annular fibers. These stresses can be macrotraumas such as a car accident or a fall; and/or they can be repetitive stress microtraumas that occur due to such things as poor postures or the ongoing compression force of weight bearing. Regardless of the cause, if the annulus is weakened, weight-bearing

compression upon the nucleus can cause it to bulge the annular fibers outward, creating what is known as a bulging disc. If the annular fibers are sufficiently stressed, they can rupture, allowing the nuclear material to extrude through the annulus; this is called a ruptured disc prolapsed disc or herniated disc. Lumbar pathologic discs most often occur in the lower lumbar region, at the L4-L5 or L5-S1 joint levels (Figure 3).

Pain from a pathologic disc can occur due to the irritation of local structures, such as the annular fibers themselves or the posterior longitudinal ligament. However, the more serious consequences of a pathologic disc are usually due to compression of neural tissues. Because of how stress forces are usually placed on the intervertebral discs, bulging and herniation most often occur posterolaterally. When this occurs, the disc protrudes into the IVF and can compress the nerve root, causing symptoms into the lower extremity on that side (midline posterior bulges/herniations occur less frequently because the annulus fibrosus is reinforced in the midline by the posterior longitudinal ligament). Because the nerve roots of the lower lumbar spine contribute to the sciatic nerve, pathologic lumbar discs usually cause symptoms of sciatica referring down into the lower extremity.

It is important to point out that the IVF can also be narrowed due to calcium deposition (bone spurs) at the joint margins; this condition is known as osteoarthritis or degenerative joint disease.

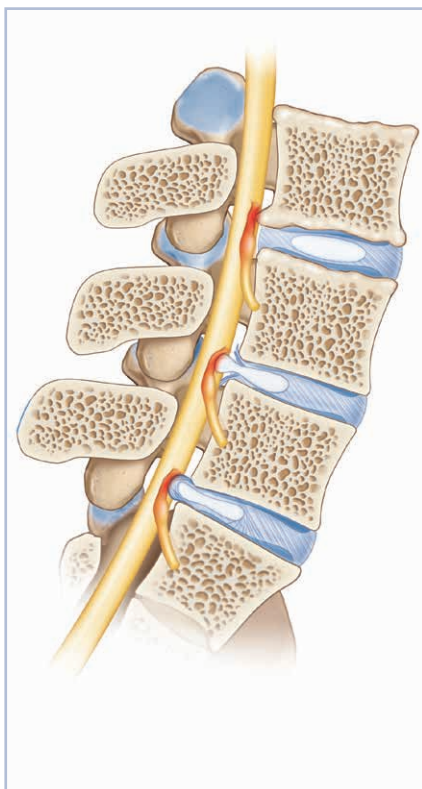


FIGURE 3
PATHOLOGIC DISCS COMPRESSING SPINAL NERVES. A BULGING DISC IS SEEN AT THE L5-S1 DISC AND A HERNIATED DISC IS SEEN AT THE L4-L5 DISC. OSTEOARTHRITIC (DEGENERATIVE JOINT DISEASE) BONE SPURS ARE SEEN ON THE BODY OF L3.

Degenerated Disc

In addition to bulging and herniated discs, there is a third pathologic condition of the intervertebral disc known as degenerative disc disease (DDD). DDD involves breakdown/degeneration of the annular fibers and desiccation of the nucleus pulposus. This results in thinning of the disc, which can be seen on X-ray; the space that the disc occupies between the adjacent vertebral bodies will be decreased in height. DDD is a normal part of aging and is usually asymptomatic. But if it is advanced in degree, it can potentially cause symptoms. Thinning causes approximation of the vertebral bodies, which decreases the size of the IVFs, increasing the likelihood of nerve compression within the IVF (compare the healthy disc in Figure A with the degenerated disc in Figure B). Because DDD involves degeneration of the annulus, it also increases the chance that the annular fibers will weaken and bulge, or perhaps herniate. Interestingly, if the nucleus pulposus is sufficiently desiccated, it exerts less pressure against the annular fibers and the likelihood of a bulging or herniated disc actually goes down. This is why the incidence of nerve compression from pathologic disc conditions decreases in senior citizens.

Figures courtesy of Joseph E. Muscolino.

Therefore, there are two major factors at play when a client has a bulging/herniated disc. One is the disc lesion itself, in other words, the weakened or ruptured fibers of the annulus fibrosis. The second is the encroachment within the IVF of the annulus or nucleus pressing on the nerve. Once the pathologic disc is present, a third factor occurs. Because of the irritation caused by the compression upon the nerve root, it usually becomes inflamed. Given that the IVF is a narrow closed space, there is little chance for the swelling to escape, so it remains in the IVF, further compressing the nerve root. It is often the size of the bulge/herniation plus the swelling that is

responsible for the nerve compression and resulting symptoms. It is important to point out that the IVF can also be narrowed due to calcium deposition (bone spurs) at the joint margins; this condition is known as osteoarthritis or degenerative joint disease. When the size of the IVF narrows, it is also described as foraminal stenosis.

Flexion versus Extension

The question now becomes: What are the mechanical forces of flexion and extension upon the lumbar spine, and how do these forces affect the pathologic disc and nerve compression? It turns out that each movement has positive and negative effects upon the lumbar spine.

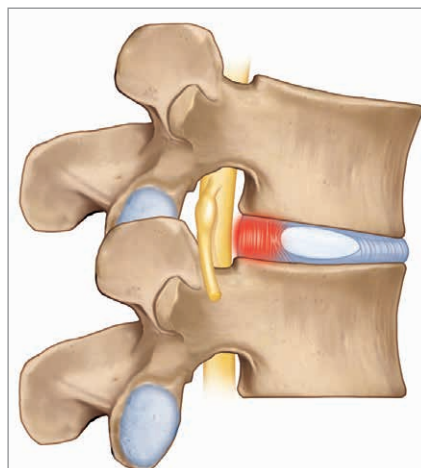


FIGURE 4A
EFFECTS OF SPINAL FLEXION

Positive (+) and Negative (-) Effects of Flexion and Extension Upon the Lumbar Spine

Flexion

- (-) Drives the nucleus posteriorly against posterior annular fibers
- (-) Places tensile force upon the posterior annular fibers, pulling them taut
- (+) Increases size of IVFs
- (+) Unloads the facets
- (-) Loads the discs
- (+) Stretches the paraspinal musculature

Extension

- (+) Relieves pressure on posterior annular fibers
- (+) Relieves tensile force upon the posterior annular fibers
- (-) Loads the facets
- (+) Unloads the discs
- (+) Strengthens the paraspinal

Tight paraspinal musculature is often responsible for directly causing low back pain.

More importantly for a pathologic disc, if the paraspinal musculature is tight, it pulls in toward its center, thereby creating a compression force upon the discs of the spine

The Effects of Flexion

The worst effect of flexion upon the lumbar spine is that it compresses the anterior disc. This has two consequences. First, it drives the nucleus pulposus posteriorly against the posterior annular fibers.

Second, it pulls the posterior annular fibers taut (Figure 4A). The combination of the tensile force pulling these fibers taut as the pressure from the nucleus is exerted against them can lead to their degeneration. The fibers begin to fray; and cracks form within them. This can lead to weakening of the posterior annulus and eventual bulging and/or herniation. Unfortunately, most activities of life are performed down in front of us, requiring repetitive flexion movements of the lumbar spine. For this reason, proponents of extension decry the use of further flexion as part of the treatment program for a client with a pathologic disc.

However, flexion also has positive effects upon the lumbar spine. As the lumbar spine flexes, the IVFs increase in size approximately 19%. This can be very helpful if there is compression of the nerve root within the IVF, which usually is a major aspect of a pathologic disc condition. Another positive effect that flexion has upon the lumbar spine is not directly disc-related, but important nonetheless. Flexion unloads compression force from the facets. This can be important if the client has irritation or inflammation of the facets, common in people who have the typical lower-crossed syndrome marked by excessive anterior pelvic tilt and hyperlordosis of the lumbar spine. However, it is important to note that the presence of compression force upon the facets can indirectly affect the client with pathologic disc. Via Wolff's Law, which states that calcium is laid down on bone in response to physical forces placed upon the bone, compression loading

of the facets can lead to osteoarthritic (also known as degenerative joint disease) bone spurs, which can further narrow the size of the IVF, increasing the likelihood that a bulging or herniated disc will cause compression of a nerve root there (See Figure 3).

Of course, if the facets are unloaded, the compressive load that is removed from the facets must be placed somewhere. Given that flexion is an anterior motion, the load is shifted anteriorly onto the discs. In typical anatomic position, the discs normally bear 80% of the weight-bearing load and the facets normally bear the remaining 20%. So not only does flexion preferentially load the anterior discs, it also increases the overall compressive load on the discs.

Flexion has another positive effect: It stretches all posterior tissues of the spine, including the paraspinal (erector spinae and transversospinalis) musculature. Tight paraspinal musculature is often responsible for directly causing low back pain. More importantly for a pathologic disc, if the paraspinal musculature is tight, it pulls in toward its center, thereby creating a compression force upon the discs of the spine. Increasing compression of the discs can then increase nucleus pressure upon the annulus, thereby increasing the size of the bulge or herniation. Therefore, loosening tight paraspinal muscles can benefit a client's pathologic disc.

The Effects of Extension

The position of lumbar extension places compression upon the posterior disc instead of the anterior disc. This has two important sequelae. First, the annulus is driven anteriorly instead of posteriorly, removing its pressure from the posterior annular fibers. Second, the tensile force upon the posterior annular fibers is removed, so that it is no longer pulled taut. The combination of these two factors can have the direct effect of lessening the degree of a posterolateral bulge or herniation, thereby decreasing compression of the spinal nerve roots within the IVFs.

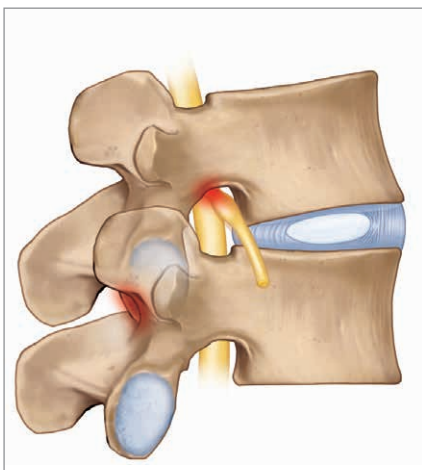


FIGURE 4B
EFFECTS OF SPINAL EXTENSION

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FIGURE 5A
FLEXION TECHNIQUES
Therapist-assisted double knee to chest stretch

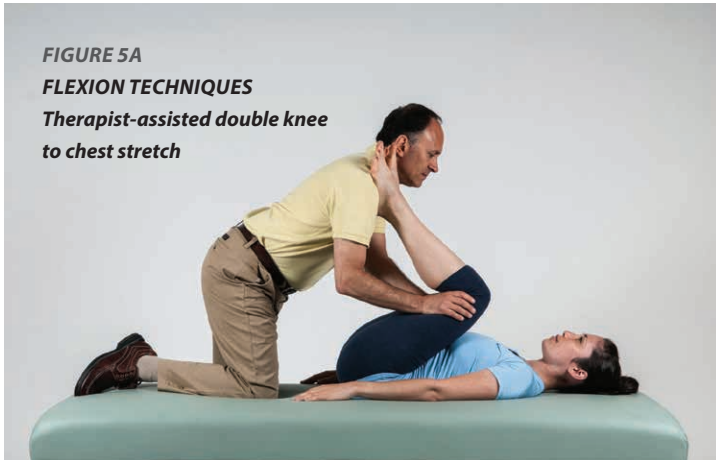
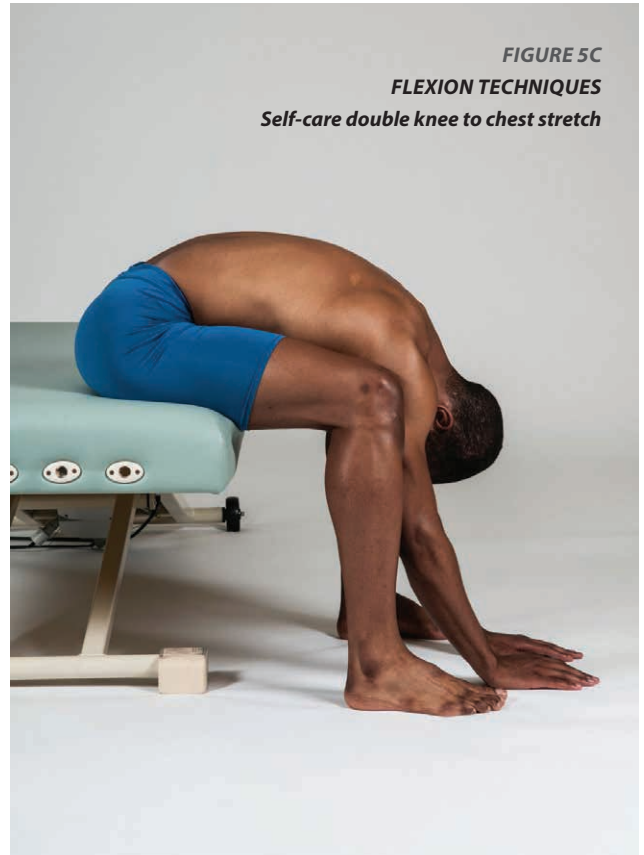


FIGURE 5B
FLEXION TECHNIQUES
Table that allows for flexion of the spine



FIGURE 5C
FLEXION TECHNIQUES
Self-care double knee to chest stretch



Note: Extension will cause the same negative effects upon the anterior annular fibers that flexion causes upon the posterior annular fibers. However, because of the relative lack of extension postures during our life, there is less accumulated physical stress to the anterior annular fibers, and therefore less likelihood of bulging/herniated discs anteriorly. Further, the anterior disc is reinforced by the anterior longitudinal ligament, which is very strong. And even if there were an anterior disc bulge or herniation, there are no neural tissues located anteriorly that would be compressed.

If the extension position is created by the client actively engaging their extensor musculature to move their trunk against gravity up into extension, there is the added benefit of strengthening paraspinal musculature. This can help to stabilize the spine and protect the discs (and facet joints) from excessive physical stress. Strong

paraspinal musculature is also better able to meet the demands placed upon it, lessening the likelihood that it will be overburdened and strained.

However, extension can also have negative effects upon the lumbar spine. Extension decreases the size of the IVF by approximately 11% (Figure 4B). Given that the greatest consequences of a bulging/herniated disc are due to the neural compression of the disc upon the spinal nerve within the IVF, decreasing the size of the IVF could potentially increase compression of the nerve, further inflaming it and worsening the condition.

The position of extension also compression loads the facet joints; as stated previously, via Wolff's Law, this could increase bone spur formation at the facets, which could further decrease the size of the IVF. The upside of this is that loading the facets commensurately results in unloading

of the discs. So not only does extension remove loading of the anterior aspect of the disc, by shifting weight-bearing to the facets, it decreases the overall load upon the discs.

Flexion and Extension Treatment Techniques

If we choose to use flexion as our treatment approach for a client with a pathologic disc, it is typically done by performing double knee to chest stretching. By bringing the knees to the chest, the client's pelvis posteriorly tilts, thereby moving their spine into flexion (Figure 5A). Flexion distraction technique is another flexion-based treatment option that is available for those therapists with tables that allow for the caudal (foot) and/or cephalad (head) end of the table to drop. Regarding self-care directions for the client, either double knee to chest and/or a sitting trunk flexion stretch (Figures 5 BC) can be recommended. The benefits derived from flexion are

Flexion and Extension Treatment Techniques

FIGURE 6A
EXTENSION SELF-CARE EXERCISES
Passive extension of the spine supported by the forearms



FIGURE 6B
EXTENSION SELF-CARE EXERCISES
Active extension created by contraction of the paraspinal extension musculature.



The benefits derived from extension are based on relieving stress on the posterior annular fibers and strengthening the paraspinal extensor musculature.

opening up the IVFs and stretching the paraspinal extensor musculature, as well as decompressing the facets.

If we choose to instead treat the pathologic disc client with extension, although it is possible to stretch the client's trunk into extension, it is not logistically easy to do so. For this reason, extension oriented treatment strategy is often based on directing the client to perform self-care stretching and strengthening extension exercises (Figure 6). This approach has been made popular by the physical therapist, Robin McKenzie; for this reason, extension exercises are often called

McKenzie exercises. The benefits derived from extension are based on relieving stress on the posterior annular fibers and strengthening the paraspinal extensor musculature.

To Flex or To Extend?

If both flexion and extension positions can be beneficial for the low back, and specifically for a pathologic lumbar disc condition, it brings us back to our original question: When a client presents with a pathologic lumbar disc, do we utilize flexion-based treatment techniques or do we avoid flexion-based postures and instead recommend that the client perform

extension exercises for their low back? Looking at the biomechanics of a pathologic disc with nerve compression within the IVF, it would seem that the answer lies in which aspect of a pathologic disc is more problematic for the client when they present: The bulge/herniation of the annulus or the compression of the nerve root within the IVF? This might be a difficult question to answer because neural compression due to a pathologic disc involves both factors, which is why each approach works with some clients, and not with others.

A clue might lie in whether the size of the IVF is decreased for other reasons such as osteoarthritic bone spurs or the presence of inflammation/swelling. Bone spurs can be seen on X-Ray as well as on CT scan or MRI. If IVF narrowing is occurring largely due to osteoarthritic bony hypertrophy, flexion might be the better course. The more information you have from radiographic findings,



Decompression and movement

Flexion is problematic because it compresses the anterior spine; and extension is problematic because it compresses the intervertebral foraminal spaces and the facet joints. Therefore, whether flexion or extension is performed, spinal compression occurs. It might be argued that what is most important is not necessarily whether the therapist employs flexion or extension, but rather to avoid compression of the spine. Therefore, with either approach, many therapists recommend that the client focuses on elongating the spine so that it is decompressed. A helpful cue for the client is to ask them to imagine that there is a string that is pulling their head straight up.

It should also be emphasized that movement in most every direction is of paramount importance. No posture is necessarily bad, as long as the client doesn't get stuck in it. The human body is meant to move. Movement works our muscles and joints, stretches and strengthens soft tissues, facilitates neural patterning, and promotes the circulation of body fluids, including a pumping action of the nucleus pulposus so that nutrient supply to the disc tissue of clients with pathologic disc conditions is improved. Ultimately, the goal of all manual and movement therapy is graceful and pain-free functional motion.

the better able you might be to decide whether to use flexion or not. For this reason, it is important to request that the client either give you a copy of the radiographic reports, or you consult directly with their physician. The presence of swelling is more challenging to determine, but as a rule, the more acute and aggravated the condition, the greater the likelihood that swelling is present. Therefore, acute disc episodes might favor a flexion approach.

Conversely, if the client is experiencing a pathologic disc episode that is chronic, an extension approach is more likely indicated. Given that inflammation usually subsides with chronicity, extension would seem to be the wiser choice in the long term because it unloads the posterior annular fibers, decreasing the bulge or herniation. Whichever approach is used to relieve the client's episode in the short run, an understanding of lumbar disc mechanics seems to indicate that extension is the best approach for the long run.

In the absence of detailed radiographic findings and/or other information that would help us make this decision, a default guideline might be to simply

choose one approach and follow it for a number of sessions: a period of two to four weeks would be a fair length of time to see if the approach is working. If the client responds favorably and begins to clearly improve, continue with this approach. If the client does not improve, or if the client's condition worsens, then the alternative approach can be tried.

What is most important is to understand the pathomechanics of a pathologic disc condition as well as the (bio)mechanics of flexion and extension as treatment approaches. Working from a fundamental understanding of the kinesiology of the body allows for critical reasoning and therefore creative application of assessment and treatment techniques, which ultimately results in a more successful clinical orthopedic practice!


Joe Muscolino is a Doctor of Chiropractic. He has been an instructor in the world of massage therapy for over 25 years. Joe will travel to Australia and teach a series of clinical orthopedic manual therapy workshops from 8-23 February, 2014. For more information, visit www.learnmuscles.com.

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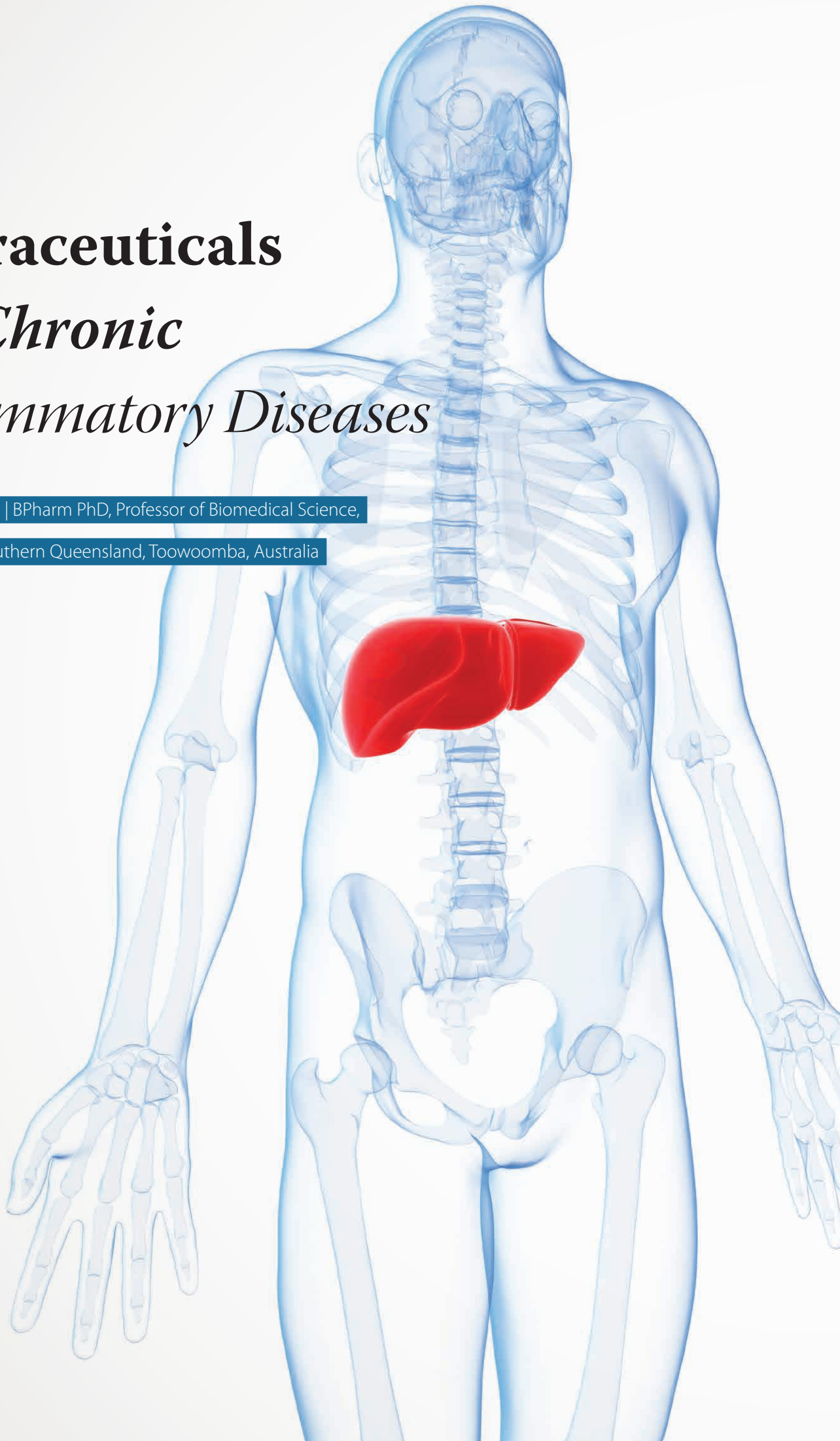
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Nutraceuticals *for Chronic Inflammatory Diseases*

Lindsay Brown | BPharm PhD, Professor of Biomedical Science,

University of Southern Queensland, Toowoomba, Australia



Abstract

Inflammation is clearly involved in the initial cellular changes that initiate chronic diseases such as cardiovascular disease, cancer, obesity, diabetes and central nervous system disorders. Inflammation increases with normal ageing, and increases further in disease states. Suppression of inflammation can delay the onset of these chronic diseases, and possibly reduce the symptoms. This suppression can occur with selective synthetic chemicals and also with natural products, some derived from foods and so defined as nutraceuticals, to reduce disease symptoms. Pre-clinical testing of nutraceuticals has been undertaken by my research group using rats fed a high carbohydrate, high fat diet to initiate inflammation, obesity, hypertension, fatty liver and glucose intolerance. This research has produced options derived from foods that may be useful for chronic treatment of inflammatory diseases in patients, especially in an ageing population.

Chronic inflammation is a major cause of non-communicable diseases, especially in the ageing population. This article will review the extent of the problem, and then discuss whether nutraceuticals, defined as medicines from foods, could help in the prevention or treatment of chronic inflammatory diseases.

The World Health Organisation (WHO) collects data on the incidence of chronic diseases, accessible at <https://apps.who.int/infobase/>, including an informative map library of this data (<http://gamapserv.who.int/mapLibrary/app/searchResults.aspx>). The WHO estimates that, of 57 million global deaths in 2008, 63% or 36 million were due to non-communicable diseases (www.who.int/gho/ncd/mortality_morbidity/en/). The WHO includes four main diseases in this category - cardiovascular diseases, cancers, diabetes and chronic lung diseases. The non-communicable risk disease profile for Australia is available from either WHO data (<https://apps.who.int/infobase/CountryProfiles.aspx>) or the Australian Institute of Health and Welfare (www.aihw.gov.au/publications/), especially their biennial reports on the health of Australians, with the latest being Australia's Health 2012 (www.aihw.gov.au/publication-detail/?id=10737422172). Like that of many developed countries, Australia's population is ageing; this has been documented in Australia's Health 2012 as well as in Older Australians at a

Glance 2007 (www.aihw.gov.au/publication-detail/?id=6442468045). In 2009, cardiovascular disease caused about 33% of all deaths in Australia, and cancer about 29% of all deaths. Australia's Health 2012 details that both cancer and cardiovascular disease are more common in the elderly; for example, 62% of Australians aged 75 and over have a cardiovascular condition compared with 5% in Australians aged under 45 years.

The role of the gut bacteria in obesity is now beginning to receive attention, as these bacteria may change energy extraction from the diet, and also the host metabolism of absorbed calories

Inflammation is likely to be the cause of the initial cellular changes that eventually result in non-communicable diseases. The complex processes of inflammation start as a repair response of the body to remove harmful stimuli such

as infectious agents and damaged cells. The signs of acute inflammation are well-known as pain, heat, swelling and loss of function. These signs may not be obvious in non-communicable diseases, as these diseases are considered as chronic low-grade inflammation and usually occur in the internal organs of the body. Continuation of the inflammatory process, even at a low rate, may damage some of the body's own cells. Disease is unlikely to develop immediately, but may take decades before clinical symptoms are evident, as in atherosclerosis.

The important regulator of cellular responses to inflammation is the protein NFκB (nuclear factor kappa-light-chain-enhancer of activated B cells). This protein induces hundreds of genes with critical roles in many physiological and pathological processes.¹ NFκB is critical to the protection of integrity in multicellular organisms by controlling cytokine production, for example, during infections. As such, it is usually chronically activated during long-term inflammatory disorders,¹ including cancer.² After the threat to the organism's integrity has passed, the NFκB activation needs to be down-regulated to prevent continuous inflammation.³ Inflammatory mediators include the eicosanoids, biologically active lipids formed from arachidonic acid by cyclo-oxygenases, lipoxygenases or epoxygenases. The cyclo-oxygenases produce the different prostaglandins that have been extensively studied for their role in human diseases including inflammation, cancer, arthritis and cardiovascular diseases.^{4,5} The role of the gut bacteria in obesity is now beginning to receive attention, as these bacteria may change energy extraction from the diet, and also the host metabolism of absorbed calories.⁶ Could the gut bacteria also be the source of the initiators of the low-grade inflammation that defines obesity?

The concept that the tissue damage leading to chronic diseases is initiated by inflammation leads to questions that may help us understand the therapeutic role of nutraceuticals.

OBESITY INCREASES THE RISK OF A SURPRISING RANGE OF DISEASES. THE MOST OBVIOUS ONES ARE CARDIOVASCULAR DISEASE, DIABETES AND FATTY LIVER.

IF INFLAMMATION INITIATES DISEASES THAT ARE MORE COMMON IN THE AGEING POPULATION, DOES THIS MEAN THAT INFLAMMATION IS INCREASED EVEN IN HEALTHY AGEING?

The answer is probably yes. One example is the ageing of the vasculature, independent of the onset of cardiovascular disease, where decreased ageing-related endothelial function is related to oxidative stress and inflammation.⁷ Vascular ageing includes structural and functional changes in both the endothelial cells that line the blood vessels and in the smooth muscle cells that allow contraction of the vessels.⁷ Characteristics of ageing vessels include an impaired endothelial control of vascular tone by release of the endogenous dilator nitric oxide (NO). Ageing vessels lose elasticity by a loss of elastin between the cells and an increase in collagen within the vessel wall. This then increases the stiffness of the vessel wall, compromising adaptation to the blood pressure changes in the normal cycle of the heart. There is also a reduced capacity to repair blood vessels even in the healthy ageing patient. The endothelial progenitor cells that are critical for endothelial cell regeneration are fewer in the ageing patient and show a decreased ability to function. Further, the oxidative stress is increased in the vascular wall as there is an increased physiological production of superoxide and other reactive oxygen species. Low concentrations of superoxide are important for cellular signaling, but higher concentrations may damage essential cellular machinery. This increase in damaged cells may activate the inflammatory pathways in these cells. In addition, superoxide reacts very quickly with NO, the endogenous vasodilator, and so decreases the local control of the vascular tone.⁷

IF AN INCREASED INFLAMMATION IS ASSOCIATED WITH VASCULAR AGEING, CAN SUPPRESSION OF INFLAMMATION PREVENT THE ONSET OF AGEING-RELATED VASCULAR DYSFUNCTION?

The answer to this question is also a probable yes. Interventions such as caloric restriction and exercise are effective in reversing the increased oxidative stress and inflammation of vascular ageing, and also decrease the risk of cardiovascular disease.⁷ Recent studies have emphasised that an increased release of interleukin-6 from skeletal muscle suppresses pro-inflammatory factors and also increases the release of interleukin-10, a potent anti-inflammatory molecule.⁸

DOES SUSTAINED LOW-GRADE INFLAMMATION, ABOVE THAT IN AGEING, CAUSE DISEASE?

There is now a wide consensus that obesity can be accurately described as a chronic low-grade inflammation.⁹ Obesity increases the risk of a surprising range of diseases. The most obvious ones are cardiovascular disease, diabetes and fatty liver. Obesity induces systemic inflammation, release of adipokines such as leptin and adiponectin, and endothelial dysfunction.¹⁰ Obesity increases the risk of cancers, especially endometrial, colorectal, postmenopausal breast, prostate and renal cancers, with two of the key pathogenic links being chronic inflammation and oxidative stress.¹¹ The estimate is that 20% of all cancers are caused by obesity, increasing to 50% in postmenopausal women. Inflammatory processes play a key role in colorectal cancers with adipose tissue macrophages secreting tumor necrosis factor- α , monocyte chemoattractant protein-1, and interleukin-6, all linked to colorectal cancer.¹² The brain is also a target of obesity as this promotes

abnormal metabolism, altered hormonal signaling and increased inflammation that promote damage to the brain. Neurologic disorders as varied as complex neurodevelopmental disorders such as Prader-Willi syndrome to chronic neuropathologic disorders such as epilepsy, multiple sclerosis and Alzheimer's disease have all been linked to obesity.¹³

DOES REDUCTION OF INFLAMMATION REDUCE DISEASE SYMPTOMS?

There is widespread evidence for this concept. The non-steroidal anti-inflammatory drugs (NSAIDs) are used throughout the world to relieve pain from minor tissue damage. Another clear example is the improvement in joint pain and swelling in patients with rheumatoid arthritis treated with etanercept, a soluble TNF α receptor that decreases the ability of TNF α to induce inflammation.¹⁴ Intakes of fruits, vegetables, cereals, legumes and spices have been linked to age-associated chronic diseases all having inflammation as a major activator; however, this association does not prove that interventions with these products will reduce these chronic diseases.¹⁵

Peroxisome proliferator-activated receptors play important roles in many biological pathways, including lipid, protein and glucose metabolism, and are also prominent players in inflammation control

WHAT IS THE EVIDENCE THAT NUTRACEUTICALS CAN REDUCE INFLAMMATION?

Modern treatment of inflammation relies on compounds such as the glucocorticoids and aspirin, both natural products, as well as synthetic compounds including ibuprofen and naproxen. The gold standard anti-inflammatory compounds are the glucocorticoids such as dexamethasone, semisynthetic derivatives of hydrocortisone produced by the adrenal cortex. The use of salicylate-rich preparations for treatment of inflammation dates from the third millennium BC, including a later description by Hippocrates of the use of the bark and leaves of the willow, so long before the development of acetylsalicylic acid (aspirin) by Bayer in 1897. Salicylates are present in many foods, including tomato-based sauces, fruit and fruit juice, tea, wine,

and herbs and spices, although Western dietary sources may be insufficient to prevent diseases.¹⁶

WHAT IS THE EVIDENCE THAT NUTRACEUTICALS CAN REDUCE OBESITY AND HYPERTENSION BY REDUCING INFLAMMATION?

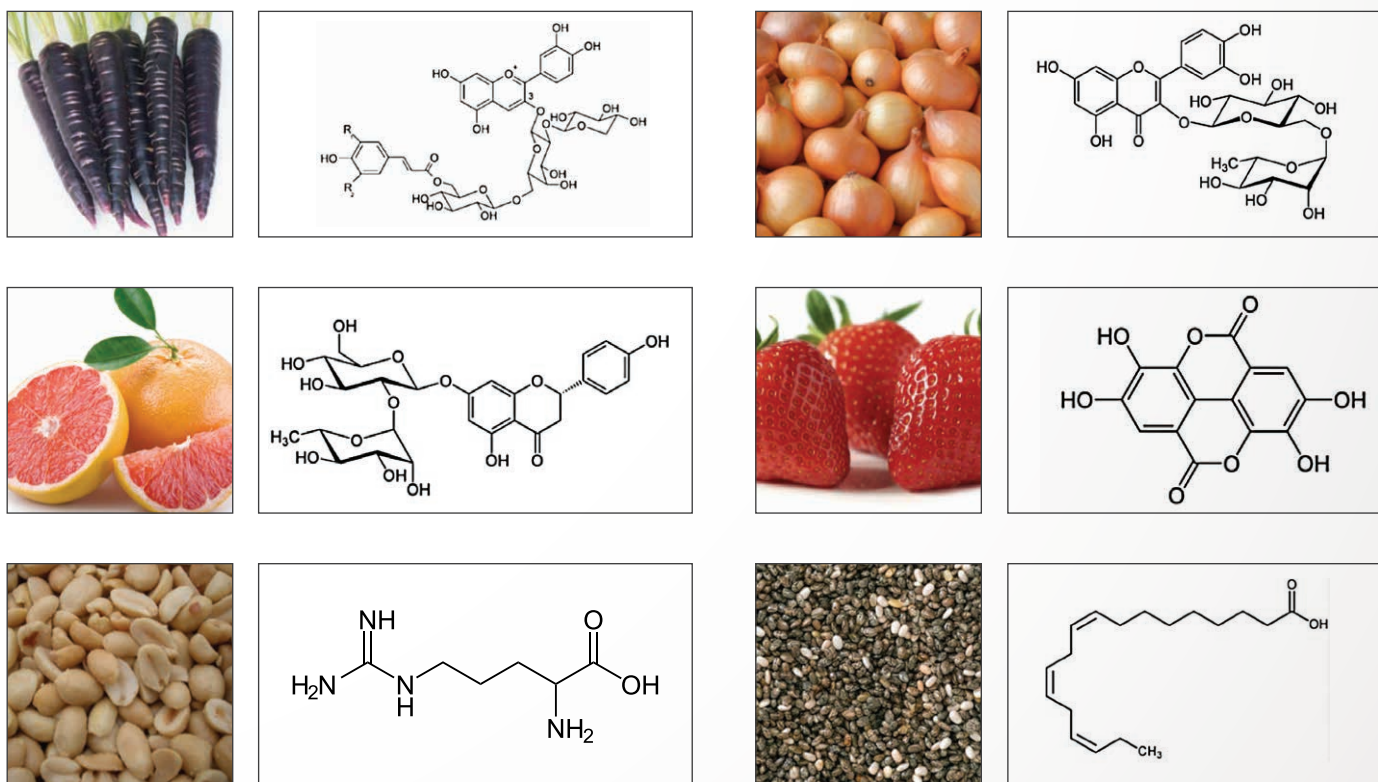
Peroxisome proliferator-activated receptors (PPARs) play important roles in many biological pathways, including lipid, protein and glucose metabolism, and are also prominent players in inflammation control.^{9,17} Since these receptors are important in control of adipose tissue and liver inflammation, they could play a role in control of obesity and fatty liver. PPARs may also up-regulate anti-inflammatory genes. Natural products that may modulate PPARy and therefore improve obesity include the tocopherols and tocotrienols, omega3 fatty acids, curcumin, resveratrol and flavonoids such as genistein.¹⁸

These compounds show potential in experimental studies of obesity, but development of their potential in the effective and safe treatment of human obesity requires clinical trials.¹⁸ The same comment applies to the chronic treatment of hypertension with nutraceuticals. Oxidative stress and inflammation can initiate and propagate hypertension, but many trials of nutraceuticals for hypertension are small and do not have long-term follow-up for efficacy and adverse effects.^{19,20} However, these studies indicate that a combination of lifestyle changes and pharmacological treatments will best reduce cardiovascular risk.

WHAT IS THE EVIDENCE THAT NUTRACEUTICALS CAN REDUCE CANCERS BY REDUCING INFLAMMATION?

The role of inflammation suppression in the treatment of cancers is now a major

FIGURE 1
FOODS WITH COMPONENTS THAT REDUCED OBESITY IN RATS FED A HIGH CARBOHYDRATE FAT DIET (L TO R).
Purple carrots and anthocyanins²⁷; onions and rutin²⁸; grapefruit and naringin²⁹; strawberries and ellagic acid³⁰; peanuts and L-arginine³¹; chia seeds and alpha-linolenic acid.³²



research topic. One example is chronic lymphocytic leukaemia (CLL) where pro-inflammatory pathway inhibitors such as the tyrosine kinase inhibitors including ibrutinib induced impressive clinical responses in CLL patients with relapsed or refractory disease.²¹ Aspirin is an effective chemopreventive agent for colorectal cancer, reducing both incidence and mortality.²² Cyclooxygenase-dependent effects are important, but independent effects such as an increased degradation of IκBα, the inhibitor protein that usually maintains NFκB in the cytoplasm, as well as acetylation of biomolecules, have also been implicated.²²

SHOULD PATIENTS BE ASKED TO TAKE NUTRACEUTICALS AS FUNCTIONAL FOODS OR DIETARY SUPPLEMENTS?

The answer will depend on the situation. Nutraceuticals, as a combination from food for nutrition and pharmaceuticals for disease, defines compounds from food sources that provide health benefits in addition to basic nutrition. Functional foods are considered to be enriched foods eaten in forms similar to the natural state to provide physiological benefits or reduce the risk of chronic disease. Dietary supplements are

There is now increasing recognition that dietary saturated fats may change the intestinal bacteria, increasing the Firmicutes to Bacteroidetes ratio, and therefore increasing the local inflammatory responses in the intestine

concentrated forms of products from foods. These definitions will overlap, with differences being subjective rather than objective.

WHAT PRECLINICAL STUDIES ARE NECESSARY TO DEFINE THE POTENTIAL OF NUTRACEUTICALS IN OBESITY?

Since obesity has been defined as a chronic low-grade inflammation, we hypothesised that treatment with anti-inflammatory compounds would reverse obesity. We developed a rat model of diet-induced metabolic, cardiovascular and liver changes by feeding male rats for 16 weeks with a high carbohydrate, high fat diet containing condensed milk (39.5%), beef tallow (20%), fructose (17.5%), salt mixture (2.5%), rat food (15.5%) and water (5%), and supplementing with fructose (25%)

in drinking water.²³ Rats showed progressive increases in body weight, energy intake, abdominal fat deposition and abdominal circumference along with impaired glucose tolerance, dyslipidaemia and increased plasma insulin, leptin and malondialdehyde concentrations. Cardiovascular signs included increased systolic blood pressure and endothelial dysfunction together with inflammation, fibrosis, hypertrophy and increased stiffness in the left ventricle. The liver showed increased wet weight, fat deposition, inflammation and fibrosis with increased plasma activity of liver enzymes. This diet-induced model closely mimics the changes observed in human metabolic syndrome. We then determined the importance of inflammation by showing that these diet-induced changes could be reversed by novel compounds including KH064 (secretory phospholipase A2 inhibitor),²⁴ 3D53 and SB290157 (complement receptor antagonists)²⁵ and GB88 (PAR2 antagonist)²⁶ that selectively target inflammatory mechanisms. We further showed that dietary supplementation with foods or their components including purple carrots,²⁷ rutin,²⁸ grapefruit,²⁹ ellagic acid,³⁰ L-arginine³¹ and n-3 polyunsaturated fatty acids³² (Figure 1) reversed the diet-induced metabolic, cardiovascular and liver changes. The key mechanism is the prevention of inflammatory cell infiltration into the heart, liver and fat pads by these interventions, despite continuing the high carbohydrate, high fat diet. This will lead to prevention of the tissue damage caused by these excess inflammatory cells, and so possibly prevent or delay chronic disease. These results strongly



Members of the research laboratory (L to R): Dr Sunil Panchal, Dr Mark Lynch, Maharshi Bhaswant, Prof Lindsay Brown, Sharyn Canrahan, Dr Kate Kauter, Senthil Arun Kumar, Siti Raihanah Shafie and Dr Hemant Poudyal

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suggest that certain foods contain non-nutritive components that can reverse the chronic low-grade inflammatory changes in heart, liver and fat pads in diet-induced obesity, without toxicity. These rat studies indicate that human studies could be successful and so need to be undertaken.

There is now increasing recognition that dietary saturated fats may change the intestinal bacteria, increasing the Firmicutes to Bacteroidetes ratio, and therefore increasing the local inflammatory responses in the intestine. Fibres are carbohydrates that are neither digested nor absorbed from the intestine, but they may be fermented to produce short chain fatty acids such as acetate, propionate and butyrate. Selectively fermented compounds that may confer health benefits to the host are known as prebiotics and includes products such as psyllium fibre, oat β -glucans, polydextrose, wheat dextrin, acacia gum, banana, whole grain wheat and whole grain corn.^{33,34} The fatty acids from fermentation are substrates for some bacteria, especially Bacteroidetes, and may normalize the Firmicutes to Bacteroidetes ratio, producing anti-inflammatory responses. This could prevent the bacterial translocation from the intestine and normalise intestinal permeability, thus decreasing systemic inflammation. It has been long accepted that increased fibre intake decreases cardiovascular risk. Clinical results on the treatment of obesity, cancer and inflammatory bowel diseases have been mixed. Further controlled studies will be welcomed.

Natural products are clearly a part of our diet; the development of nutraceuticals is a logical extension. Separating anecdote from evidence that the intake of nutraceuticals improves health remains a priority. The increasing understanding of the role of chronic inflammation in noncommunicable diseases gives a solid foundation for further studies on the anti-inflammatory properties of nutraceuticals.

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Homoeopathy, *Humanitarian Aid and Homoeoprophylaxis: Part 1*

Jimi Wollumbin

Abstract

Homoeopathy has a 200 year history of use in epidemic diseases and arose during a period of history when Europe's sanitation and nutritional levels were comparable to those of many developing countries today. This has resulted in a significant body of information around the treatment and prevention of many of the diseases encountered in international relief efforts and community development today. In 2012 One Health Organisation (OHO) conducted a pilot project in India with its collaborative partner Traditional Healthcare to assess the viability of using homoeopathy to increase host resistance to malaria. This article documents OHO's experience, together with some of the relevant classical literature and more recent studies in order to better disseminate knowledge that has clear applications for modern humanitarian aid seeking to include holistic approaches.

Dr Jimi Wollumbin, CEO, One Health Organisation, with a 9 year-old client suffering from malarial encephalitis-induced brain damage. This photo was taken shortly after the clients very first unassisted walk following 3 weeks of treatment with acupuncture.



Project Background

The rural communities of Datom and surrounding localities in the Ranchi district of Jharkhand, North-East India, lack any semblance of an accessible public healthcare facility. Community members requiring urgent and/or specialised medical treatment are required to make a train journey (often preceded by a lengthy walk) of up to five hours to one of the two hospitals in Ranchi where healthcare is available – a trip that is both unaffordable and infeasible for the severely ill or infirm. Frequently, individuals and families who do manage to make this trip are forced to curtail their hospital treatment early due to financial constraints. The most prevalent infectious disease in the area is malaria, which afflicts a large percentage of the population. In response to this urgent need, the team from the Traditional Healthcare project, with the support of One Health Organisation, have created open air clinics since 2005 while constructing sustainable healthcare facilities.

Epidemiology

Malaria is presently endemic in a broad band around the equator, in areas of the Americas, many parts of Asia, and much of Africa. Based on documented cases, the WHO estimates that there were 216 million cases of malaria in 2010 resulting in 655,000 deaths.¹ The majority of cases occur in children under five years, with 65% of cases occurring in children under fifteen.² Raymond Chambers, the UN Secretary General's Special Envoy for Malaria, states that 'one child still dies every minute from malaria - and that is one child and one minute

too many'.³ With some commentators suggesting that the death rate could double in the next twenty years,¹ holistic medical practices should continue to be evaluated for the contributions they may make to this global epidemic.

Pathology

Malaria is a disease caused by four parasites, all of which are transmitted by female mosquitoes. General symptoms are intermittent fever, headache, general malaise, and bone and waist pain. The diagnosis is confirmed by clinical presentation and a thick blood smear.

IN 1813 AN EPIDEMIC FOLLOWED THE DEVASTATION OF NAPOLEON'S ARMY MARCHING THROUGH GERMANY TO ATTACK RUSSIA. WHEN THE EPIDEMIC CAME THROUGH LEIPZIG AS THE ARMY PULLED BACK FROM THE EAST, HAHNEMANN WAS ABLE TO TREAT 180 CASES OF TYPHUS AND DOCUMENTED A 1.5% MORTALITY RATE AS OPPOSED TO THE CONVENTIONAL FIGURES OF 30%

Homoeoprophylaxis' Historical Uses

The history of the use of homoeopathic medicines in epidemics, both curatively and preventatively, dates back to the founder of homoeopathy, Samuel Hahneman, when in 1801 he published an article titled 'The Prevention and Cure of Scarlet Fever':²

'Who can deny that perfect prevention of infection from this devastating scourge, the discovery of a means whereby this divine aim may be surely attained, would offer infinite advantages over any mode of treatment, be it of the most incomparable kind soever? ... The remedy capable of maintaining the healthy uninfected by the miasm of scarletina, I was so fortunate as to discover.'³

Hahnemann also wrote on his experiences with typhus epidemics.⁴ In 1813 an epidemic followed the devastation of Napoleon's army marching through Germany to attack Russia. When the epidemic came through Leipzig as the army pulled back from the east, Hahnemann was able to treat 180 cases of typhus and documented a 1.5% mortality rate as opposed to the conventional figures of 30%.⁵ As a result of experiences such as this and the reported success in preventing and curing cholera that Hahnemann himself documented,⁶ homoeopathy's professional acceptance bloomed, and within a single generation had expanded into most European countries and some American states. By the time of the 1831 pan-European cholera epidemic official mortality statistics were available from



By the time of the 1854 London cholera epidemic the success of homoeopathic medicine in epidemics had come to be seen as a threat by practitioners of the conventional medicine of the day

a wide range of sources that compared the results of conventional care and homoeopathic treatment.⁷ A well regarded textbook of the time, Osler's 'Principles and Practice of Medicine', reported a cholera mortality rate of a terrifying 80% under normal treatment, whereas the Imperial Council of Russia listed 40% and the Austrian government figures were 66%. The homoeopathic mortality rates from the same epidemic however were as follows:

- Average mortality in the ten London homoeopathic hospitals examined: 9%
- King of Bavaria's report on homoeopathy: 7%
- Imperial Russian Council's report: 10%
- Austrian homoeopathic mortality: 33%

This is a good example of what public health historian Dana Ullman summarised as 'the astounding success' of homoeopathy in treating

and preventing nineteenth century epidemics.⁸ The allopathic editor of the Dublin Quarterly Medical Journal wrote in response to the documented results in Austria that 'On account of this extraordinary result, the law interdicting the practice of homoeopathy in Austria was repealed.' These results were not anomalous,⁹ and were repeated in the 1849 French cholera epidemic, where a single homoeopathic doctor treated 1662 cases, with a mere 49 deaths resulting in a 2.9% mortality rate, as opposed to the conventional rate of over 10%. In recognition of this, Napoleon III bestowed a Legion of Honour and Pope Pius IX awarded an Order of St Gregory to the doctor.⁸ By the time of the 1854 London cholera epidemic the success of homoeopathic medicine in epidemics had come to be seen as a threat by practitioners of the conventional medicine of the day, with the records of the many homoeopathic hospitals being omitted from the report to the House of Lords so they didn't 'skew the results'. The suppressed report revealed

that under allopathic care mortality was 59.2% while under homoeopathic care it was only 9%.¹⁰

Results in the new world were no less dramatic, with the infamous 1850's yellow fever epidemics that swept through the southern states of the USA claiming mortality rates of up to 85%, according to official Osler's statistics, whereas the mortality figures gathered at homoeopathic hospitals were between 5% and 6%.¹¹ The New York diphtheria epidemics of 1862-1864 yielded a similar disparity, with Bradford recording the mortality rate under conventional care as 83.6%, whereas the mortality rate among patients treated homoeopathically was only 16.4%. Based on figures such as this the Homoeopathic Mutual Life Insurance Company was formed, and offered lowered premiums for clients under homoeopathic care. In 1878 they recorded 7927 policies for clients under homoeopathic medical care and 84 deaths, making a mortality rate of 1.06%, whereas among 2258 clients under

allopathic medical care there were 66 deaths, a 2.92% mortality rate. A non-homoeopathic client was therefore almost three times more likely to die, which explains the higher premiums they were forced to pay for life insurance policies.⁸

The Experience of the 20th Century

By the beginning of the twentieth century.¹² The American Institute of Homoeopathy's 1916 report documented that patronage of homoeopathy had grown to rival conventional medicine, with 35.5% of the population seeking homoeopathic care. They listed the following figures for the previous year:

- 101 accredited institutes representing 20,092 beds for in-patient treatment
- 109,527 hospital patients treated during the previous fiscal year
- The dispensary departments of these institutions treated 287,887 out-patients
- An average mortality rate of only 4.1%

When the Spanish flu pandemic struck two years later in 1918 it killed an estimated 4%, or 675,000 Americans, and infected around 500 million people worldwide, with somewhere between 30-50 million lives lost.⁸ Fortunately for us, significant figures were able to be documented by the established hospitals practising homoeopathic medicine due to the above-mentioned healthcare infrastructure. The Journal of the American Institute for Homoeopathy reported in May 1921 that of 24,000 cases treated conventionally the mortality rate was 28.2%, meaning almost one in three contracting the illness died from it. By comparison, of the 26,000 cases treated homoeopathically in accredited homoeopathic institutes the mortality rate was only 1.05%. This figure was further supported by Dean W.A. Pearson of Philadelphia who collected 26,795 cases of flu treated with homoeopathy with the above result.¹⁰

By the 1930's, following the controversial closure of most non-conventional medical institutes due to the Flexner Report's recommendation on uniformity in medical education and practice, the focus of homoeopathy and infectious disease had shifted from the field into the laboratory. In 1938 a French researcher, Dr Chavanon, conducted trials on diphtheria which suggested that lasting immunity was conferred by preventative homoeopathic treatment with the nosode, using the recently invented Schick test.¹³ These results were then reproduced by British researchers in 1941¹⁴ and 1943⁸ indicating possible protection for up to five years after a single dose.

At this point in history advances in public sanitation had largely removed the occurrence of cholera, typhus and diphtheria, as water supplies contaminated with effluent had been the root cause of these diseases. Typhus and yellow

fever similarly succumbed to advances in town planning and public health, as fleas and mosquitoes were more effectively managed. Finally, significant increases in nutrition had reduced the previously high mortality rates of otherwise mild diseases (measles, mumps, rubella, scarlet fever, rheumatic fever and whooping cough) to their current low levels. However, the rising epidemic of the era was poliomyelitis, which in 1950 was confirmed by the UK Ministry of Health to be associated with conventional inoculations.¹⁵ A series of homoeopathic trials was conducted throughout this period but due to the closure of the previously established medical infrastructure they were smaller ones.¹⁶ The largest of these, which involved up to 40,000 patients, was conducted in Brazil, which had been unaffected by the Flexner Report.¹⁷

The second part of this article will be published in the March 2014 issue of JATMS. A full list of references will be published along with Part 2.

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Craniosacral Therapy: *A Case Study*

Chris Teale | Physiotherapist and Certified CranioSacral Therapist

I saw baby Ali* who was six weeks old for attachment issues and the tendency to hold her head to the right side. Her mother was referred to me by a visiting community midwife. Ali's birth was an uncomplicated 17 hours, with final stage lasting 15 minutes. Her mum felt that Ali had some signs of colic and was a bit whiney but her main problem was attachment, with mum resorting to a nipple shield due to discomfort and stress caused by feeding. She also had a tendency to short sleeps in the day, being unable to sleep past one sleep cycle.

The visiting midwife thought it was related to the baby's high palate and suggested that Ali try CranioSacral Therapy. On evaluation, she was a happy and settled baby but she tended to lie with her head to the right, which corresponded with some obvious flattening of the right occipital and

temporal bones. There was an associated decrease in normal craniosacral expansion of the cranial base. Her sacrum had a right lateral torsion and fascial tension radiated from her respiratory diaphragm anteriorly into her neck, with her hyoid bone deviated to the right. Associated with this was an increase in tension of the deep posterior cervical muscles.

In the initial treatment I released the sacral torsion and fascial tension of the respiratory diaphragm which radiated anteriorly into her neck. This was achieved by applying less than 5gms of pressure to the tissues, allowing Ali's body to release in its own time. The release was confirmed when heat was released from the tissues. My fingers settled on Ali's hyoid while I cupped her posterior cervical muscles. As she became slightly agitated I encourage

her father to allow her to suck on his little finger. This was a practice they used at home to comfort her and as she relaxed her hyoid bone posterior cervical tension released. I then used a gloved finger to palpate her vomer, a small bone that articulates with the soft palate and sphenoid, which was restricted and which released while Ali sucked on my finger.

She was now quite settled and on re-evaluation of her cranial system there was increased craniosacral rhythm of her right temporal and occipital bones. I finished her session with a decompression of her sphenoid. This bone along with occiput and temporal bones forms the cranial base, one of the most vulnerable areas during childbirth.

On her follow up-session, Mum had reduced using her nipple shield to 2-3

Some pictures of babies not from case study



Sphenoid decompression



Tentorium cerebellum release - horizontal membrane system

times per day rather than with every feed. This was more precautionary than necessary, as her Mum had felt quite stressed by the pain that had occurred during feeding and wasn't keen to re-experience it. Ali had also changed her sleep pattern and was now having at least one long sleep in the day. On palpation the sacral, diaphragm and hyoid releases were maintained, but there was still some restriction of the posterior cervical muscles, right occiput and temporal bones. Treatment focused on releasing her cranial base, including the occiput and temporal bones, and the horizontal membrane system, particularly on the right.

On her third visit Ali's Mum had stopped using her nipple shield altogether and was very happy. Ali was taking a lot less

time to feed and the symptoms that they thought were colic had now disappeared. She still had a slight tendency to favour the right although it was now hard to distinguish the flattening of the occiput and temporal bones that was initially present. On evaluation there was still some restriction of the cranial and spinal membrane system and right trapezius muscle. The final treatment included gentle dural releases, and stretches to the right trapezius muscle, which her parents could do at home. They phoned a week later to say that she was now comfortably sleeping with her head resting spontaneously on either side.



Frontal bone release

*baby's name changed for confidentiality

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Long-term Use of Supplemental Lysine – *Is it Safe?*

Lea Bumpstead | BHSc (Nut Med), Prof Ext Dip Herb Med, MEAA Safety Cons.

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Abstract

The amino acids lysine and arginine have been shown to respectively inhibit and stimulate herpes simplex virus (HSV) replication. Lysine supplements have been used over the last three decades to inhibit viral replication, shorten the duration of herpetic blisters and help prevent recurrence. However arginine has many physiological roles in the body and as it uses the same intracellular transport routes as lysine there is the potential for adverse effects due to a relative arginine deficiency. There is also the potential for adverse effects on renal function due to increased amino acid intake.

Background

In 1977 Griffith, Norins and Kagan^{1,2} discovered that if arginine was added to isolated HSV in a petri dish, the virus would multiply. However, when lysine was added the virus's ability to multiply was inhibited. In 1983 they ran a small study on 45 human subjects which supported their hypothesis that lysine would inhibit the HSV *in vivo*. A subsequent study in 1983 expanded the research to 1543 participants which again supported the therapeutic application of lysine.

Clinical and anecdotal evidence suggests that the benefits of lysine supplements are obtained with doses from 394mg to 3000mg, and ranging up to 9000mg. In one double blind study using a dose of 1000mg t.d.s, after six months lysine was rated as effective or very effective by 74% as opposed to 28% on placebo, with the conclusion that L-lysine is an effective agent for reduced occurrence, severity and healing time for recurrent HSV infection.³

Studies have yielded mixed results; For example, a 1984 study by DiGiovanna and Harvey found no benefit.⁴ But this may have been due to factors such as the dose tested being too low for therapeutic benefit, the severity of the outbreak, the large number of dropouts in the placebo group and whether the supplement was used prophylactically or post-outbreak. Some studies have also used synthetic non-biologically active d-lysine.

The most common side effects reported from acute usage are nausea, diarrhoea and weakness. Side effects appear to be minimised if doses are divided into smaller ones and ingested with foods containing protein.

Ball-and-stick model of the L-lysine cation, (S)-2,6-diammoniohexanoate, [C₆H₁₅N₂O₂]⁺, from the crystal structure of L-lysine monohydrochloride dihydrate

Arginine

Arginine is a conditionally essential amino acid as it can be obtained from the diet and is synthesised endogenously from the amino acid citrulline and sourced from the breakdown of proteins in the body. Arginine synthesis from citrulline occurs primarily in the small intestine and the renal tubules in the kidney.^{5,6,8}

Infants and people with kidney or small intestine damage require exogenous sources due to the reduced ability to synthesise arginine. Arginine becomes essential in pathological states such as sepsis, burns, trauma or surgery.^{6,8} Low plasma arginine levels are a hallmark of sepsis.⁸ Arginine deficiency is also a feature of sickle cell disease.⁹

Arginine is important for the transport, storage and removal of excess nitrogen and ammonia.⁷ In one patient with small intestine and kidney damage an arginine deficiency led to hyperammonemia and resultant disturbed consciousness, which were corrected with supplemental arginine.¹⁰

Arginine is converted to ornithine by arginase. Ornithine is converted to polyamines necessary for cell growth and differentiation and to proline which is important for collagen synthesis and wound healing.^{5,7,8} Supplementation with arginine has been shown to directly support collagen synthesis and wound healing.¹¹

Arginine is an important amino acid which is an essential precursor for the synthesis of molecules with wide ranging metabolic roles, including nitric oxide.^{5,6,7}

Nitric oxide

Nitric oxide has many physiological roles in the body, including vasodilation which affects cardiovascular health, free radical scavenging and neurotransmission. Nitric oxide released by vascular endothelium is vasoprotective and

anti-atherosclerotic.^{6,7,8} Endothelial dysfunction is associated with atherosclerosis and cardiovascular disease. Arginine administration has been shown to improve endothelial function in animals and humans with hypercholesterolemia and atherosclerosis.¹²

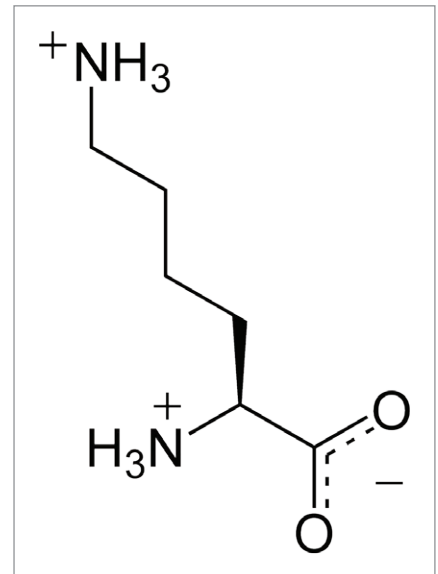
Defective gallbladder motility is implicated in cholesterol gallbladder disease. Nitric oxide plays an important role in gallbladder motility by triggering relaxation of the gallbladder and allowing emptying, thereby reducing the build-up of gallstones.^{13,14} Supplemental lysine has been linked to hypercholesterolemia and gallstone formation in animal studies.^{15,16}

Nitric oxide is also important for male reproduction due to effects on sperm production and for achieving and maintaining erections.^{7,8} Nitric oxide triggers the synthesis of cyclic GMP which causes calcium uptake leading to muscle cell relaxation, vasodilation and increased blood flow to the penis. As an example of the importance of this pathway for achieving and maintaining erections, the drug Sildenafil (Viagra) works by binding the enzyme PDE5 that degrades cyclic GMP.¹⁷

Asthma sufferers have been found to have lower circulating arginine levels than controls. The relative nitric oxide deficiency induces hyper-reactive airways which contributes to asthma symptoms.^{9,18}

Arginine is important for the thymus and lymphocyte count and nitric oxide is generated by phagocytes as part of the immune response. Nitric oxide is utilised by macrophages, neutrophils, mast cells, fibroblasts, hepatocytes, vascular endothelial cells, smooth muscles cells and cardiac myocytes.⁷

Nitric oxide has an indirect but important role in the repair and integrity of gastric mucosa.^{7,19} This in turn has an indirect effect on the immune system, which is supported by



Skeletal formula of the L-lysine monocation

an intact gut lining and weakened by intestinal permeability.

LYSINE IS AN ESSENTIAL AMINO ACID; IT IS NOT SYNTHESISED IN THE BODY AND MUST BE OBTAINED FROM THE DIET. LYSINE EXCESS CAN INHIBIT NITRIC OXIDE PRODUCTION VIA ITS COMPETITION WITH ARGININE FOR SHARED INTRACELLULAR TRANSPORT

Lysine

Lysine is an essential amino acid; it is not synthesised in the body and must be obtained from the diet. Lysine excess can inhibit nitric oxide production via its competition with arginine for shared intracellular transport. Long term use of lysine therefore has the potential to hinder nitric oxide production with possible effects on immunity, collagen synthesis,

TABLE A
A SELECTION OF LYSINE SUPPLEMENTS, RECOMMENDED DOSE AND ADVICE

BRAND	LYSINE DOSE	ADVICE/CONTRADICTIONS/CAUTIONS
Supermarket Brand A (contains other ingredients)	Adults 500mg b.d 1000mg b.d during outbreak Children 6-12, 500mg q.d	Or as professionally prescribed Advice given on other ingredients
Supermarket Brand B	500mg b.d with food	Or as recommended by a healthcare practitioner
Health Store Brand C (contains other ingredients)	Adults prevention 1000mg q.d Acute 1000mg t..d.s Children <12 1000mg q.d	Or as directed by a healthcare practitioner
Health store Brand D	500mg b.d 1000mg b.d or t.d.s acute	Consult a healthcare practitioner if you have kidney or liver disease or during pregnancy and breastfeeding
Practitioner Brand E (contains other ingredients)	1 x 800mg q.d 2 x 800mg b.d	Not all contradictions and cautions are listed on the bottle. A phone number is provided for further information then: Not recommended for persons with hypercalcaemia, kidney disease, existing high blood levels of lysine, pregnancy and lactation, plus other advice related to other ingredients

wound healing, male sexual health and cardiovascular health.^{8,20}

Lysine may have a nephrotoxic effect and should not be taken with aminoglycoside antibiotics due to the increased risk of nephrotoxicity.^{21,22}

The kidney has an important role in the metabolism of amino acids. Excess amino acid intake causes greater amounts of waste such as urea that must be eliminated. This can overload kidney function leading to progressive kidney impairment, particularly in people with existing kidney disease, hypertension, diabetes or aged over 65 years.

A case report from 1996 linked a daily intake of 3000mg lysine over five years to Fanconi syndrome which progressed to end stage renal failure.²³ The 44-year-old female presented to a nephrology clinic with polyuria, polydipsia and fatigue. Tests revealed proteinuria and abnormal creatinine clearance. After four months a biopsy showed long-term vascular injury with interstitial fibrosis and tubular atrophy. At this stage, the patient revealed she had been taking 3000mg of lysine a day for five years.

Lysine aids calcium absorption and therefore may be beneficial for those suffering from effects of calcium deficiency such as osteoporosis or osteopenia^{24,25} but may not be advisable for people with hypercalcaemia.

There is a potential for a rebound effect when ceasing lysine intake after chronic use. Anecdotal reports suggest HSV sufferers report lesion recurrence if they stop taking lysine. In an early small double cross-over study those allocated to six months on lysine who were then changed to the placebo group experienced an increase in herpetic lesion frequency.²⁶

Table A shows that in the sample lysine supplements a prophylactic dose from 800 to 1000mg is recommended on an ongoing daily basis with various increases recommended during outbreaks. The safety advice varies but there doesn't appear to be any information relating to duration of use.

Discussion

Supplementation with lysine has shown benefit in the acute treatment of HSV.

Abbreviations

q.d = once a day;
b.d = twice a day;
t.d.s = three times a day

There is however, the potential for lysine to be counterproductive long term due to competition with arginine for shared transport and a proposed relative arginine deficiency.

Arginine is the precursor for many important molecules with influence in many pathways, but of particular concern in relation to HSV are the roles in the immune system, gut integrity and wound healing. Given the possibility of a rebound effect when ceasing supplementation, there is the possibility that people with HSV, especially chronic sufferers, will continue to take lysine in order to prevent HSV outbreaks. In fact most lysine supplements recommend an ongoing prophylactic daily intake of 1000mg.

Without appropriate safety advice, people may also take a larger

prophylactic dose than recommended, as demonstrated by the case study linked to Fanconi syndrome. Excess protein or amino acid intake can lead to kidney damage. It is possible there are other cases where adverse effects have occurred due to excess or long term lysine ingestion without the cause being identified.

Conclusion

Short term use of lysine appears to be safe for the symptomatic treatment of HSV in the general population, especially if taken in divided doses and ingested with meals containing protein. The available evidence on the safety of long term and/or high dose lysine supplementation for the general population is inconclusive; however doses at or above 3000mg should not be recommended for long term use due to the potential for kidney damage.

Lysine should not be recommended for infants or young children or for persons at risk of harm from a relative arginine deficiency such as, but not limited to, people suffering from asthma, sickle cell disease, kidney disease or small intestine complications such as short bowel syndrome, without appropriate medical advice. In addition, caution is warranted in relation to males with reproductive health concerns such as low sperm count or erectile dysfunction as well as persons with hypercalcemia, gallbladder disease or cardiovascular disease and also during pregnancy and breastfeeding.

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Burns and their *Management* *Using Homoeopathy*

Robert Medhurst | BNat DHom

At some stage or other, just about everyone will experience burns, some minor and some severe. Burns are generally classified into three types, depending on the severity of the burn.

First degree burns, sometimes known as superficial burns, involve damage to the epidermis. The burn site is painful and erythematous, and blistering is not

present. Second degree burns, sometimes known as partial thickness burns, involve damage to the epidermis and dermis. The pain here is severe. There is peeling, blistering and swelling and a clear or yellow-coloured exudate is produced at the site. Infection may occur and spread down to the third layer of the skin. Skin grafts may be required and there is a risk of scarring. In the case of third degree or full thickness burns, the epidermis, dermis and subcutaneous tissue are often destroyed. There may be shock from fluid loss. The burn site may be painless because of damage to nerve tissue, but pain will be felt in the area surrounding the site. Underlying tissue such as muscle, tendon and bone can be damaged or destroyed, and the burn site appears white or charred. Extensive scarring may arise and skin grafts are often necessary. In cases of second or third degree burns, anything other than emergency medical management should only be used as first aid while such management is sought.

The first aid management for burns usually involves the removal of the person from the source of the burn, gentle but copious washing of the burn site, and covering the area to reduce the risk of infection. The faster that treatment is started, the lower the risk of sequelae. It should be remembered that any external materials used in the treatment



of burns must be sterile because of the very high risk of infection, and for the same reason, care must be taken to avoid breaking blisters.

Homoeopathic treatment of minor burns, or its use as first aid together with orthodox medical first aid while waiting for emergency medical treatment, has some significant advantages. One of the most impressive things about homoeopathic medicines is the speed with which they work - particularly in acute conditions. The medicines themselves are relatively easy to prescribe, they will not interact with pharmaceutical therapy, the remedies are eminently transportable, and the selection of the appropriate remedy is relatively easy.

Following is a short list of tried and true homoeopathic remedies for burns and their associated conditions that have been minimising pain and suffering for many generations. Please note that these are intended as a guide, and are for educational purposes only. They are not meant to replace the services of a suitably qualified person.

Cantharis

This is often the first choice in homoeopathic medicines for burns of all kinds, and it may be used internally in potency, or externally as a dilution of the 1X potency or tincture. Used early, it often helps to prevent blister formation. The symptoms indicating its selection include a red face, hypersensitivity, blistering, particularly where small blisters combine to form larger ones, and an intolerable and constant urge to urinate. There may be feelings of being alternately hot or cold, delirium, and burn pain that feels burning, cutting, biting or smarting. There may also be convulsions, a sudden loss of consciousness, restlessness, anxiety or renal complications. A burning or scalded feeling may be present in the mouth and throat with burning pains in the chest. Symptoms are often worse from touch, from being approached, and better from rest or cold applications.

Urtica urens

Traditionally used in first or second degree burns, Stinging Nettle may be used internally and/or externally as a dilute tincture. It has been found to be useful for relieving pain and promoting healing. The indications here include redness, intense burning heat, stinging, intense itching and agonising pain. There may be burning heat in the skin with formication. Symptoms are worse from cold, water, cold applications, cool moist air or touch.

Causticum

Causticum has a history of use in third degree burns, pain relief from burns, poor resolution of old burns and the pathological effects of burns. The remedy picture is characterised by tearing, drawing or burning pain, restlessness, tremor, blistering, loss of muscular strength, obscured vision, as if a film were over the eyes, hoarseness and cough with a raw pan in the chest and drowsiness. Symptoms are worse from thinking about the ailment, worse from dry cold or a cold wind and are better from heat or damp or rainy weather.

Arsenicum album

Restlessness and depression are common pointers to Arsenicum. The sufferer may seem exhausted, even after the slightest exertion, will often desire company, expresses fears of death or being alone, thinks it is useless to take medicine and may be irritated by disorder or confusion. There may be fever with a cold sweat, deep burns with vesicles, oedema, swelling and burning of the skin, infected flesh, and inflammatory swelling, burning or lancinating pain and the body may seem icy cold. Thirst, burning pains, a cold sweat, a burning in the throat and chest and constriction of the airways and also often present. Colic or septic infections may develop here. Symptoms are worse at night, particularly after midnight, from cold, cold drink or cold food, and symptoms may be improved by heat, warm drinks and having the head elevated.

CAUSTICUM HAS A HISTORY OF USE IN THIRD DEGREE BURNS, PAIN RELIEF FROM BURNS, POOR RESOLUTION OF OLD BURNS AND THE PATHOLOGICAL EFFECTS OF BURNS

Aconite

Aconite's primary role in this situation is the relief of shock. It is best used in the early stages and discontinued as tissue changes occur. Some of the pointers to its suitability include panic, fear of death, alternating bodily cold and heat, chills, fever, thirst, physical and mental restlessness, fright, anxiety, a sudden sinking of strength and a fear of being touched. Hyperaemia, tachycardia, a hot, bursting headache, intolerable pains, redness of the face and eyes and redness and swelling of the skin with a burning heat may also be noted, as may oppressed breathing, a hoarse, dry cough, tracheal constriction, laryngeal sensitivity, and sensitivity to inspired air. Symptoms are worse in a warm room, at night, or in dry, cold wind, and better from open air.

Hepar Sulph

This is often called for in the later stages of burns and is particularly useful in cases where suppurating wounds or glandular swellings are evident, and the skin is cracked and itchy. Small papules may also spread around the sides of the old lesion. The sufferer may be chilly, want to be wrapped in blankets and yet be sweating. There may be hypersensitivity, irritability and nocturnal depression as well as a craving for sour or strongly flavoured things. Symptoms are worse from touch, lying on the painful side, dry cold wind, or cool air, and are better from damp weather and warmth.

Arnica

Mental and physical shock, trauma or fainting and other issues arising after severe burns are often relieved by the use of Arnica. It has a history of use in the prevention of septicaemia, tissue inflammation or abscesses that fail to mature. There's often extreme sensitiveness and pain. The sufferer feels bruised and beaten, fears being approached or touched, wants to be left alone, and tells everyone they're okay. There may be delirium, shivering, diplopia, a feeling as if the head were hot and the body cold, and the whole body may feel hypersensitive. Symptoms here are worse from touch or motion, rest or damp cold, and are better from lying down or having the head held low.

Carbo Veg

Colloquially known as the 'corpse reviver', Carbo veg may be of use in states of shock or collapse. It's noted for supporting the circulation and respiration, and preventing shock from developing into collapse. The guiding signs and symptoms here include a blue and icy cold body with a hot head, exhaustion, tachypnoea, a faint pulse, gasping for air, cool breath, an aversion to darkness, hoarseness and cough with a burning in the chest. Symptoms are worse at night, from heat or open air and better from being fanned.

Hypericum

This may be used internally in potency, and/or externally as a dilution of the tincture. Its main roles in situations where a person has been burnt include shock, nerve pain or injuries to nerves. The pain experienced here is often very severe and the sufferer may appear to be quite drowsy. The symptoms experienced by the person who may benefit from Hypericum are usually worse from cold, from touch, from damp or exposure, and are better from bending the head back.

Kreosote

Like Hypericum, Kreosote may be used either internally, externally (as a very

dilute tincture) or both. Its action often makes it more applicable to the later stages of serious burns, particularly where decomposition of fluids has occurred. Burning pains, irritability, loss of memory, a burning throat with hoarseness, a cough with copious purulent expectoration and a burning pain in the chest, may also be present. Symptoms are worse from open air, cold, when lying down, and better from warmth, motion and warm food and drink.

Rhus tox

Rhus tox is a homeopathic remedy made from Poison Ivy (*Rhus toxicodendron*). Anyone who's experienced physical contact with this plant will have a clear idea why it's used homeopathically for burns. Its symptoms include superficial blistering, vesicles, and burning. Intense itching is characteristic here, as is restlessness, delirium, photophobia, a dry cough and oppression of breathing. There may be tearing pain and stiffness on first motion that's improved by continued motion, as well as mental dimness and disturbed sleep. Symptoms are worse from cold, at night, from rest, and better from warmth, motion, and a change of position.

Apis

Often useful in the early stages of burns. The indications for Apis include pink, stinging and swollen skin that's very sensitive to touch, oedema, and acute inflammation. Other pointers to the remedy are intolerance to heat, stupor, listlessness, prostration, photophobia, a sensation of stiffness, red and swollen eyelids with hot lachrymation, a feeling of suffocation, a short dry cough, hoarseness and dyspnoea. Symptoms are worse from heat, touch, or pressure, and better from open air or cold bathing.

Belladonna

Belladonna is noted for a rapid onset of symptoms, thirstlessness and dilated pupils. The skin may radiate heat and may be hot, bright red, throbbing, swollen and sensitive. The sufferer may be delirious, anxious,

Aloe vera is certainly popular as a topical treatment for minor burns, accelerating healing and reducing the itch from burns

fearful, and experience hyperaesthesia of all of the senses, neuralgic pains that come and go, dryness of mouth and throat and an aversion to water. There may also be convulsions, a loss of consciousness, diplopia, swollen eyelids, cold extremities, a painless hoarseness, a short dry cough and oppressed breathing. Symptoms are usually worse from touch, noise, draught and lying down, and are better from sitting up.

Carbolic acid

This remedy is often used for the sequelae of burns, notably burns that ulcerate and don't heal, particularly where the skin itches and exudes a putrid discharge. The sufferer may appear languid and may exhibit a feeble pulse, depressed breathing and have very acute sense of smell. The symptoms here are usually aggravated by cold.

Topical Preparations

Aloe vera is certainly popular as a topical treatment for minor burns, accelerating healing and reducing the itch from burns. Calendula is also popular as a topical application, reducing the risk of infection, accelerating healing and reducing the risk of scars. The only caution here is that Calendula is best used around the edges of the wound. This is because the healing action of Calendula can be quite rapid, and any potentially pathogenic material not cleaned from the wound before its use may well be quickly encased within the healed wound, setting the scene for the formation of an abscess. As a final reminder, it's essential to ensure that any topical preparations used in the management of burns are sterile.

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INGREDIENTS

Each patch contains extracts equivalent to dry

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Mentha haplocalyx	branch	225mg
<i>And powered</i>		
Dryobalanops aromatica,	sap resin	37.5mg

INDICATIONS

For the temporary relief of arthritic pain or rheumatic pain and relief of muscular aches and pains associated with sprains and strains caused by over-exertion, sports and falls.

DIRECTIONS FOR USE

Adults and children over 12 years. Clean and dry the area before applying. Remove the protective cover, apply the Herbal Plaster on the skin, press down firmly and smooth out. The area of pain should be completely covered. You may be able to leave a patch in place for up to 24 hours. Skin types can vary, please ensure if irritation occurs the patch is removed immediately and use discontinued.

CAUTIONS & CONTRAINDICATIONS

For external use only: People with sensitive skin use with caution as irritation may occur. Discontinue if irritation occurs. Not for open wounds. Not to be used during pregnancy & breastfeeding. Not to be used on face or sensitive areas of skin. Keep away from eyes.

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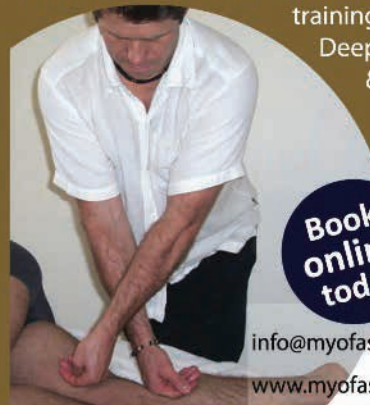
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An Anatomical *Evaluation of Skin Scar Tissue*

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A scar is defined in the Oxford Dictionary as 'a mark left on the skin or within body tissue where a wound, burn, or sore has not healed completely and fibrous tissue has developed'. Scarring in many instances is a mechanism by the body to repair itself after injury in a rapid manner. Unfortunately, the scar repair is not the original tissue (e.g., epithelial or muscle tissue) and this leads to functional deficiencies such as the muscle being unable to fully contract. The predominant tissue in a scar is

collagen, a fibrous connective tissue produced by fibroblasts. This is the most common tissue in the body, existing in components such as bone, cartilage, ligaments, tendons, around muscle and nerves and in the dermis of skin.

Minimisation or absence of scar formation after a minor skin lesion involving epidermal tissue

In a small skin lesion it is better to allow a scab to develop after a blood clot has developed during the wound

healing phase. This usually occurs three to four days post-injury and detaches naturally with time. The irritability that some people experience when the scab is present could be attributed to the increased tension developed in the dermal region, resulting in heightened sensory stimulation of the variety of sensory receptors which reside in the region, including Meisner's corpuscles (fine and discriminative touch), Paccinian corpuscles (coarse touch and pressure), Ruffini endings (subcutaneous stretch) and others. If the scab is removed prematurely, then the body will replace the re-opened lesion with collagenous scar tissue which restricts normal tissue (epithelial) regeneration causing a fine white line to develop on the skin surface. Allowing the natural process of scab formation and detachment to occur will invariably lead to normal epithelial regeneration underneath the scab, avoiding the need to rapidly replace the lesion with collagen to minimize bacterial and antigenic invasion.

Scar formation resulting from a dermal injury

When a skin lesion involving dermal tissue occurs the body's initial response is to close off the wound by creating a blood clot. The tissue disruption initiates an acute inflammatory process within a few hours, with the occurrence of vasodilation and localized oedema. This allows leucocytes (white blood cells) and macrophages to phagocytose the area of cell debris and pathogens. Within a timeframe of 72 hours fibroblasts start to produce collagen and manufacture

A MAJOR ELEMENT OF SCAR TISSUE IS THAT COLLAGEN CROSS-LINKS AND FORMS AN ALIGNMENT IN A SINGLE DIRECTION RATHER THAN THE IRREGULAR BASKETWEAVE PATTERN IN NORMAL TISSUE.

Keloid scars could actually be categorised as a benign type of tumour, and often grow bigger than the area of the original injury. The time course of keloids is generally an onset of three months

a collagenous matrix in order to close the wound as rapidly as possible. This cellular activity is supported by the formation of an increased capillary network, which occurs for a couple of weeks. The resultant scar formation at this stage is usually very erythematous. During the next four weeks the scar accommodates more collagen formation and increases in density. The fibroblast proliferation and abundance of collagen also increases the stiffness of the tissue. As the matrix further develops the fibroblasts re-organize the collagen fibres, pulling the edges of the wound together. This thickening of the collagen then affects the vascular supply to the scar, leading to the development of a paler region. As a result, a scar is usually thicker, denser, and paler than surrounding tissues, and the poor elasticity of scar tissue can limit movement in areas of the body that were extensively damaged, such as around a joint. A major element of scar tissue is that collagen cross-links and forms an alignment in a single direction rather than the irregular basketweave pattern in normal tissue. The collagenous fibres bind to the damaged tissue and this has a tendency to deform and shorten the surrounding soft tissues, resulting in loss of flexibility. This weakness in a soft tissue like muscle predisposes it to further damage and leads to loss of power and strength. In addition, a complete stretch and normal contraction is unable to occur. Scars can also lead to nerve impingement and tissue hypoxia, as the blood supply can be restricted by newly formed collagenous tissue. Another feature to take into account is that skin scar tissue does not contain dermal structures such as sweat glands and hair follicles.

Main types of abnormal skin scar tissue

Principally, these can be categorised into:

- **Atrophic scars**, which are depressions in the skin created by inflammatory conditions such as acne or chicken pox. Collagen production does not proceed normally, leading to poor regeneration of the skin surface. According to Fife,¹ 'The pathogenesis of atrophic acne scarring is not completely understood, but is most likely related to inflammatory mediators and enzymatic degradation of collagen fibres and subcutaneous fat'.
- **Hypertrophic scars**, which are due to an overproduction of collagen. They are usually red or purple and are slightly raised above the surrounding skin. They tend to fade and become flat over time. According to Gauglitz et al.² hypertrophic scarring has the highest incidence related to surgery (40% to 70%) and around 90% following burns, with the most common sites being the shoulders, neck, knees and ankles. The time for developing these types of scars is usually within four to eight weeks after the wound, followed by further scar growth (up to six months) and then gradual regression over a few years. An important feature of this type of scar is that it does not extend beyond the initial injury site and recurrence following excision is rare.
- **Keloid scars**, which are very elevated, red or dark scars that form when the body produces a lot of extra collagen in a scar. Keloid scars could actually be categorised as a benign type of tumour, and often grow

bigger than the area of the original injury. The time course of keloids is generally an onset of three months. According to Meenakshi et al.,³ keloids can occur following trauma, inflammation, surgery and burns, and occasionally spontaneously. The excess deposition of collagen occurs in the dermis and subcutaneous tissues. This overproduction of collagen can lead to disfigurement, contractures and pain. Guaglitz et al.² state that the primary sites of this type of scarring are usually on the anterior chest, shoulders, earlobes, upper arms and cheeks.

Meenakshi et al.,³ claim a familial connection among darker skin people such as African and Hispanics. The main features differentiating keloid scars from hypertrophic scars are that keloid scars enlarge and extend beyond the original injury site, there is no spontaneous regression and following excision there is a high recurrence rate.

- **Contracture scars**, which often happen with burns, and end up pulling the skin in towards the site of the injury. This can make the skin appear puckered around the wound. These scars are mainly fixed, thick and rigid. Contracture scars may also venture deeper, affecting muscles and nerves. If the scar occurs around a joint, it may cause restrictions in movement.
- **Stretch (striae) marks**, which are caused by the skin, especially the dermis, being stretched rapidly, often during pregnancy, during rapid growth phases in adolescence and in obesity. The tissue is often sunken a little into the skin, and tends to fade with time. The most common areas are the abdomen, breasts, upper arms, underarms, back, thighs, hips and gluteal regions.

Various forms of treatment for reducing skin scars

From a medical point of view there are a number of highly variable treatments, ranging from prescription creams,

From a medical point of view there are a number of highly variable treatments, ranging from prescription creams, ointments (silicone-based), gels, steroid injections, collagen induction therapy, laser surgery, cryotherapy and other forms of surgical scar removal such as skin grafts and scar revision

ointments (silicone-based), gels, steroid injections, collagen induction therapy, laser surgery, cryotherapy and other forms of surgical scar removal such as skin grafts and scar revision. These are applied in order to reduce or eliminate the scar, or reduce the inflammatory response. From a natural therapy point of view, there are also many treatments in the healing process of scar tissue. For instance, Nima Shei⁴ mentions Vitamin E, which stimulates collagen formation to improve skin texture, and aloe vera juice to regenerate skin tissue. Interestingly, a study by Shih et al.,⁵ when reviewing some topical scar treatments, claimed that Vitamin E alone did not improve scars but that some evidence existed that it may when combined with silicone gel sheets. Nicole Cutler⁶ mentions massage techniques such as manual lymphatic drainage to improve the lymph circulation around the area, myofascial release to help affected tissue constriction, and heat application to aid with the pliability of the scar. She cautions that these should be performed within the scope of a massage therapist's training and knowledge and if doubt exists a medical practitioner's permission should be sought. Scars increase in collagenous density from three months to more than one year, so as a general rule scars need to be addressed before they become excessively fibrous, otherwise there can be complications such as nerve compression, further discomfort, and markedly reduced blood and

lymphatic flow. In conclusion, although treatments (medical and natural therapy) are aimed at reducing scar tissue formation and thereby attempt to restore a high degree of functional normality, it should be acknowledged that the literature reveals different opinions about their effectiveness.

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JATMS Readers' Survey

Dr Sandra Grace | Editor JATMS

ATMS conducted an online survey of members to collect feedback about their journal. The email was sent to 9116 emails. A total of 1185 responses were received (13% response rate). Of those who responded, 23.4% had been in practice for less than 5 years, 48% had been in practice for between 6 and 20 years, and 12.6% had been in practice for more than 20 years. Only 0.8% of respondents were under 25 years of age; 6.6% were under 35 years. Most (77.8%) of respondents were female.

There was very strong support for the aims of the journal:

- To provide important association news, government legislation and policies that affect natural medicine practice, and CPE opportunities (95.3% agreed or strongly agreed)

- To keep members up to date with current research that may affect their practices (88.5% agreed or strongly agreed)
- To be a showpiece for ATMS (75.9% agreed or strongly agreed).

Almost all respondents reported that they read or looked through the journal: 51.6% said always, 27.5% said often and 17.5% said sometimes. The most useful sections of the journal were reported to be the updates on health fund issues (96.8%), the research sections (original research articles 96.2%, recent research summaries 96.3%), opportunities for CPE (95.4%) and the Law Report (91.3%) (Table 1).

Forty-four percent of respondents made suggestions for additional features they

would like to see in the journal. Many members requested a greater focus on their own modalities. Other suggestions included interviews with practitioners, articles on building a practice and integrating natural and mainstream medicine, and case studies. Several members requested a classified section. Some members preferred shorter articles:

"I FEEL THE ARTICLES ARE TOO LONG MOST OF THE TIME. THERE IS SO MUCH TO READ FROM SO MANY SOURCES, I OFTEN GET OVERWHELMED BY THE LENGTH OF THEM."

Some members also suggested a questions and answers section (e.g. a forum for members to put question to the ATMS Board). Others requested more opportunities to gain CPE points.

TABLE 1 USEFULNESS OF JOURNAL CONTENT TO ATMS MEMBERS

	Very useful	quite useful	not useful	rating count
President's Report	16.4% (183)	63.4% (708)	20.2% (226)	1 117
Chief Executive Officer's Report	12.0% (132)	61.3% (675)	26.7% (294)	1 101
State News	26.4% (294)	58.2% (647)	15.6% (174)	1 112
Law Report	36.4% (403)	54.9% (608)	8.8% (97)	1 107
Policy Report	35.0% (380)	54.8% (596)	10.6% (115)	1 087
Original Research Articles	60.7% (682)	35.5% (399)	3.9% (44)	1 124
Summary of Recent Research	60.8% (682)	35.5% (398)	3.8% (43)	1 122
Book Reviews	38.2% (428)	54.1% (606)	7.9% (89)	1 120
Health Fund News & Update	64.9% (733)	31.9% (360)	3.5% (39)	1 130
Continuing Professional Education Opportunities	64.5% (730)	30.9% (350)	4.7% (53)	1 131
Minutes of the AGM	10.0% (108)	59.1% (639)	31.3% (339)	1 082
			Answered	1 144
			Skipped	50

Quarterly publications were considered about right by 91.4% (1,045) respondents and 70.5% (807) preferred to receive a hard copy of the journal; 12.2% (139) preferred to receive an electronic version and 17.3% (198) preferred both; 81.5% (928) of respondents preferred to read the journal in hard copy.

With regard to layout and design of the journal, including colour, font, front cover image, 93% (1051) of respondents were happy with the current format. Seven percent of respondents (79) offered suggestions, including the use of a larger font size and recycled matt paper. They were divided over the need for a scientific look or a more contemporary magazine style journal.

"EITHER SHOOT FOR BEING A PROFESSIONAL STIFF

JOURNAL WITH FACTUAL AND COMPREHENSIVE ARTICLES, OR OPEN IT UP TO INCLUDE MORE RELAXED, ENJOYABLE TO READ PIECES. I DON'T THINK THE BLEND IS QUITE RIGHT YET."

A number of respondents (27.3%) said they would consider writing an article that would be of interest to ATMS members.

Most (93.6%) thought that the name of the journal was appropriate.

Sixty-three percent of respondents retained their past issues of the journal for more than a year; a further 14.5% for up to a year; 38.2% displayed the journal in the waiting room of their clinic.

Just over a quarter (25.5%) of respondents were prepared to pay an

additional cost for the journal, and of those 66.5% said they would be prepared to pay an additional \$10 per year.

Editor's response

I thank all those members who responded to our survey with many insightful and constructive suggestions and expressions of approval for the journal's present content and format. Wherever it is practicable, I will try to implement your suggestions. Those that require ATMS Board approval have been presented to the CEO. I will certainly be following up on the suggestion that members have greater input to the journal in the form of articles, letters and forums. I have always felt that more contributions from members would strengthen the journal and I look forward eagerly to receiving them. Send your articles and letters to me at atms.journal@westnet.com.au.

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Therapists' Obligations *under Consumer Law*

Ingrid Pagura | BA, LLB

Under the Competition and Consumer Act 2010 which came into force on 1 January 2011, all complementary health therapists have obligations. Two of the major obligations relate to behaviour and goods and services.

Therapists are required not to undertake any misleading or deceptive conduct. 'Conduct' includes actions and statements, such as advertisements, promotions or quotations made by a person. If the statement creates a misleading overall impression about the price, value or quality of consumer goods or services it is likely to break the law. It doesn't matter that you didn't intend to mislead or deceive. What matters is how your statements and actions, that is business conduct, could affect the thoughts and beliefs of a consumer.

Slightly exaggerated comments may be acceptable but 'puffery' may not be. 'Puffery' is wildly exaggerated, fanciful or vague claims that no reasonable person could possibly treat as serious. Examples of puffery could be a massage therapist claiming to give the best massage in the world or a naturopath selling herbs that will melt fat away. There is no legal distinction between puffery and misleading or deceptive conduct and it will depend on the circumstances in each case. Whether a court considers puffery as misleading or deceptive depends on the circumstances of each case.

A therapist can break the law by failing

to disclose relevant facts to a customer. Silence can be misleading or deceptive when important details a person should know are not told to them or there is a change in information already given to them that makes it incorrect. This also depends on the circumstances of each case. For example, silence could be seen as misleading when a massage therapist is selling their clinic and doesn't mention to the buyer that it is because another massage therapist is moving in nearby.

Promises, opinions and predictions can be misleading or deceptive if the person making them knew they were false, did not care whether they were true or not and had no reasonable grounds for making them. For example, a therapist assures a client that a health fund will give them a full rebate even if they don't know for sure.

This area also relates to promises a therapist makes, in particular those about treatments or products. Therapists must never make statements about curing or improving certain conditions unless they have evidence to prove it. Testimonials from other clients are not seen to be evidence for this type of claim. A therapist must always be very careful when explaining potential benefits and outcomes to clients.

Testimonials are statements from previous customers about their experience with a product or service and it is unlawful to present false or misleading ones. These can give consumers confidence in a product or service on the basis that another

person is satisfied with the goods or services and encourage them to buy something to their detriment, based on belief in the testimonial. Testimonials must be real, not ones that you've written yourself!

Finally do not mislead clients about your qualifications, skills or experience. For example, if I call myself a surgeon, patients would assume that I have a certain level of knowledge and skill. Again, silence could be an issue here where you don't correct a person who incorrectly assumes your qualifications.

Your business can't rely on disclaimers and small print as an excuse for misleading or deceptive conduct.

The ACCC gives the following advice on presenting information to customers.

Be sure to:

- give current and correct information
- use simple language
- check that the overall impression is accurate
- back up claims with facts and documented evidence where appropriate
- note important limitations or exemptions
- correct any misunderstandings
- be prepared to substantiate.

The other obligation relates to the provision of goods and services. As a supplier or manufacturer you guarantee that goods or services are of acceptable quality when sold to a consumer.

This means you guarantee the goods will be safe, durable and free from defects,

acceptable in appearance and finish, and do the job that that type of thing is usually used for. The test for goods is whether a reasonable consumer would find the goods:

- fit for all the purposes for which goods of that kind are commonly supplied (e.g., massage oil able to be used on clients)
- acceptable in appearance and finish (e.g., a massage table should be free from scratches to the upholstery)
- free from defects (e.g., the clinic printer will only print every second page)
- durable (e.g., the towels must last in good shape for a reasonable time after purchase, without fraying after one wash).

When looking at these elements there are a number of things to take into account, such as the nature of the goods, the price paid, any statements on any packaging or label on the goods and any representation you made about the goods.

The acceptable quality guarantee may not apply if defects have been pointed out to the consumer or if they have examined the goods and didn't find any defects they should have noticed. Finally any abnormal use of the goods may also mean that the guarantee doesn't apply.

All goods carry with them certain guarantees. These terms are implied in every consumer transaction. They must:

- be of acceptable quality – they will be safe, durable and free from defects and do the job that that type of thing is usually used for
- match any description given to the consumer
- match the sample or demonstration model
- be fit for any disclosed purpose (i.e., the goods will do the job the consumer was told they would)

One of the most important aspects of consumer law is that all suppliers of goods and services act in a conscionable manner. Generally, 'unconscionable conduct' is a statement or action so unreasonable it defies good conscience. The Department of Fair Trading highlights the following examples of unconscionable conduct by a trader:

- not properly explaining the conditions of a contract to a person they know does not speak English or has a learning disability
- not allowing sufficient time to read an agreement, ask questions or get advice

- using a friend or relative of the customer to influence the customer's decision
- inducing a person to sign a blank or one-sided contract
- taking advantage of a low-income consumer by making false statements about the real cost of a loan
- failing to disclose key contractual terms
- using high pressure tactics, such as refusing to take 'no' for an answer.

Note: these are examples and not a complete list of unconscionable conduct and sometimes these instances will not be unconscionable – it depends on the circumstances.

For further information please see ACCC website at www.accc.gov.au or NSW Department of Fair Trading at www.fairtrading.nsw.gov.au.



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Proposed Reforms to Advertising of Therapeutic Goods

Raymond Khoury | BA, DBM, PhD, ATMS Director

In May 2013 the Therapeutic Goods Administration (TGA) commenced a consultative process on its proposed reforms to the advertising of therapeutic goods.(1) If the proposal for advertisements to healthcare professionals is adopted, herbalists, naturopaths, homoeopaths and nutritionists will be removed from Schedule 1 of the Therapeutic Goods Regulations 1990 (Cth). Additionally, these practitioners will no longer be able to receive therapeutic goods advertisements for healthcare professionals from suppliers.

On 25 August 2013 a seminar was sponsored by ATMS to inform members. The guest speaker was Professor John Skerritt, National Manager of the TGA. Professor Skerritt told participants that 22,000 petitions had been received. At the end of the seminar participants were invited to ask questions. The general mood was one of hostility towards the reform.

On 25 October 2013 ATMS hosted a meeting of the affected associations to discuss a unified strategy to halt the reform's introduction. Representatives of six associations attended the meeting. Some of the associations agreed to participate with ATMS to develop an alternative approach to the TGA reform. This model is expected to be presented to the TGA in late 2013.

Code of Conduct

The Australian Health Ministers' Standing Council on Health has agreed in principle on a single national

Code of Conduct for unregistered health practitioners.(2) It is possible that the model of the NSW Health Care Complaints Commission could be adopted nationally. A public consultative process to further inform the ministers is expected.

USA Senate

The United States Senate has passed a resolution designating 7 to 13 October 2013 as Naturopathic Medicine Week. The purpose of this designation is to recognise the value of naturopathic medicine 'in providing safe, effective and affordable health care'.

Invitation to join submission writers' group

The ATMS Regulatory Committee is inviting members to join a group of submission writers. This voluntary position is to compile submissions to various government agencies and other stakeholders. Any member who has experience in submission writing, or members who wish to develop submission writing skills, please send your details to regulatorywatch@atms.com.au.

References

1. Khoury R. *Therapeutic Goods Administration proposes reforms that will restrict access to our medicines. Journal of the Australian Traditional-Medicine Society* 2013, 19(3), 160-163.
2. *Standing Council on Health. Communique: Regulation of Unregistered Health Practitioners. 1 August 2013. Australian Health Ministers' Advisory Council, Canberra.*





ATMS *Media Watch*

Stephen Eddey | Vice President of ATMS



The aim of the ATMS Media Watch service is to look at the scientific evidence and develop good news stories supporting the natural medicine industry and ATMS members. For example, if a new study comes out finding that massage could help relieve migraines, it would then be distributed to all of our members who have listed their e-mail address with ATMS. ATMS members would be encouraged to re-post the article and so assist to increase exposure to the story.

Another aim is to respond to negative press and put forward a positive alternative. For example, a hypothetical Dr Smith publishes an article stating there is no evidence for the use of acupuncture. The ATMS Media Watch team then collates a raft of studies supporting the use of acupuncture and showing its effectiveness in many situations. We will also comment on medical drugs and suggest alternative treatment methods for conditions that require these medical drugs. We will, of course, not recommend that anybody stop taking any medications.

We need your help! If you come across negative or positive information about natural medicine, please submit the information to **mediawatch@atms.com.au** and we will respond in a prompt manner to 'nullify the negative' and 'promote the positive' information.

With your help, we will endeavour to promote natural medicine across Australia and across the world, while supporting ATMS members' practices.

TGA Reforms

In May 2013, the Therapeutic Goods Administration (TGA) commenced a consultative process on reforms to the advertising of therapeutic goods. Details of the reforms were published in the September 2013 issue of the Journal of the Australian Traditional-Medicine Society.

On 25 August 2013, a seminar was sponsored by ATMS on the reforms, and the guest speaker was Professor John Skerritt, National Manager of the TGA. On 2 October, ATMS representatives met with Professor Skerritt and Dr Larry Kelly of the TGA to further discuss the impact of the reforms on herbalists, naturopaths, homeopaths and nutritionists. On 25 October, ATMS hosted a meeting of the associations to discuss a unified strategy to the reforms.

ATMS's main concern is the proposed removal of Schedule 1 from the Therapeutic Goods Regulations 1990 (Cth), and whether members will lose their status as healthcare professionals in Therapeutic Goods Law. ATMS representatives are negotiating with the TGA, and other stakeholders, to attain a solution which is in our best interests.

TGA Certificate

Since 1991, ATMS has issued the Certificate of Advertising Exemption, commonly known as the 'TGA Certificate', to enable members to receive practitioner only products.

The TGA reforms will mean that a new system to identify properly qualified herbalists, naturopaths, homeopaths, and nutritionists will be introduced. In our discussion with the TGA it was understood that the TGA Certificate was not required to be issued in this transitional period. Therefore, we will not be issuing you with a TGA Certificate this year.

This will not affect your access to purchase practitioner-only products. In the improbable event that you experience a difficulty with a distributor, please let us know and we will rectify it.

If members need more information, please contact Raymond Khoury, Chair of the ATMS Regulatory committee, via email **regulatorywatch@atms.com.au**.



Acupuncture and TCM

Fang L, Fang M.

Research progress on the standardization of Chinese Tuina therapy: a short review.

[Review] Chinese Journal of Integrative Medicine. 2013; 19(1):68-72.

The standardization of Chinese Tuina therapy is one of the most popular research topics in Chinese medicine. By reviewing the literatures contributed by Chinese investigators between 1982 and 2010, the authors summarized the progress on Chinese Tuina manipulation techniques, in particular, focusing on the data on several key parameters (i.e., frequency, duration, and force). This summarization will benefit the standardization of Chinese Tuina.

Li T, Peng T.

Traditional Chinese herbal medicine as a source of molecules with antiviral activity.

[Review] Antiviral Research. 2013; 97(1):1-9.

Traditional Chinese herbal medicine (TCHM) is widely used in the prevention and treatment of viral infectious diseases. However, the operative mechanisms of TCHM remain largely obscure, mainly because of its complicated nature and the fragmented nature of research. In recent years, systematic methodologies have been developed to discover the active compounds in TCHM and to elucidate its underlying mechanisms. In this review, we summarize recent progress in TCHM-based antiviral research in China and other Asian countries. In particular, this review focuses on progress in targeting key steps in the viral replication cycle and key cellular components of the host defence system. Recent developments in centralized and standardized TCHM screening and databases are also summarized.

Aromatherapy

Varney E, Buckle J.

Effect of inhaled essential oils on mental exhaustion and moderate burnout: a small pilot study.

Journal of Alternative & Complementary Medicine. 2013; 19(1):69-71.

Objectives

The objective of this pilot study was to determine the effectiveness of a mixture of essential oils (peppermint, basil, and helichrysum) on mental exhaustion, or moderate burnout (ME/MB) using a personal inhaler.

Design

This was a randomized, controlled, double-blind pilot study. Data were collected 3 times a day for 3 weeks (Monday-Friday). The first week was baseline for both groups, the second week was intervention (aromatherapy or placebo), and the third week was washout.

Settings

Participants used a personal inhaler at home or at work. The outcome measures were a 0-10 scale with 10=worst feeling of burnout, 0=no feeling of burnout. There was a qualitative questionnaire rating aroma and a questionnaire listing perceived stressors comprised a convenience sample of 13 women and 1 man who each had self-assessed ME/MB.

Results

While both groups had a reduction in perception of ME/MB, the aromatherapy group had a much greater reduction.

Conclusions

The results suggest that inhaling essential oils may reduce the perceived level of mental fatigue/burnout. Further research is warranted.

Posadzki P, Alotaibi A, Ernst E.

Adverse effects of aromatherapy: a systematic review of case reports and case series.

[Review] International Journal of Risk & Safety in Medicine. 2011; 24(3):147-61.

Aim

This systematic review was aimed at critically evaluating the evidence regarding the adverse effects associated with aromatherapy.

Method

Five electronic databases were searched to identify all relevant case reports and case series.

Results

Forty-two primary reports met our inclusion criteria. In total, 71 patients experienced adverse effects of aromatherapy. Adverse effects ranged from mild to severe and included one fatality. The most common adverse effect was dermatitis. Lavender, peppermint, tea tree oil and ylang-ylang were the most common essential oils responsible for adverse effects.

Conclusion

Aromatherapy has the potential to cause adverse effects some of which are serious. Their frequency remains unknown. Lack of sufficiently convincing evidence regarding the effectiveness of aromatherapy combined with its potential to cause adverse effects questions the usefulness of this modality in any condition.

HERBAL MEDICINE

Braun LA, Spitzer O, Tiralongo E, Wilkinson JM, Bailey M, Poole SG, Dooley M. Naturopaths and Western herbalists' attitudes to evidence, regulation, information sources and knowledge about popular complementary medicines. Complementary Therapies in Medicine. 2013; 21(1):58-64

Background

The practice of naturopathy and Western herbal medicine (WHM) was built on traditional evidence but may be undergoing change with the advent of scientific evidence. The aims of this research were to provide a better understanding of practitioners'

attitudes towards evidence, information sources, professional regulation and their knowledge about the evidence of commonly used complementary medicines (CMs).

Method

Naturopaths and WHM practitioners were invited to participate in an anonymous, self-administered, on-line survey. Participants were recruited using the mailing lists and websites of CM manufacturers and professional associations.

Results

Four hundred and seventy nine practitioners participated; 95% currently in practice. The majority (99%) thought well documented traditional evidence was essential or important, 97% patient reports and feedback, 97% personal experience, 94% controlled randomised trials and 89% published case reports. Significantly more recent graduates (less than 5 years) rated randomised trials as essential compared to others. Most (82%) respondents want information sources containing both traditional and scientific evidence. They currently use several resources; 74% CM textbooks, 67% conferences/seminars, 57% CM journals, 48% databases and 40% manufacturers' information. The mean knowledge score was 61.5% with no significant differences between respondents with diploma or degree level education or by graduating year. Eighty-five percent of practitioners strongly agreed or agreed that practitioners should be formally registered to safeguard the public, 8% were unsure and 8% disagreed or strongly disagreed.

Conclusion

Naturopaths and WHM practitioners accept the importance of scientific evidence whilst maintaining the importance and use of traditional evidence. The majority are in favour of professional registration.

Niwa Y, Matsuura H, Murakami M, Sato J, Hirai K, Sumi H.

Evidence that naturopathic therapy including *Cordyceps sinensis* prolongs survival of patients with hepatocellular carcinoma. Integrative Cancer Therapies. 2013; 12(1):50-68.

Hypothesis

Naturopathic treatment will benefit patients with hepatocellular carcinoma (HCC).

Study design

Retrospective analysis of case series of HCC patients treated with naturopathic agents.

Methods

HCC was diagnosed by dynamic computed tomography (CT) imaging and alpha-fetoprotein (AFP) or PIVKA II, or by histology. Tumor staging was determined by CT. A modified Childs-Pugh scoring was used to assess liver disease. Patients were treated with orally administered combinations of 12 naturopathic agents. Patients were monitored clinically and by CT tumor imaging, serial tumor markers, and liver function tests.

Results

Patient characteristics: 101 patients with HCC (67 men and 34 women, age 67.2 +/- 8.8 years) were treated for a median of 13.4 months (range 0.8-100.8). Of these 84% had cirrhosis, 63% had hepatitis C virus, 18% had hepatitis B virus, 1% had both, and 9% had metastatic disease. Median modified Childs-Pugh score was 6 (range 3-13). Barcelona Clinic Liver Cancer tumor stages of 0, A, B, C, and D were found in 36%, 25%, 20%, 14%, and 6%, respectively. Median AFP was 40 (range 0-311,000). Median PIVKA II was 59 (0-378,000). Previous treatment was included none (27%), resection with relapse (20%), transarterial chemoembolization (50%), radiofrequency ablation (28%), percutaneous ethanol injection therapy (15%), chemotherapy (14%). Outcomes:

Initial treatment was with 2.6 +/- 0.8 agents (range 2-4). Overall, patients were treated with 3.7 +/- 1.2 agents (range 2-7). There was a significant correlation between number of agents administered and survival ($P < .0001$). Patients treated with ≥ 4 agents survived significantly longer than patients treated with ≤ 3 agents (40.2 vs. 6.4 months, $P < .0001$). This difference could not be attributed to statistically significant differences in severity of liver disease or tumor stage, delay in treatment, previous treatment, concurrent nondrug treatment, or censoring effects. The greatest effect was seen in patients treated with at least 4 agents that included *Cordyceps sinensis*. This prolonged survival was without toxic side effects and appeared to potentiate the survival benefit of conventional therapy.

Conclusion

Treatment of HCC with a regimen of ≥ 4 agents prepared from natural products was associated with prolonged survival in a substantial portion of patients. The data provide level II evidence for the efficacy of naturopathic therapy in HCC.

Homoeopathy

Roll S, Reinhold T, Pach D, Brinkhaus B, Icke K, Staab D, Jackel T, Wegscheider K, Willich SN, Witt CM.

Comparative effectiveness of

homoeopathic vs. conventional therapy in usual care of atopic eczema in children: long-term medical and economic outcomes. *PLoS ONE*. 2013; 8(1):e54973.

Background

One in five children visiting a homeopathic physician suffers from atopic eczema.

Objectives

We aimed to examine the long-term effectiveness, safety and costs of homoeopathic vs. conventional treatment in usual medical care of children with atopic eczema.



Methods

In this prospective multi-centre comparative observational non-randomized rater-blinded study, 135 children (48 homeopathy, 87 conventional) with mild to moderate atopic eczema were included by their respective physicians. Depending on the specialisation of the physician, the primary treatment was either standard conventional treatment or individualized homeopathy as delivered in routine medical care. The main outcome was the SCORAD (SCORing Atopic Dermatitis) at 36 months by a blinded rater. Further outcomes included quality of life, conventional medicine consumption, safety and disease related costs at six, 12 and 36 months after baseline. A multilevel ANCOVA was used, with physician as random effect and the following fixed effects: age, gender, baseline value, severity score, social class and parents' expectation.

Results

The adjusted mean SCORAD showed no significant differences between the groups at 36 months (13.7 95% CI [7.9-19.5] vs. 14.9 [10.4-19.4], $p=0.741$). The SCORAD response rates at 36 months were similar in both groups (33% response: homeopathic 63.9% vs. conventional 64.5%, $p=0.94$; 50% response: 52.0% vs. 52.3%, $p=0.974$). Total costs were higher in the homeopathic versus the conventional group (months 31-36 200.54 Euro [132.33-268.76] vs. 68.86 Euro [9.13-128.58], $p=0.005$).

Conclusions

Taking patient preferences into account, while being unable to rule out residual confounding, in this long-term observational study, the effects of homeopathic treatment were not superior to conventional treatment for children with mild to moderate atopic eczema, but involved higher costs.

Danno K, Colas A, Terzan L & Bordet MF.

Homeopathic treatment of premenstrual syndrome: a case series. Homeopathy: the Journal of the Faculty of Homeopathy. 2013; 102(1):59-65.

Objective

Observational, prospective study to describe the homeopathic management of premenstrual syndrome (PMS) by a group of French physicians.

Method

Women with PMS for >3 months were prescribed individualized homeopathic treatment. The intensity of 10 clinical symptoms of PMS was scored individually at inclusion and at a 3-6 month follow-up visit: absent=0, mild=1, moderate=2, severe=3. Total symptom score (range: 0-30) was calculated and compared for each patient at inclusion and at follow-up. PMS impact on daily activities (quality of life, QoL) was compared at inclusion and follow-up as: none, mild, moderate, severe, very severe.

Results

Twenty-three women were prescribed homeopathic treatment only (mean age: 39.7 years). Folliculinum (87%) was the most frequently prescribed homeopathic medicine followed by Lachesis mutus (52.2%). The most common PMS symptoms (moderate or severe) at inclusion were: irritability, aggression and tension (87%), mastodynia (78.2%) and weight gain and abdominal bloating (73.9%); and the most common symptoms at follow-up were: irritability, aggression and tension (39.1%), weight gain and abdominal bloating (26.1%) and mastodynia (17.4%). Mean global score for symptom intensity was 13.7 at inclusion and 6.3 at follow-up. The mean decrease in score (7.4) was statistically significant ($p<0.0001$). Twenty-one women reported that their QoL also improved significantly (91.3%; $p<0.0001$).

Conclusions

Homeopathic treatment was well tolerated and seemed to have a positive impact on PMS symptoms. Folliculinum was the most frequent homeopathic medicine prescribed. There appears to be scope for a properly designed, randomized, placebo-controlled trial to investigate the efficacy of individual homeopathic medicines in PMS.

Integrative medicine

Coulter ID, Herman PM, Nataraj S. Economic analysis of complementary, alternative, and integrative medicine: considerations raised by an expert panel. BMC Complementary and Alternative Medicine. 2013; 13:191 doi:10.1186/1472-6882-13-191

Background

An international panel of experts was convened to examine the challenges faced in conducting economic analyses of Complementary, Alternative and Integrative Medicine (CAIM).

Methods

A one and a half-day panel of experts was convened in early 2011 to discuss what was needed to bring about robust economic analysis of CAIM. The goals of the expert panel were to review the current state of the science of economic evaluations in health, and to discuss the issues involved in applying these methods to CAIM, recognizing its unique characteristics. The panel proceedings were audiotaped and a thematic analysis was conducted independently by two researchers. The results were then discussed and differences resolved. This manuscript summarizes the discussions held by the panel members on each theme.

Results

The panel identified seven major themes regarding economic evaluation that are particularly salient to determining the economics of CAIM: standardization (in order to compare CAIM with conventional therapies, the same basic

economic evaluation methods and framework must be used); identifying the question being asked, the audience targeted for the results and whose perspective is being used (e.g., the patient perspective is especially relevant to CAIM because of the high level of self-referral and out-of-pocket payment); the analytic methods to be used (e.g., the importance of treatment description and fidelity); the outcomes to be measured (e.g., it is important to consider a broad range of outcomes, particularly for CAIM therapies, which often treat the whole person rather than a specific symptom or disease); costs (e.g., again because of treating the whole person, the impact of CAIM on overall healthcare costs, rather than only disease-specific costs, should be measured); implementation (e.g., highlighting studies where CAIM allows cost savings may help offset its image as an “add on” cost); and generalizability (e.g., proper reporting can enable study results to be useful beyond the study sample).

Conclusions

The business case for CAIM depends on economic analysis and standard methods for conducting such economic evaluations exist. The challenge for CAIM lies in appropriately applying these methods. The deliberations of this panel provide a list of factors to be considered in meeting that challenge.

MESSAGE

FitzGerald MP, Payne CK, Lukacz ES, Yang CC, Peters KM et al.

Randomized multicenter clinical trial of myofascial physical therapy in women with interstitial cystitis/painful bladder syndrome and pelvic floor tenderness.

Journal of Urology. 2012; 187(6):2113-8.

Purpose

We determined the efficacy and safety of pelvic floor myofascial physical therapy compared to global therapeutic massage in women with newly symptomatic interstitial cystitis/painful bladder syndrome.

Materials and Methods

A randomized controlled trial of 10 scheduled treatments of myofascial physical therapy vs global therapeutic massage was performed at 11 clinical centers in North America. We recruited women with interstitial cystitis/painful bladder syndrome with demonstrable pelvic floor tenderness on physical examination and a limitation of no more than 3 years' symptom duration. The primary outcome was the proportion of responders defined as moderately improved or markedly improved in overall symptoms compared to baseline on a 7-point global response assessment scale. Secondary outcomes included ratings for pain, urgency and frequency, the O'Leary-Sant IC Symptom and Problem Index, and reports of adverse events. We compared response rates between treatment arms using the exact conditional version of the Mantel-Haenszel test to control for clustering by clinical center. For secondary efficacy outcomes cross-sectional descriptive statistics and changes from baseline were calculated.

Results

A total of 81 women randomized to the 2 treatment groups had similar symptoms at baseline. The global response assessment response rate was 26% in the global therapeutic massage group and 59% in the myofascial physical therapy group ($p=0.0012$). Pain, urgency and frequency ratings, and O'Leary-Sant IC Symptom and Problem Index decreased in both groups during followup, and were not significantly different between the groups. Pain was the most common adverse event, occurring at similar rates in both groups. No serious adverse events were reported.

Conclusions

A significantly higher proportion of women with interstitial cystitis/painful bladder syndrome responded to treatment with myofascial physical therapy than to global therapeutic massage. Myofascial physical therapy may be a beneficial therapy in women with this syndrome.

Myburgh C, Hartvigsen J, Aagaard P & Holsgaard-Larsen A.

Skeletal muscle contractility, self-reported pain and tissue sensitivity in females with neck/shoulder pain and upper trapezius myofascial trigger points—a randomized intervention study. Chiropractic & Manual Therapies. 2012; 20:36 doi:10.1186/2045-709X-20-36

Background

In relation to Myofascial Triggerpoints (MFTTrPs) of the upper trapezius, this study explored muscle contractility characteristics, the occurrence of post-intervention muscle soreness and the effect of dry needling on muscle contractile characteristics and clinical outcomes.

Methods

Seventy-seven female office workers (25-46yrs) with and without neck/shoulder pain were observed with respect to self-reported pain (NRS-101), pressure-pain threshold (PPT), maximum voluntary contraction (Fmax) and rate of force development (RFD) at baseline (pre-intervention), immediately post-intervention and 48 hours post-intervention. Symptomatic and asymptomatic participant groups were each randomized into two treatment sub-groups (superficial (SDN) and deep dry needling (DDN)) after baseline testing. At 48 hours post-intervention participants were asked whether delayed onset muscle soreness (DOMS) and/or post-needling soreness had developed.

Results

Muscle contractile characteristics did not differ between groups at baseline. Forty-six individuals developed muscle soreness (39 from mechanical testing and seven from needling). No inter-group differences were observed post-intervention for Fmax or RFD for the four sub-groups. Over the observation period, symptomatic participants reported less pain from both SDN ($p=0.003$) and DDN ($p=0.011$). However, PPT



levels were reduced for all participants ($p=0.029$). Those reporting DOMS experienced significant decreases in PPT, irrespective of symptom state or intervention ($p=0.001$).

Conclusions

In selected female neck/shoulder pain sufferers, maximum voluntary contraction and rapid force generation of the upper Trapezius was not influenced by clinically relevant self-reported pain or the presence of diagnostically relevant MFTrPs. Dry needling, deep or superficial, did not affect measured functional outcomes over the 48-hour observation period. DOMS affected participants uniformly irrespective of pain, MFTrP status or intervention type and therefore is likely to act as a modifier.

Nutrition

Liu X, Wang Z, Wan P, Yu B, Liu Y, Xue Y.

Green tea polyphenols alleviate early blood brain barrier damage during experimental focal cerebral ischemia through regulating tight junctions and PKC α signalling. *BMC Complementary and Alternative Medicine.* 2013; 13:187
doi:10.1186/1472-6882-13-187

Background

It has been supposed that green tea polyphenols (GTPs) have neuroprotective effects on brain damage after brain ischemia in animal experiments. Little is known regarding GTPs' protective effects against the blood-brain barrier (BBB) disruption after ischemic stroke. We investigated the effects of GTPs on the expression of claudin-5, occludin, and ZO-1, and the corresponding cellular mechanisms involved in the early stage of cerebral ischemia.

Methods

Male Wistar rats were subjected to a middle cerebral artery occlusion (MCAO) for 0, 30, 60, and 120 min. GTPs (400 mg/kg/day) or vehicle was

administered by intragastric gavage twice a day for 30 days prior to MCAO. At different time points, the expression of claudin-5, occludin, ZO-1, and PKC α signaling pathway in microvessel fragments of cerebral ischemic tissue were evaluated.

Results

GTPs reduced BBB permeability at 60 min and 120 min after ischemia as compared with the vehicle group. Transmission electron microscopy also revealed that GTPs could reverse the opening of tight junction (TJ) barrier at 60 min and 120 min after MCAO. The decreased mRNA and protein expression levels of claudin-5, occludin, and ZO-1 in microvessel fragments of cerebral ischemic tissue were significantly prevented by treatment with GTPs at the same time points after ischemia in rats. Furthermore, GTPs could attenuate the increase in the expression levels of PKC α mRNA and protein caused by cerebral ischemia.

Conclusions

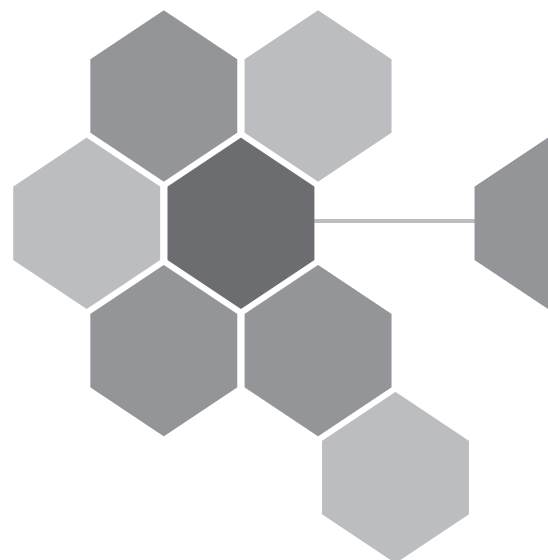
These results demonstrate that GTPs may act as a potential neuroprotective agent against BBB damage at the early stage of focal cerebral ischemia through the regulation of TJ and PKC α signaling.

Livingstone C.

Insulin-like growth factor-I (IGF-I) and clinical nutrition. [Review] *Clinical Science.* 2013; (6):265-80, 2013.

IGF-I (insulin-like growth factor-I) is a peptide hormone, produced predominantly by the liver in response to pituitary GH (growth hormone), which is involved in a wide variety of physiological processes. It acts in an endocrine, paracrine and autocrine manner to promote growth. The production of IGF-I signals the availability of nutrients needed for its anabolic actions. Recently, there has been growing interest in its role in health and disease. IGF-I has long been known to be regulated by nutrition and

dysregulated in states of under- and over-nutrition, its serum concentrations falling in malnutrition and responding promptly to refeeding. This has led to interest in its utility as a nutritional biomarker. A considerable evidence base supports utility for measurement of IGF-I in nutritional contexts. Its concentration may be valuable in providing information on nutritional status, prognosis and in monitoring nutritional support. However, it is insufficiently specific for use as a screening test for under nutrition as its serum concentration is influenced by many factors other than nutritional status, notably the APR (acute-phase response) and endocrine conditions. Concentrations should be interpreted along with clinical findings and the results of other investigations such as CRP (C-reactive protein). More recently, there has been interest in free IGF-I which holds promise as a nutritional marker. The present review covers nutritional regulation of IGF-I and its dysregulation in disease, then goes on to review recent studies supporting its utility as a nutritional marker in clinical contexts. Although not currently recommended by clinical guidelines, it is likely that, in time, measurement of IGF-I will become a routine part of nutritional assessment in a number of these contexts.





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Alkymia's Child

Reviewed by: **Bill Pearson**

For members of ATMS, Mariangela is offering her book at a 20% discount. Contact Mariangela on 0411 389 811 or visit her website at www.alkymia.com.au. The book is usually \$24.95 in paperback or \$9.99 as an EBook. Discount applies to both.

Too often it is a nightmare story as Mariangela takes us with her family along the circuitous pathway of finding answers to things which were capable of tearing her family apart. With that in mind it is also a love story. A profoundly deep and moving love story primarily between a mother, father, initially one child and then children but with a supporting cast of hundreds. Some in the physical world and many beyond. It is a book which will tear you apart as it tears at Mariangela and her family.

It demonstrates in wonderful and often confronting detail how special the family is and even though Findlay because of his special needs comes under fire there is obviously a special soul emerging. But there are also many sections of the book where he is just like any other kid, terribly aware that he is in public with his parents.

This book will challenge many a reader. And why not? What Mariangela shares with us challenged her, her family and the many practitioners covering all branches of medicine and healing as they all strove for answers. I believe Mariangela found hers.

This book also transports us to La Paz, Buenos Aires, Machu Picchu, Santiago and other exotic locations where we tango, salsa, join a cattle ranch but of course wherever we are taken healing, growth, learning etc is the foundation which travels with us and the very underpinning of why pen first touched paper.

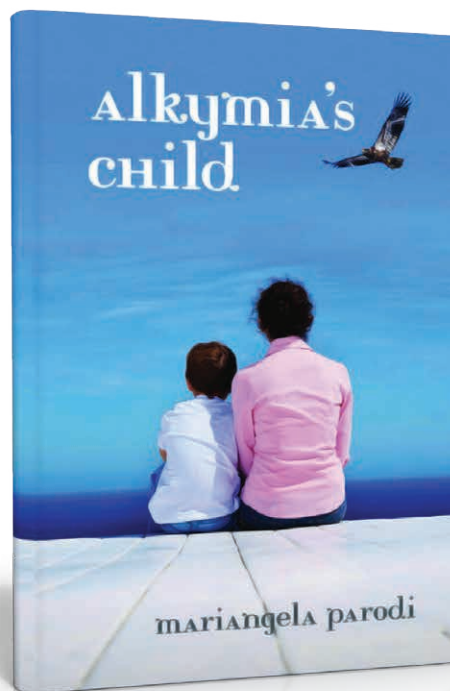
Perhaps there is no greater journey in this thing we call life than that journey which involves family as that surely engages us in our own search for identity. For our position. And like all journeys it is often circuitous and challenging. I suggest that this book by Mariangela is an outstanding example of that genre. On every page is a moving example of search but little or temporary discovery, of questions but few resulting in satisfying answers and consequently a search begins which understandably challenges Mariangela and her family but eventually leads them all to what I feel Mariangela knew anyway. She just had to have it confirmed. And this is probably why this all happened. Had to happen.

Two of my favourite maxims came to mind while reading this book:

- Life is what happens when we have made other plans
- Sometimes we stumble over the truth but pick ourselves up and walk away as though nothing had happened

Well Mariangela and her family certainly had a slice of life thrust upon them which they hadn't planned, the result being that they couldn't walk away as though nothing had happened. What had happened would challenge them, stretch them and in many ways push them to the brink of what families endure.

I am an avid reader. So much so that I believe there is a difference (well there is in my mind) between a writer and an author. A writer can spin a good yarn. An author creates something which is spellbinding and leaves us with huge impressions. I have no hesitation in saying that Mariangela Parodi is an author.



ATMS member and Author Mariangela Parodi and ATMS Director and Life Member Bill Pearson following the launch of her book in Hobart on September 8th 2013.

Heal with Food - Food Farmocopoeia

Reviewed by: **Stephen Clarke**

Hard copy can be purchased by contacting the author Debbie at www.healwithfood.com.au for \$27.50 plus postage and handling. An e-book format can be purchased by following the links on that website.

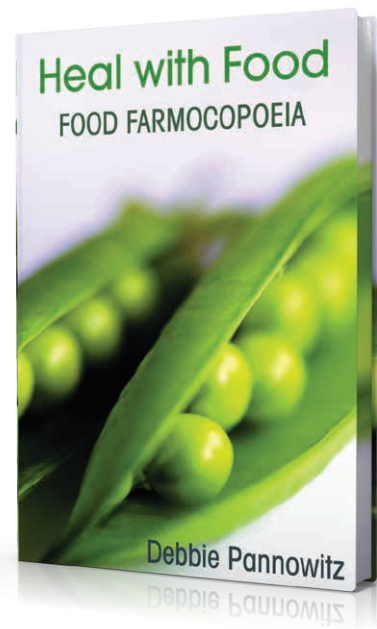
Debbie Pannowitz is an accredited specialist in both kinesiology and nutritional medicine. She has drawn on her long career in scientific research, the food pharmacology and health industries, teaching and clinical practice to compile this A to Z of nutritional approaches to over a hundred common ailments.

Perhaps its major strength is the simplicity and clarity with which a wealth of expert information is provided. Its clear layout would make it

of value to both informed and interested members of the public and practitioners who want a ready reference to be used in its own right or as a starting point for further research.

The format consists of an alphabetical list of ailments and foods recommended for their treatment and management and those to avoid. Where relevant, healthy lifestyle practices are presented along with nutritional advice. For example, maintaining normal body weight and using hot compresses of essential oils are recommended to treat arthritis along with ten dietary recommendations.

Although the book is intended for use by health professionals and the general public, the author clearly makes the point that it is not intended to replace the advice of qualified practitioners and further warns of the dangers inherent in self-medicating with supplements.



The book is an A4 spiral bound format. It also contains 14 appendices dealing with a wide range of important subjects such as serving sizes, foods high in phytoestrogens, acid-forming and alkali-forming foods, and foods with a low GI. The final pages of the book comprise a glossary of nutritional terms which further contribute to the book's functionality as an accessible and comprehensive reference.



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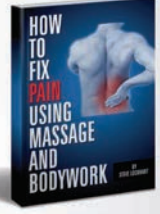
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Health Funds

ATMS is a 'professional organisation' within the meaning of section 10 of the Private Health Insurance Accreditation Rules 2008. This potentially allows ATMS accredited members to be recognised as approved providers by the various private health funds. Approved health fund provider status is, however, subject to each individual health fund's requirements.

Consequently membership of ATMS does not automatically guarantee provider status with all health funds. Please also note that several health funds do not recognise courses done substantially by distance education, or qualifications obtained overseas.

Additional requirements for recognition as a provider by health funds include:

- Clinic Address (Full Street Address must be provided – Please note that some health funds may list your clinic address on their public websites)
- Current Senior First Aid
- Current Professional Indemnity Insurance (some health funds require specific minimum cover amounts)
- Compliance with the ATMS Continuing Education Policy
- Compliance with the Terms and Conditions of Provider Status with the individual health funds.

ATMS must have current evidence of your first aid and insurance on file at all times.

When you join or rejoin ATMS, or when you upgrade your qualifications, details of eligible members are automatically sent to the applicable health funds (provided you have given ATMS permission to send your details to the health funds) on their next available listing. The ATMS office will also forward your change of details, including clinic address details to your approved health

funds on their next available list. Please note that the health funds can take up to one month to process new providers and change of details as we are only one of many health professions that they deal with.

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

Terms and Conditions of Provider Status

Many of the Terms and Conditions of Provider Status for the individual health funds are located on the ATMS website. For the Terms and Conditions for the other health funds, it will be necessary to contact the health fund directly.

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.

For health funds to rebate on the services of Accredited members, it is important that a proper invoice be issued to patients. The information which must be included on an invoice is also listed on the ATMS website. It is ATMS policy that only Accredited members issue their own invoice. An Accredited member must never allow another practitioner, student or staff member to use their provider details, as this constitutes health fund fraud. Misrepresenting the service(s) provided on the invoice also 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.

It is of note that the health funds require practitioners to be in private practice. Rebates are only claimable for the consultation (not the medicines or remedies); however this does not extend to mobile work including markets, corporate or hotels. Home visits are eligible for rebates.

Australian Health Management (AHM)

Names of eligible ATMS members will be automatically sent to AHM each month. AHM's eligibility requirements are listed on the ATMS website www.atms.com.au. ATMS members can check their eligibility by checking the ATMS website or by contacting the ATMS Office on 1800 456 855. Your ATMS Number will be your provider number, unless you wish to have online claiming. You will then need to contact AHM directly for the new provider number.

Australian Regional Health Group (ARHG)

This group consists of the following health funds:

- ACA Health Benefits Fund Ltd
- Cessnock District Health Benefits Fund
- CUA Health Limited
- Defence Health Limited
- GMHBA (Including Frank Health Fund)
- GMF Health
- Health.com.au Pty Ltd
- Health Care Insurance Limited
- HIF WA
- Latrobe Health Services (Federation Health)
- Mildura District Hospital Fund
- Navy Health Fund
- Onemedifund
- Peoplecare Health Insurance
- Phoenix Health Fund
- Police Health Fund
- Queensland Country Health Fund Ltd
- Railway and Transport Fund Ltd
- Reserve Bank Health Society Limited
- St Luke's Health
- Teachers Federation Health
- Teachers Union Health
- Transport Health
- Westfund

Details of eligible members, including member updates are automatically sent to ARHG by ATMS monthly. The details sent to ARHG are your name, address, telephone and accredited discipline(s). These details will appear on the AHHG websites. If you do not wish your details to be sent to ARHG, please advise the ATMS office on 1800 456 855.

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,
 - H Homoeopathy,
 - N Naturopathy,
 - O Aromatherapy,
 - W Western Herbal Medicine.

If ATMS member 123 is accredited in Western herbal medicine, the ARHG provider number will be AT00123W.

- 4 If you are accredited in several modalities, you will need a different provider number for each modality (e.g. if ATMS member 123 is accredited for Western Herbal Medicine and Aromatherapy, the ARHG provider numbers are AT00123W and AT00123O).

ARHG and Remedial Massage

Remedial massage therapists who graduated after March 2002 must hold a Certificate IV or higher from a registered training organisation.

Members who are accredited for Remedial Massage, will need to use the following letters.

- M Massage Therapy
- R Remedial Therapy

The letter at the end of your provider number will depend on your qualification, not the modality in which you hold accreditation. All members who hold a Diploma of Remedial HLT50302 or HLT50307 will be able to use both the 'M' and 'R' letters. It is recommended to use the 'R' as often as possible, but as not all health funds under ARHG cover 'Remedial Therapy', it will be necessary to use the 'M' at the end of the provider number for those funds only. All other eligible Remedial Massage Therapists who do not hold the Diploma of Remedial Massage HLT50302 or HLT50307 are required to use the 'M' at the end of their provider number.

Australian Unity

Names and details of eligible ATMS members will be automatically sent to Australian Unity each month. ATMS members will need to contact Australian Unity on 1800 035 360 to register as a provider, after filling out the Australian Unity Application Form located on the ATMS website to activate their provider status. This only needs to happen the first time. The provider eligibility requirements for Australian Unity are located on the ATMS website www.atms.com.au. Your ATMS number can be used as your Provider Number, or you can contact Australian Unity for your Australian Unity generated Provider Number.

BUPA (including MBF, HBA, Health Cover Direct, AXA, NRMA, SGIO, SGIC, St Georges Health, ANZ Health and Mutual Community)

Names and details of eligible ATMS members will be automatically sent to BUPA on a weekly basis. The provider eligibility requirements for BUPA are located on the ATMS website www.atms.com.au. The Provider eligibility

requirements include an IELTS test result of an overall Band 6 or higher for TCM qualifications completed in a language other than English. BUPA will generate a Provider Number after receiving the list of eligible practitioners. BUPA advises ATMS of your Provider Number and ATMS will then advise those members directly.

CBHS Health Fund Limited

Names and details of eligible ATMS members will be automatically sent to CBHS each month. The details sent to CBHS are your name, address, telephone and accredited discipline(s). These details will appear on the CBHS website. If you do not want your details to be sent to CBHS, please advise the ATMS office on 1800 456 855. The provider eligibility requirements for CBHS are located on the ATMS website www.atms.com.au. Your ATMS number will be your Provider Number.

Doctors Health Fund

Names and details of eligible ATMS members will be automatically sent to Doctors Health Fund each fortnight. Please note that Doctors Health Fund only covers Remedial Massage. The provider eligibility requirements for Doctors Health Fund are located on the ATMS website www.atms.com.au. Your ATMS number will be your Provider Number.

Grand United Corporate

To register with Grand United Corporate, please apply directly to Grand United on 1800 249 966.

HBF

Names and details of eligible ATMS members will be automatically sent to HBF each month. The provider eligibility requirements for HBF are located on the ATMS website www.atms.com.au. HBF generates provider numbers after they receive the first claim from first HBF client.

HCF (including Manchester Unity)

Names and details of eligible ATMS members will be automatically sent to HCF each fortnight. The provider



eligibility requirements for HCF are located on the ATMS website www.atms.com.au. Your ATMS number will be your Provider Number.

Health Partners

Names and details of eligible ATMS members will be automatically sent to Health Partners each month. The provider eligibility requirements for Health Partners are located on the ATMS website www.atms.com.au. Your ATMS number will be your Provider Number.

Medibank Private

Names and details of eligible ATMS members will be automatically sent to Medibank Private on a weekly basis. The provider eligibility requirements for Medibank Private are located on the ATMS website www.atms.com.au. Medibank Private requires Clinical Records to be taken in English. Medibank Private generates Provider Numbers after receiving the list of eligible practitioners from ATMS. Medibank Private sends these provider numbers directly to your clinic address/es.

NIB

Names and details of eligible ATMS members will be automatically sent to NIB on a weekly basis. The provider eligibility requirements for NIB are located on the ATMS website www.atms.com.au. NIB does accept overseas Acupuncture and Chinese Herbal Medicine qualifications which have been assessed as equivalent to the required Australian qualification by Vetassess. Your ATMS Number will be your provider number, unless your client wishes to claim online. Your client will need to contact NIB directly or search by your surname and postcode on the NIB website www.nib.com.au for your provider number for online claiming purposes.

HICAPS

ATMS members who wish to activate these facilities need to register directly with HICAPS. Please note that you must have a Medibank Private Provider number to be able to use these facilities. HICAPS do not cover all health funds and modalities.

Database of medical cases

Billions of patients are treated around the world every year and the potential learning from each patient interaction or 'case' is enormous. Most cases go unreported. A new database of medical cases has recently been set up by BioMed Central providing an opportunity to capture much of the potential learning that has previously been unrecorded and unshared.

Cases Database is available at www.casesdatabase.com. Searching and access to case summaries is free. Access to the full text of non-open access case reports may require a subscription to the journal.

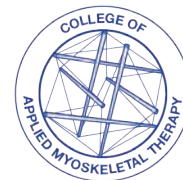
Please go to www.hicaps.com.au or call 1800 805 780 for further information.

Erratum

My sincere thanks to Dr Gbaitb Al Badri for pointing out an error in the article I published on Galenic Medicine in JATMS June 2013 which mistakenly referred to an image of a book as a 'Persian Galenic text'. Dr Badri assures me that the text featured is actually the Koran. The tour guide showing me the rare books collection of the CCRUM library was in fact a student, and either I misunderstood his explanation of the display case in question or he was himself mistaken in thinking this particular text to be a Galenic medical work. Ultimately the fault lies entirely with me as the author of the article and I can only offer my sincere thanks for correcting the error; and my similarly sincere apologies for the misunderstanding.

Kind Regards,

Dr Jimi Wollumbin (TCM)



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HEALTH FUND UPDATE

Health Fund	Acupuncture	Alexander Technique	Aromatherapy	Bowen Therapy	Chinese Herbal Medicine	Counselling	Deep Tissue Massage	Herbal Medicine	Homoeopathy	Hypnotherapy	Iridology	Kinesiology	Lymphatic Drainage	Naturopathy	Nutrition	Reflexology	Remedial Massage	Remedial Therapies (No longer ATMS Accredited)	Rolfing	Shiatsu	Sports Massage	Traditional Chinese Massage
Australian Health Management	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Australian Regional Health Group	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ACA Health Benefits Fund	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cessnock District Health	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CUA Health (Credicare)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Defence Health Partners	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GMF Health (Goldfields Medical Fund)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GMMBA (Geelong Medical)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Frank Health Fund	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Health Care Insurance Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Health.com.au	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HIF (Health Insurance Fund of WA)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Latrobe Health Services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MDHF (Midura District Hospital Fund)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Navy Health Fund	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Onemedifund	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Peoplecare Health Insurance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Phoenix Health Fund	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Police Health Fund	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Queensland Country Health	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Railway and Transport	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reserve Bank Health Society	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
St Lukes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Teachers Federation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Teachers Union Health	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Transport Health	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Westfund	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Australian Unity	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	★	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BUPA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CBHS Health Fund	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Doctors Health Fund	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GU Health (Grand Uniteq)*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Health Partners	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HBF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HCF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Medibank Private	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NIB	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ Therapy covered by Fund
 * Need to Apply directly to Fund
 ★ Iridology can only be claimed when provided by an Australian Unity recognised Naturopath.
 ◆ Only open to existing recognised Manchester Unity Providers. HCF are not accepting new practitioners under these modalities.

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 consultations. For further rebate terms and conditions, patients should contact their health fund. Policies may change without prior notice.



Continuing *Professional Education*

Continuing professional education (CPE) is a structured program of further education for practitioners in their professional occupations.

The ATMS CPE policy is designed to ensure its practitioners regularly update their clinical skills and professional knowledge. One of the main aims of CPE is to keep members abreast of current research and new developments which inform contemporary clinical practice.

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.

It is a mandatory requirement of ATMS membership that members accumulate 20 CPE points per financial year. Five

(5) CPE points can be gained from each issue of this journal. To gain five CPE points from this issue, select any three of the following articles, read them carefully and critically reflect how the information in the article may influence your own practice and/or understanding of complementary medicine practice:

- Muscolino J. To flex or extend?
- Brown L. Neutraceuticals for chronic inflammatory diseases
- Wollumbin J. Homoeopathy, humanitarian aid and homoeoprophylaxis: Part 1
- Bumpstead L. Long term use of supplemental lysine - is it safe?
- Medhurst R. Burns and their management using homoeopathy

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?

Record your answers clearly on paper for each article. Date and sign the sheets and attach to your ATMS CPE Record. As a condition of membership, the CPE Record must be kept in a safe place, and be produced on request from ATMS.

**IT IS A MANDATORY
REQUIREMENT OF ATMS
MEMBERSHIP THAT MEMBERS
ACCUMULATE 20 CPE POINTS
PER FINANCIAL YEAR. FIVE (5)
CPE POINTS CAN BE GAINED
FROM EACH ISSUE OF THIS
JOURNAL**



Continuing Education *Calendar 2014*

MONTH	EVENT	TOPIC	REGION
January 2014	Webinar	Communication Skills in TCM Practice	-
February 2014	Seminar	Paediatric Nutrition and Health	Melbourne
	Webinar	Website & Social Media	-
	Seminar	Advanced Remedial Massage Techniques	Sydney
	Seminar	Lymphatic Drainage	Coffs Harbour
	Webinar	Principles of Integrative Oncology	-
	Seminar	Anti-Ageing Medicine: Add years to your life and life to your years - the Telomere Story	Brisbane
March 2014	Webinar	Self Care: Practitioner Health & Wellbeing	-
	Seminar	Nutrition Deficiencies, Body Signs, Clinical Signs and Complex Conditions in Clinical Practice	Sydney
	Webinar	Nutrition Support for Autoimmune Diseases?	-
	Seminar	Lower Back Pain	Tasmania
	Seminar	Ayurvedic approaches to rejuvenation and ageing well	Central Coast
April 2014	Webinar	Paediatric Nutrition and Health	-
	Seminar	Acupressure	Adelaide
	Seminar	Advanced Remedial Massage Techniques	Canberra
	Webinar	Communication & Counselling in Clinical Practice	-
May 2014	Seminar	Intro to Kinesiology	Sydney
	Webinar	Optimizing Hormones	-
	Seminar	ATMS & Natural Medicine: a Natural Choice	Perth
	Webinar	Generic Clinical Records	-
	Seminar	Exercise Therapy & Sports Nutrition	Newcastle
June 2014	Seminar	Acupuncture Treatment of Tension Headaches	Sydney
	Webinar	Skin Deep: Nutrition for Better Skin	-
	Seminar	Cupping	Melbourne
	Webinar	Treating Complex Sensitive Patients	-
	Seminar	Manual Lymphatic Drainage	North Queensland
	Seminar	Advanced Remedial Massage Techniques	Newcastle

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