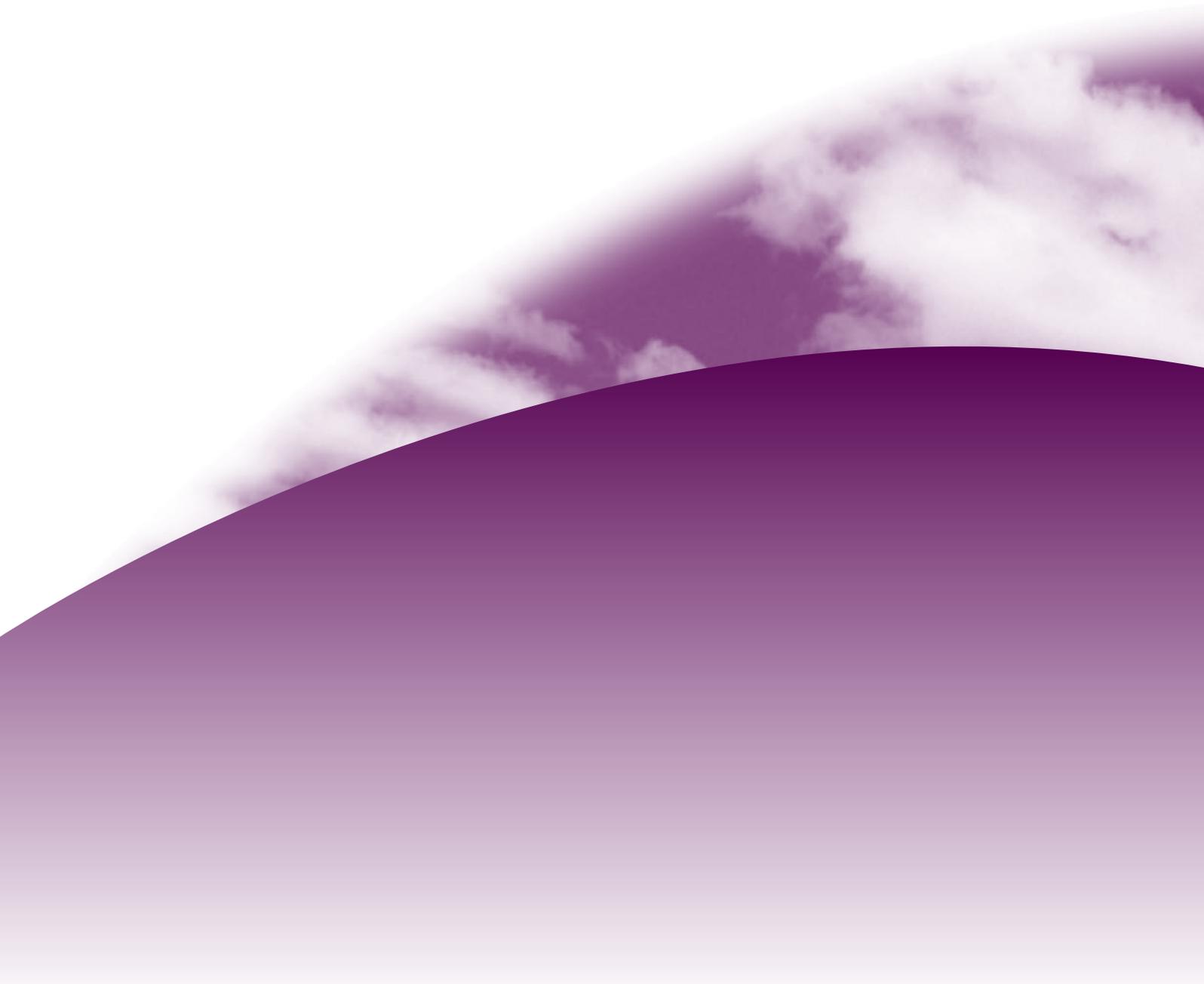


5 Asthma and Complementary Therapies

A guide for health professionals



Asthma and Complementary Therapies

A guide for health professionals

*This publication is dedicated to the memory
of Professor Ann Woolcock AO*

The aim of this paper is to provide an up-to-date, evidence-based summary of the issues around asthma and complementary therapies, including practical advice. There is also a consumer brochure on this topic. These documents have been produced by the Australian Government Department of Health and Ageing in collaboration with the National Asthma Council.

Authors

A/Prof Guy Marks,
Woolcock Institute of Medical Research, Sydney;
Prof Marc Cohen, Head, Complementary Medicine,
RMIT University, Melbourne;
Dr Vicki Kotsirilos, Member, Complementary
Medicines Evaluation Committee, Therapeutic
Goods Administration;
Dr Chris Luttrell, Member, General Practitioners
Asthma Group;
Dr John Massie, Royal Children's Hospital,
Melbourne;
Ms Treasure McGuire, Pharmacist, Mater Health
Services, South Brisbane/School of Pharmacy
University of Queensland;
A/Prof Ray Mullins, John James Medical Centre,
Deakin, Canberra;
Ms Cassandra Slader, Pharmacist, St Vincent's
Public Hospital, Sydney and Faculty of Pharmacy,
University of Sydney

Contents

Introduction	1
Why do people with asthma seek to use complementary therapies?	2
Complementary therapies and asthma in healthcare practice	2
Aims of treatment for people with asthma	3
Regulatory framework for complementary therapies and therapists	3
Information resources	4
Current evidence of the effectiveness of complementary therapies in the treatment of people with asthma	5
Summary of current evidence of effectiveness of complementary therapies in the treatment of people with asthma	7



Australian Government
Department of Health and Ageing



Key Messages

- There is evidence of increasing public interest in the use of complementary therapies for the treatment of medical conditions.
- However, overall, there is less information available about the safety and effectiveness of complementary therapies than is available about mainstream pharmaceutical treatments.
- As with any new asthma treatment, it is wise to trial a complementary therapy for a set period to determine its benefit. Following this trial a clear decision can be made to stop or continue the therapy. If a patient would like to try a complementary therapy, encourage him/her to discuss what aspect of their asthma they hope to improve and how to measure the benefit.
- Health professionals prescribing complementary therapies should be aware of the potential for adverse effects and for interactions with pharmaceutical medicines.
- There is no national system of registration or recognition of complementary therapy practitioners. In most States and Territories, the majority of complementary therapy practitioners are not subject to regulation.
- Many complementary medicines carry an Australian Listing (AUST L) number issued by the Therapeutic Goods Administration (TGA).

Introduction

There is evidence of widespread and increasing public interest in the use of complementary therapies (both medicines and physical therapies) for the treatment of medical conditions, including asthma. Authoritative information about these therapies, their possible benefits or adverse effects on people with asthma, is required to enable health professionals to respond to the needs of people with asthma.

This paper summarises current information from published clinical trials and systematic reviews about the effectiveness of various complementary therapies for improving symptoms and/or lung function and/or reducing medication requirements in people with asthma. This data is laid out at the end of this document in a colour-coded table.

An agreed definition of complementary therapy has not yet been developed. This paper uses a simple working definition: a complementary therapy is a therapy, including medicinal products, which is not considered to be part of current standard medical care.

The review is limited to a review of evidence of effectiveness of specific therapies that are being used as treatment for asthma in Australia. Some complementary health practices extend beyond the application to specific therapies to include non-orthodox approaches to diagnosis and, indeed, non-orthodox beliefs about the nature of illness. Assessment of the implications of these aspects of complementary therapy is beyond the scope of this review. However, practitioners should be aware of the consequences, both beneficial and potentially adverse, of diagnostic labels and therapeutic decisions made within these alternative paradigms.

Overall, there is less evidence about the effectiveness and safety of complementary therapies than there is about mainstream therapies. There is a need for well-targeted, high quality research to address the major gaps in the evidence.

Why do people with asthma seek to use complementary therapies?

A variety of reasons for this have been proposed in the medical literature. The most frequently suggested reasons are:

- Dissatisfaction with Western medicine and treatment options.
- Dissatisfaction with patient–doctor relationship.
- Desperation about current disease-state severity and treatment.
- Philosophical congruence with a complementary therapy.
- Perception of complementary therapies being safe and natural.
- A means of coping with a chronic illness.
- Feeling empowered by use of complementary therapies.

Complementary therapies and asthma in healthcare practice

While there may be insufficient medical evidence for health professionals to recommend a complementary therapy to people with asthma, patients may feel that a complementary therapy is worth considering. Patients may appreciate a discussion

of the evidence and consider a trial of therapy with some measurable expectations. Although there may be no change in objectively measured outcomes, such as improvement in peak flow measurements or spirometry, a patient may feel that a complementary therapy has been successful if they are just feeling better. It is worthwhile assessing how the patient judges their asthma control and work with them to assess the effectiveness of a particular therapy or therapies. Some suggested strategies are to:

- talk openly about the patient's reason for their choice and what benefit they hope to get from it;
- inform the patient that any change in current treatment should be considered a trial to attempt better control/reduced drug usage, in the same way you would trial a new medication regimen;
- consider engaging in discussion with the therapist of the patient's choice, just as you would with an allied health professional;
- discuss with the patient some methods for self-assessment of improvement in asthma control for some weeks before, during and after the trial of complementary therapy. For example, before-and-after comparisons of:
 - night-time waking
 - early morning bronchoconstriction
 - exercise tolerance
 - use of bronchodilator
 - reduction in preventer use
 - days missed from school/work;
- discuss with the patient the need to formally assess their asthma control before, during and after the trial of complementary therapy by using, for example:
 - quality-of-life symptom scores
 - peak expiratory flow rates (in adults)
 - spirometry.

When using standard medical treatment or complementary therapies, it is important to remember the aims of treatment.

Aims of treatment for people with asthma

Asthma is a chronic disease characterised by the presence of widespread, variable airflow obstruction and accompanied by respiratory symptoms. An important aim of treatment is to improve quality of life by ameliorating the severity of symptoms both on a day-to-day basis and during severe exacerbations. In part, this is achieved by treating these episodes when they arise. However, it is most effectively achieved by preventing the onset of symptoms, and of severe exacerbations, and this can be achieved with good control of the underlying disease abnormality.

Symptoms arise in people with asthma due to airway narrowing. Hence, prevention and reversal of airway narrowing are also important aims of therapy. Asthma may have long-term adverse consequences including premature, irreversible loss of lung function and premature death. The prevention of these outcomes is an important aim of treatment. Effective management of people with asthma entails achieving these aims with the minimum amount of medications. The level of treatment required to achieve good asthma control is another indicator of the severity of the disease or of the effect of alternative management strategies.

The maintenance of quality of life through effective management is also a key aim of treatment. For the person with asthma, the goal is to improve and then maintain the capacity to perform everyday activities – to not be limited by asthma.

The National Asthma Council's *Asthma Management Handbook 2002* (available at www.nationalasthma.org.au) makes recommendations for the assessment and management of asthma in order to achieve these aims. This is a useful resource recommended for all health professionals caring for people with asthma.

In considering the role of complementary therapies in the management of asthma, and in advising patients about their possible use, it is the responsibility of the health professional to be aware of the impact of treatment on both short-term and long-term outcomes of the illness. For example, evidence of short-term efficacy for relief of symptoms or reversal of bronchoconstriction may not be sufficient for recommending a therapy for people with asthma, as there is evidence that long-term undertreatment of asthma can lead to long-term adverse health effects.

In this review, the effects of complementary therapies are summarised in terms of their effects on the following clinically relevant outcomes of asthma:

- symptoms and quality of life
- lung function
- medication requirement.

Exacerbations, premature death and loss of lung function are seldom measured in clinical trials of complementary therapies and are not considered in this review.

Regulatory framework for complementary therapies and therapists

At present the use of most complementary therapies in Australia is based on a buyer-beware principle. There is some regulation in place; for example, Victoria requires that traditional Chinese medicine practitioners must be registered with the Chinese Medicine Registration Board. The disciplines of osteopathy and chiropractic are also registered in many States and Territories. The only other regulatory requirement for practitioners of complementary therapies is for practitioners to be registered with the Australian Tax Office for Goods and Services Tax (GST) exemption.

Medicines used as complementary therapies are subject to Commonwealth regulations. Under the *Therapeutic Goods Act 1989*, all products in Australia for which therapeutic claims are made must be on the Australian Register of Therapeutic Goods and must carry either an AUST L (Australian Listing) or AUST R (Australian Registration) number on their label.

Most complementary medicines are 'listed' (AUST L) products. Their claims are limited to 'assist' rather than 'treat' minor self-limiting conditions or for 'maintaining health' or reducing risk of non-serious conditions.

An AUST R number is given to both prescription and non-prescription products where ingredients pose some degree of risk and/or higher-level claims/indications are sought. Efficacy claims are generally more substantial. For a medicine to achieve an AUST R registration, data supporting its efficacy and claims is required. Many complementary medicines lack such data and while manufacturers of Listed products are required to hold evidence to support claims, this is not evaluated prior to marketing and is only called in in the event of a complaint or a safety concern with the product.

Information resources

National Asthma Council

The National Asthma Council website contains information and publications on asthma and has links to other asthma sites: A web version of this information paper with references, hyperlinks and additional resources also appears at this website: www.NationalAsthma.org.au

National Prescribing Service Therapeutic Advice and Information Service

Independent drug information for community-based health professionals

Telephone **1300 138 677**

(Monday to Friday 9 am to 6 pm AEST)

Internet-based complementary therapies resources

Herbal resources/monographs

Longwood Herbal Task Force

www.mcp.edu/herbal

IDIS-herbal links

www.uiowa.edu/~idis/herbalinks

Integrative medicine

www.onemedicine.com

National Centre for Complementary and Alternative Medicine, USA

www.nccam.nih.gov

The European Scientific Cooperative on Phytotherapy

www.escop.com/index.htm

Botanical Pathways (SCU)

www.botanicalpathways.com/default_cookie.html

Herb Blurbs: American Botanical Council

www.herbalgram.org/member_login.php?redir_cname=hg_herb_blurbs&denied=1

Victorian Government Report on Chinese Medicines

www.dhs.vic.gov.au/pdpd/chinese/report/4b.htm

FDA Adverse Event Reporting System

www.cfsan.fda.gov/~dms/aems.html

Phytotherapies

www.phytotherapies.org/monograph_index.cfm

WHO monographs on medicinal plants

www.who.int/medicines/library/trm/medicinalplants/monograph_volume_two.shtml

Natural Pharmacist

www.tnp.com

Please note:

some of these databases may require a subscription

Nutrition

Nutrition Notebook

www.springboard4health.com/notebook/index.html

Therapies other than herbs

Complementary therapies in medicine

www.harcourt-international.com/journals/ctim/ideal.cfm

CISCOM Research Council for Complementary Medicine, UK

www.gn.apc.org/rccm/ciscom.html

Asthma Foundations of Australia

For further information on asthma and patient materials, contact your local Asthma Foundation on **1800 645 130**, or visit their websites:

www.asthma.org.au

www.asthmansw.org.au

www.asthmasa.org.au

www.asthmawa.org.au

www.asthmatas.org.au

www.asthmant.org.au

www.asthmaqld.org.au

www.asthmaaustralia.org.au

Australian Government

Information on Australian Government initiatives on asthma

www.health.gov.au/pq/asthma

Information for consumers on various health issues including asthma

www.healthinsite.gov.au

Healthy Homes: A guide to indoor air quality in the home for buyers, builders and renovators

www.enhealth.nphg.gov.au/council/pubs/ecpub.htm

Australasian Society for Clinical Immunology and Allergy

Reliable and up-to-date information on allergy and asthma

www.allergy.org.au

Current evidence of the effectiveness of complementary therapies in the treatment of people with asthma

For each therapy and for each of the clinically relevant outcomes, the available evidence was summarised as shown in the following table:

Strong evidence for effectiveness 3+	Systematic review finding a statistically significant and clinically important effect (without significant heterogeneity) OR More than one randomised controlled trial finds a statistically significant and clinically important effect and there are no equivalent trials showing absence of effect
Probably effective 2+	More than one controlled trial available. A majority, but not all, of which show a statistically significant and clinically important effect
Possibly effective 1+	One controlled trial available shows a statistically significant effect
Equivocal evidence of effect +/-	Randomised or non-randomised clinical trials yield conflicting results, demonstrated effects are probably not clinically important
Possibly ineffective 1-	One small controlled trial available shows no significant effect
Probably ineffective 2-	More than one controlled trial available. A majority, but not all, of which exclude a clinically important effect (absence of effect) OR One large controlled trial excludes a clinically important effect
Strong evidence of lack of effect 3-	Systematic review excludes a clinically important effect (without significant heterogeneity) OR More than one randomised controlled trial excludes a clinically important effect
Insufficient evidence 0	Available evidence does not meet the above criteria

Results

The results of this review of effectiveness are summarised in the accompanying table. In addition, the table describes the patient group in which effectiveness was assessed; that is, the age group, the level of asthma control of the subjects, and their concomitant therapy. In particular, it should be noted that there are difficulties in translating effects observed with treatment of adults to those that could be expected when the same treatment is applied to children.

The table also cites evidence of adverse effects and other safety considerations, such as potential interactions with other treatments, which are relevant to the therapies. Additional information for medicinal therapies listed in this table was gained by searching the databases listed at the end of this paper.

Therapies for which there is insufficient evidence for all clinically relevant outcomes of asthma are not included in the table.

Methodology

Systematic reviews of the literature were undertaken for each of the complementary therapies that were identified as being of interest. The following databases were searched: Medline, Embase, Cinahl, Amed (Allied and Complementary Medicine database, www.bl.uk/services/information/amed.html), and the Cochrane Library (www.update-software.com/clibng/cliblogon.htm), Cochrane Central Register of Controlled Trials and the Cochrane Database of Systematic Reviews). For the Cochrane Databases, a simple search strategy combining the therapy descriptor(s) with the term 'asthma' was used. The following methodological filters, adapted from those recommended by Haynes et al.⁽¹⁾ for the purpose of identifying citations relevant to therapy⁽²⁾, were used in the other database:

Medline

randomised controlled trial.pt. OR dt.fs. OR tu.fs. OR random\$.tw.

Embase

randomised controlled trial/ OR dt.fs. OR random\$.tw.

Cinahl

dt.fs. OR tu.fs. OR random\$.tw.

Amed

random\$.tw.

Each search combined terms for the therapy under consideration, the term 'asthma', and the methodological filter. Searches were limited to those articles with English language abstracts in which human subjects were studied.

Available evidence was ranked according the following levels of evidence⁽³⁾:

- I Evidence obtained from a systematic review of all relevant randomised trials.
- II Evidence obtained from at least one properly designed randomised trial.
- III Evidence obtained from other non-randomised controlled trials.

Abstracts reporting lower levels of evidence (non-systematic reviews, uncontrolled studies, case series, case reports or expert opinion) were excluded. Only those studies reporting one or more of the clinically relevant outcomes, described in the section 'Aims of treatment for people with asthma' in this paper, were included.

Where Level I evidence for the effect of a therapy was available, further evidence was not considered unless it was published after the last update of the systematic review or it reported outcomes not encompassed by the systematic review. Where Level II evidence was available, Level III evidence was not considered unless it was published later or reported outcomes not included in the randomised controlled trial. Where conflicting evidence at the same level was reported, higher quality studies were given precedence.

Summary of current evidence of effectiveness of complementary therapies in the treatment of people with asthma

Therapy	Highest level of evidence available	Patient group ^A	Effectiveness ^B			Comments	Safety considerations ^C
			Symptoms ^D	Lung function	Medication required		
Diet modification^E							
Omega-3 fatty acids (fish oil) ^(4, 5)	I: Cochrane Review	Adults and children with asthma	2-	2-	2-	Less than 200 subjects have participated in all 6 trials. Various doses	Toxic effects have been observed with some vitamin and mineral supplements when administered at high dosages
Selenium supplements ⁽⁶⁾	II: RCT	Non-atopic patients with asthma	1+	1-	0	Single 14 wk trial in 24 pts. Clinical benefit in 6/12 Rx sodium selenite 100µg/d vs 1/12 placebo	
Vitamin C supplementation ⁽⁷⁾	I: Cochrane Review	Adults and children with asthma	0	+/-	0	Two single dose studies (2g and 500mg Vit C) only available for lung function outcome (total N = 46)	
Vitamin C and E supplementation combined ⁽⁸⁾	II: RCT	Children living in Mexico City (high ozone environment)	0	+/-	0	Attenuation of the negative effect of ozone on lung function	
Oral magnesium supplements ⁽⁹⁾	II: RCT	People with asthma on low Mg diet	1+	1-	1-	Dose was 400mg/day	
Lactobacillus acidophilus ⁽¹⁰⁾	II: RCT	Adults with asthma and atopy	1-	1-	0	Dose was 225g twice daily	
Dietary salt ⁽¹¹⁾	I: Cochrane Review	Adults with allergic asthma	0	+/-	+/-	Small numbers of subjects, no significant effect but wide confidence intervals	

Therapy	Highest level of evidence available	Patient group ^A	Effectiveness ^B			Comments	Safety considerations ^C
			Symptoms ^D	Lung function	Medication required		
Physical therapies							
Chiropractic (spinal manipulation to treat mechanical dysfunction of the joints with consequent effects on the nervous system) ^(12, 13)	II: RCT	2 trials in adults and in children with persistent asthma	2-	2-	2-	Total 124 subjects in the two trials	No side effects reported by subjects in these trials
Massage ⁽¹⁴⁾	II: RCT	Children with asthma	0	0	1+	Parent delivered 20-minute massage v progressive muscle relaxation therapy	None reported. Reduced anxiety in massage arm
Swimming ⁽¹⁵⁾	II: RCT	Children with asthma	0	1-	1-	One trial in 14 subjects. Indoor swimming 2-3x/week for 3 months.	
Physical training ⁽¹⁶⁾	I: Cochrane Review	Adults and children with asthma	1-	2-	0	Physical training for 20-30 mins, 2-3 times/week for 4 weeks. Various programs. Cardiopulmonary fitness improved	
Medicinal therapies: homeopathy							
Homeopathy (remedies derived from plants and minerals, given in extremely diluted forms according to individual patient needs) ⁽¹⁷⁻¹⁹⁾	I: Cochrane Review	Adults and children with asthma on concomitant medication	+/-	1+	1+	N = 452	

Therapy	Highest level of evidence available	Patient group ^A	Effectiveness ^B			Comments	Safety considerations ^C
			Symptoms ^D	Lung function	Medication required		
Medicinal therapies: traditional Chinese herbal medicines^(20, 21)							
<i>Ginkgo biloba</i> extract (ginkgolides BN 52021 and BN 52063) ⁽²²⁻²⁴⁾	II: 2 RCTs	People with asthma aged 13-48 years	+/-	1+	0	One study was in 61 people for 8 weeks; the second in 8 atopic adult asthmatics with effects measured immediately	Reports of headache, nausea, dizziness, palpitations and allergic skin reactions; rare reports of bleeding (AusDI, 2003) Drug interactions likely (AusDI, 2003)
<i>Ligusticum wallichii</i> (also called <i>chuan xiong</i> in China and <i>senkyu</i> in Japan) ⁽²⁵⁾	II: 1 RCT	Adults with moderate to severe asthma	1-	1+	0	Measured at one month	
<i>Chanbei Kechuanping</i> (CBKCP) ⁽²⁶⁾	II: 1 RCT	People with asthma	0	1+	0	Effects measured immediately	
Xuan Fei Ding Chuan Wan and Xiao Chuan Gu Ben Wan ⁽²⁷⁾	II: 1 RCT	People with asthma	+/-	1+	0		
Reinforcing kidney and invigorating spleen decoction ⁽²⁸⁾	II: 1 RCT	'Severe' asthma taking inhaled steroids	1-	1-	0	4-6 months	
Invigorating kidney for preventing asthma tablets ⁽²⁹⁾	II: 1 RCT	Adults with asthma taking inhaled corticosteroids	+/-	1+	0	3 months	

Therapy	Highest level of evidence available	Patient group ^A	Effectiveness ^B			Comments	Safety considerations ^C
			Symptoms ^D	Lung function	Medication required		
Strengthening body decoction mahuang <i>Ephedra sinica</i> mixture ⁽³⁰⁾	II: 1 RCT	'Cold and heat type' adult asthmatics	1-	1+	0	Two weeks	mahuang is ephedrine 30-90%
mahuang (Ephedra) <i>Wenyang Tongulo</i> mixture (WTM) ⁽³¹⁾	II: 1 RCT	Adults with asthma	1-	1+	0	8 weeks Comparison was with oral salbutamol and inhaled corticosteroid	Reports of headache, nausea, irritability, motor restlessness, insomnia, tachycardia (AusDI, 2003) Rare case reports of hepatotoxicity (Am J Gastroenterol 1996; 96: 1436-8)
Chinese herbal medicines ⁽³²⁾	III: non-randomised CT	Children with asthma	+/-	+/-	0	Some TCM medicinals contain ephedrine, a sympathomimetic amine, which may be responsible for observed effects	
Medicinal therapies: traditional Ayurvedic (Indian) medicines^(20, 21)							
<i>Boswellia serrata</i> ⁽³³⁾	II: 1 RCT	Adults with asthma	1+	1+	0		2/40 patients reported epigastric discomfort on <i>Boswellia</i>
<i>Coleus forskohlii</i> (forskolin) ⁽³⁴⁾	II: RCT	People with asthma	0	1+	0	Immediate effect tested. Less effective than β agonist but more than placebo	
<i>Picrorrhiza kurroa</i> ⁽³⁵⁾	II: 1 RCT		1-	1-	0	Over 14 weeks	

Therapy	Highest level of evidence available	Patient group ^A	Effectiveness ^B			Comments	Safety considerations ^C
			Symptoms ^D	Lung function	Medication required		
Solanum xanthocarpum/ S. trilobatu (kantakari) ^(36, 37)	II: 1 RCT	Adults with asthma and with COPD	1+	1-	0	Single dose study	
Tylophora Indica ⁽³⁸⁻⁴³⁾	II: 5 RCTs	Adults with asthma, generally on no other treatment	2+	1+	0	Effects reduced after several weeks	Sore mouth, nausea and vomiting, loss of taste
Medicinal therapies: traditional Japanese medicines ^(20, 21)							
<i>Tsumura saiboku-to (TJ-96)</i> ^(44, 45)	II: 2 RCTs	Adults with asthma	2+	2+	1+ (oral steroids)		
Medicinal therapies: herbs (miscellaneous) ^(20, 21)							
Ivy leaves (dried) (<i>Hedera helix L.</i>) ^(46, 47)	II: 5 RCTs	Adults and children with chronic airway obstruction due to asthma	+/-	+/-	0	Only one trial was placebo controlled	
Breathing and yoga							
Buteyko breathing technique (system of breathing exercises focusing on nasal route of breathing, hypoventilation and avoidance of deep breaths) ^(48, 49)	II: 5 RCTs	Short-term studies in adults	2+	0	2+		

Therapy	Highest level of evidence available	Patient group ^A	Effectiveness ^B			Comments	Safety considerations ^C
			Symptoms ^D	Lung function	Medication required		
Yoga (ancient Indian practice using physical postures, discipline of breathing, and concentration during practice) ⁽⁵⁰⁻⁵⁴⁾	II: 4 RCTs	Patients with asthma	+/-	0	+/-	Two studies showed reduced airway hyper-responsiveness	
Breathing exercises ⁽⁵⁵⁾	I: Cochrane Review		0	1+	1+	5 studies reviewed including one study on Buteyko. No standard breathing technique used	
Other therapies							
Acupuncture (laser or fine needles used to puncture the skin at defined points) ^(56, 57)	I: 2 systematic reviews (1 Cochrane)		+/-	+/-	+/-	Short-term studies. Questionable use of sham acupuncture as comparator. 7 trial of 174 people reviewed by Cochrane	
Hypnotherapy (creating a trance-like state) ⁽⁵⁸⁻⁶³⁾	I: Systematic review	Adults and older children with severity ranging from mild-moderate/severe	+/-	+/-	+/-	Dependent on hypnosis 'susceptibility'. Several published studies have not provided sufficient detail to assess effect.	

Therapy	Highest level of evidence available	Patient group ^A	Effectiveness ^B			Comments	Safety considerations ^C
			Symptoms ^D	Lung function	Medication required		
Ionisation (instrumentally boosting the positive and negative ion content of the air) ⁽⁶⁴⁻⁶⁸⁾	II: RCT	Adults and children with asthma	2-	0	2-	Total N = 92	One trial demonstrated positive ionisation aggravated EIA
Meditation (techniques used to calm the mind and body) ⁽⁶⁹⁾	II: 1 RCT	Adults with 'stable' asthma	0	1+	0	Only half the respondents completing the full trial. Airways resistance decreased	
Music therapy ⁽⁷⁰⁾	II: 1 RCT	Stable asthmatics	1+	1-	0	Data from a single trial (n = 72) with relaxation and no treatment as the comparator	
Osteopathy (physical manipulative therapy used to adjust misalignments of the muscles, joints and bones) ^(71, 72)	II: 1 pilot RCT and 1 controlled comparative study	Adults with asthma. Comparative group in second trial included non-asthmatics	1-	+/-	0	Total number of participants = 18	
Reflexology (application of pressure, usually to the feet, to produce therapeutic effects on other parts of the body) ^(73, 74)	II: 2 RCTs	Adults with asthma	+/-	1-	+ - (SABA use decreased)	Total N = 70 Peak flows increased in one study, but neither study showed improvements in FEV1.	

Therapy	Highest level of evidence available	Patient group ^A	Effectiveness ^B			Comments	Safety considerations ^C
			Symptoms ^D	Lung function	Medication required		
Speleotherapy (use of subterranean environments as a therapeutic measure) ⁽⁷⁵⁾	I: Cochrane Review (3 RCTs)	Children with asthma	0	1+	1+	Results may vary from cave to cave Total N = 118 Lung function effects were described as transient	
Relaxation therapy ⁽⁷⁶⁻⁸²⁾	I: 1 systematic review and other RCTs	Adults and children with asthma ranging from mild to severe	2-	+/-	2-	May be of greatest benefit for those with asthma exacerbated by anxiety. Has also been demonstrated to be useful in acute attacks	

^A Age group (children or adults), level of severity or control, concomitant medications.

^B 3+ Strong evidence for effectiveness; 3- Strong evidence of lack of effect;
2+ Probably effective; 2- Probably ineffective;
1+ Possibly effective; 1- Possibly ineffective;
+/- Equivocal evidence of effect; 0 No evidence for this outcome.

^C Including operator dependent, dose dependent and other adverse effects and potential interactions with other treatments.

^D Includes measures of quality of life and other subjective measures of asthma control.

^E In addition to the interventions listed here, there are several studies, not reviewed here, which have demonstrated that individuals with asthma and proven food chemical sensitivity benefit from avoidance of the specific food chemical(s) to which they are sensitive. There is no evidence that specific food avoidance is beneficial for people with asthma without proven food or food chemical sensitivity. Any advice on food avoidance should be given by health professionals with expertise in nutritional and dietary advice.

This series on Asthma Topics for Consumers comprises eight separate titles:

- 1 Asthma and Allergy
- 2 Asthma and Lung Function Tests
- 3 Asthma and Pain Relievers
- 4 Asthma and Air Pollution
- 5 Asthma and Complementary Therapies**
- 6 Asthma and Infant Bedding
- 7 Asthma and Diet in Early Childhood
- 8 Asthma and Wheezing in the First Years of Life

To access these documents log on to:
www.NationalAsthma.org.au or contact
your local Asthma Foundation on **1800 645 130**.

© Australian Government Department of Health and Ageing 2005

Disclaimer

The information contained in this paper has been expert reviewed and represents the available published literature at the time of review. It is not intended to replace professional medical advice. Any questions regarding a medical diagnosis or treatment should be referred to a medical practitioner.

