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Featured Article

Headache

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This article is an excerpt from the [Clinical Handbook of Internal Medicine: The Treatment of Disease with Traditional Chinese Medicine. Volume 3](#) by Will Maclean and Jane Lyttleton. While the



book also contains sections that discuss herb and formula recommendations, for compliance reasons those sections cannot be presented by Mayway. Please see the book for this information.

Headache (tou tong 头痛)

is pain in the head. Almost everyone will experience a headache at one time or another. As an isolated event in response to some postural, physical or emotional state, a headache is part and parcel of life. When persistent or recurrent, or when they interfere with normal functioning, headaches suggests chronic imbalance that requires intervention.

The headaches likely to bring a patient into the Chinese medicine clinic are the chronic, recurrent types. Most chronic headaches have an internal and an external component. What this means is that the underlying internal imbalance is frequently complicated by pathological (myofascial) lesions in the soft tissues of the neck and upper back. These lesions are associated with specific changes in muscle architecture, and can be felt as tight knots or painful bands of tissue. These lesions can cause pain to be referred to various areas of the head, and are commonly known as trigger points. Trigger points in the muscles of the neck and upper back are a common finding in patients with chronic headaches. Trigger points can develop in response to the underlying pathology, or may develop independently due to mechanical and postural forces. In either case, successful treatment of chronic headaches usually involves both constitutional treatment and the removal of as much tension and trigger point activity as possible.

ETIOLOGY

External pathogens

Invasion by external pathogens is a common cause of acute, usually self limiting headaches. Wind, cold, damp and heat, either singly or in combination may be involved. The taiyang channels of the back of the neck are most commonly targeted as they are the most exposed to the environment and the first point of contact between the pathogen and the host. In most cases, these headaches will be accompanied by exterior signs and symptoms, but occasionally the headache may appear before the onset of other symptoms. Each pathogen produces a characteristic type of headache, and may affect different parts of the head. The headache is the result of disruption to the distribution of qi and blood through the superficial tissues of the head and neck by the pathogen.

Emotional Factors

Emotions are significant contributors to both acute and chronic headaches. Liver qi constraint from unexpressed frustration, anger, worry or other internalized emotion, leads directly to the common tension headaches that afflict a large proportion of humanity. Chronic qi constraint, in turn, sets the scene for the development of more serious pathology, such as blood stasis, yin deficiency with ascendant yang and Liver wind. In addition, chronic qi constraint can weaken the Spleen and lead to qi and blood deficiency, damp and phlegm. Prolonged qi constraint also contributes to the chronic muscle tension in the upper back and neck that leads to the development of trigger points.

BOX 9.1 PATTERNS OF HEADACHE

- External invasion
 - wind cold
 - wind heat
 - wind damp
 - summerheat
- Internal excess
 - Liver qi constraint
 - Liver fire
 - Ascendant Liver yang and wind
 - Cold affecting the Liver & Stomach
 - Phlegm damp
 - Wind phlegm
 - Blood stasis
 - Stomach heat
 - Stomach & Gallbladder disharmony
- Internal deficiency
 - Qi deficiency Blood deficiency
 - Kidney deficiency
 - yin deficiency
 - yang deficiency

BOX 9.2 BIOMEDICAL CAUSES OF HEADACHE

General

- tension/stress
- referred pain from trigger points in neck and upper body muscles
- infection/fever
 - sinus
 - otitis
 - dental infection, gum disease
 - meningitis/encephalitis

Cardiovascular

- subarachnoid hemorrhage
- cerebral hemorrhage
- temporal arteritis

Neurological

- migraine/cluster headaches
- trigeminal neuralgia

Drugs (use or withdrawal from)

- alcohol
- aspirin and codeine (rebound from)
- antibiotics and anti-fungal agents

- antihypertensives
- caffeine
- corticosteroids
- ergotamine (rebound from)
- MAO inhibitors
- nicotine
- oral contraceptives
- vasodilators

Other

- occupational or environmental toxins and chemicals
- post traumatic, concussion
- anemia hypoglycemia
- herpes zoster (pre-eruption)
- glaucoma

Caution:

Sudden severe headaches or steadily increasing headaches may hint at a sinister malady such as meningitis, a subdural hematoma or a cerebral tumor.

A common and often overlooked cause of headache is dehydration. This is seen in those who do manual or outdoor work, as well as those who work in hot environments or in the desiccating environment of air conditioned buildings.

Overwork

Working excessively long hours or laboring to the point of exhaustion depletes Spleen and Kidney yang qi. Insufficient sleep depletes Heart and Kidney yin. Headaches are quite common in people who expend lots of mental energy while being largely sedentary, a frequent finding in students, academics and office workers. This is due to the combined effects of qi and blood deficiency, the creation of damp as a result of qi deficiency, and the postural stresses associated with prolonged sitting. In addition, excessive use of the eyes, in combination with working long hours or working at night, depletes Liver blood.

Constitution

Chronic headaches can be associated with constitutional or inherited imbalances. Migraine headaches often run in families, and many patients report a history of headaches that start from a young age. This may involve aspects of Kidney jing deficiency and subsequent yin deficiency

causing ascendant yang, or an inherited tendency to phlegm damp, qi constraint or qi and blood deficiency.

Trauma

A fall or blow to the head is a common cause of blood stasis type headaches. The headaches may not necessarily appear immediately following the trauma, but can occur months or years later, initiated by another illness, or a decline in general health and circulation.

Trigger points and mechanical stress

Trigger points (TPs) are focal contracted and irritated areas within a muscle that produce pain signals. Pain is referred to a location some distance from the site of the trigger point. Muscles of the neck and upper back are especially prone to develop trigger points and frequently refer pain to specific regions of the head. TP's are characterized by an area of focal tenderness and knots within a tight band of contracted muscle and can be easily located by palpation.

Some emotional states may weaken the Spleen and Lungs and lead to qi deficiency. Qi deficiency, in turn, can be complicated by excess pathology in the form of phlegm damp or qi constraint. Worry, obsessive thinking or rumination deplete Spleen qi or cause Liver Spleen disharmony. Grief, prolonged sadness or bereavement can weaken the Lungs and deplete Lung qi. Weak Lung qi loses the ability to restrain the Liver through the controlling cycle (metal controlling wood) which encourages both qi constraint and the chaotic ascent of qi.

Diet

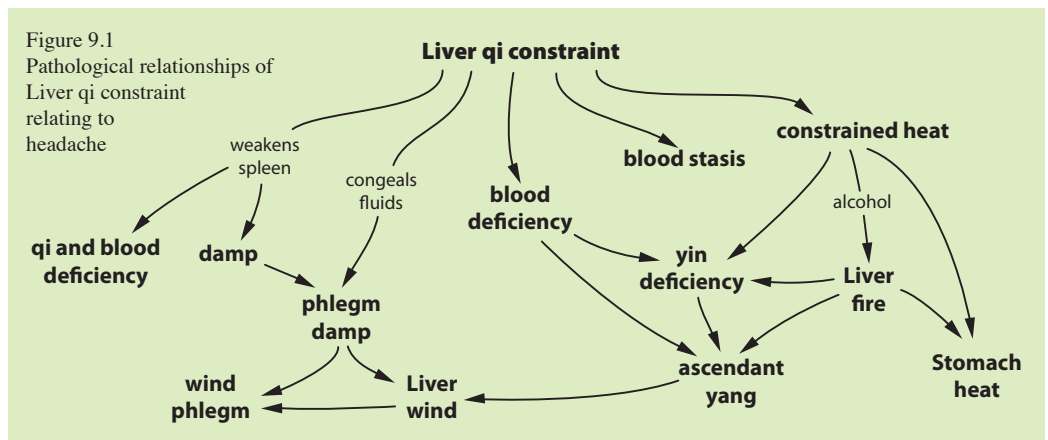
The diet is a common contributor to headaches. Insufficient food or lack of protein can lead to qi and blood deficiency. Foods or dietary habits that weaken the Spleen, such as raw and cold foods, and restrictive or rigid diets, can lead to qi and blood deficiency and the generation of damp and phlegm. An excess of sweet, oily, rich food and dairy products directly introduces phlegm damp into the body. Some medications weaken the Spleen, deplete Spleen yang qi, or create damp and phlegm when used inappropriately. These include heat clearing herbs, hypoglycemic agents, antihypertensive drugs, laxatives and antibiotics. Excessive reliance on analgesics can damage Stomach and Liver yin.

Overconsumption of heating foods, in particular red wine and spirits, chocolate, coffee, shellfish, chillies, cheese and some spices can heat the Stomach, Liver and Gallbladder, leading to heat or fire patterns.

BOX 9.3 COMPREHENSIVE ASSESSMENT

- Constitutional diagnosis
- Assessment of the neck and upper back for trigger point activity
- Postural and ergonomic assessment, including bed and pillow, work habits, desk, keyboard and screen height
- Miscellaneous causes - dehydration, drugs, eyestrain, exposure to the sun

Many chronic types of headache have both a constitutional and muscular component. Some conditions, notably the Liver patterns (qi constraint, ascendant yang and wind) and yin and blood deficiency patterns, predispose patients to the formation of trigger points. The resulting trigger points then become a source of pain in the head themselves, and overlapping patterns of pain may emerge. For a thorough discussion of trigger points, see Travel and Simons (1983), Legge (2010) and Baldry (1993).



Trigger points can develop because of mechanical stress, as the result of internal pathology, or a mixture of both. The pathology most likely to produce TPs is associated with Liver pathology, in particular Liver qi constraint and related complications, and deficiency of Liver blood and yin which fails to nourish the muscles and sinews, leaving them prone to mechanical strain and injury.

The mechanical causes of TP formation include sudden unaccustomed overload of a muscle, traumatic injury, repetitive activity or postural stress. Mechanical stresses that specifically give rise to headaches include postural stress associated with poorly designed furniture, sitting hunched for hours in front of a computer, a cramped sleeping position, an excessively soft or high and hard pillow or prolonged head extension while engaged in a task requiring an awkward orientation. The muscles implicated in headaches are noted in Boxes 9.5-9.8.

Once trigger points have formed, they generally persist unless actively treated. Many people harbor latent TPs that can be activated by seemingly trivial events such as coughing or sneezing, overexertion, a long drive or sudden rotation of the head.

PATHOLOGY

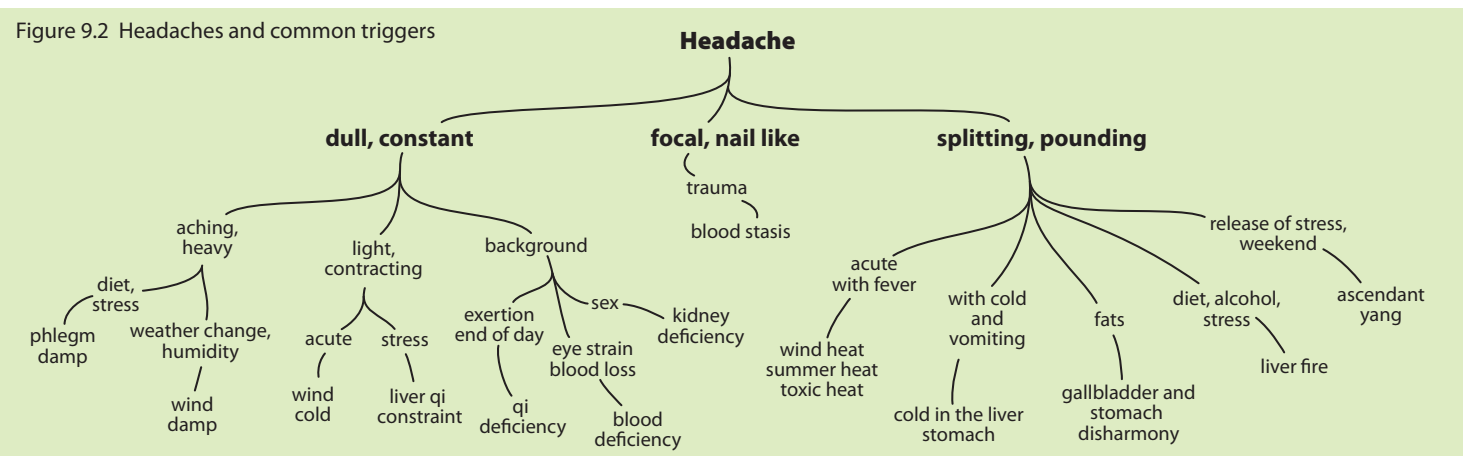
There are two mechanisms of headache production, those associated with deficiency and those associated with excess. These two types produce quite different types of headache.

The excess types of headache are more severe, and can be debilitating. They are caused by obstruction to the circulation of qi and blood by a pathogen. The nature of the obstructing pathogen has a direct bearing on the quality of the pain. The more substantial the obstruction, the more intense the headache. Trigger point activity in associated tissues is common.

The deficient types of headache are due to insufficient qi, blood, yin or yang reaching the head. They are mild to moderate and dull, and are associated with mental and physical fatigue. Mixed deficiency and excess headaches are common, with some patients experiencing both at the same time, or sequentially. A common example is the persistent dull headache of yin and blood deficiency which occasionally yields to the intense and splitting headache of ascendant yang.

TREATMENT

Treatment of the acute headache aims at immediate relief with the use of acupuncture to disperse stagnation, deactivate trigger points, dispel wind and so forth, or with swift acting herb decoctions and prepared medicines. Between episodes the treatment focuses on the underlying condition. As a general rule, headaches due to



BOX 9.4 KEY DIAGNOSTIC POINTS

Nature

- throbbing, pounding, splitting - ascendant Liver yang, Liver fire, Stomach and Gallbladder disharmony, toxic heat
- distending - ascendant Liver yang, Liver fire, wind heat
- focal, stabbing, boring - blood stasis
- heavy, as if wrapped in a wet cloth- phlegm damp
- like a tight band around the head - Liver qi constraint
- dull, background, all over ache - blood deficiency, Kidney deficiency

Onset

- premenstrual - Liver qi constraint, ascendant yang, blood stasis
- after menstruation or when breast feeding - blood deficiency
- when hungry - Spleen qi deficiency
- with eating - Stomach heat, phlegm damp
- first thing in the morning, waking with - phlegm damp, qi constraint
- biomechanical stress on neck with trigger point activation from poor pillow height
- soon after getting out of bed - blood deficiency, Liver qi constraint
- with activity, at end of the day - qi and blood deficiency
- evening, at night - yin and blood deficiency, blood stasis
- weekends, holidays - Liver qi constraint, ascendant yang

Aggravation

- with emotional upset, anger - Liver pathology
- with prolonged standing- blood deficiency, Kidney deficiency
- with prolonged sitting or lying - phlegm damp, qi constraint, ascendant yang
- alcohol, fatty food - Stomach and Gallbladder disharmony, Liver fire
- with changes of weather -wind damp, phlegm damp
- with massage of the neck - blood deficiency, yin deficiency
- waking with headache during the night- blood deficiency, Liver qi constraint ascendant yang (between 1-3am), Stomach and Gallbladder disharmony
- with strong smells - phlegm damp
- with use of the eyes - blood deficiency
- after sex - Kidney deficiency

Amelioration

- with exercise - Liver qi constraint, phlegm damp
- with rest - deficiency
- with eating - Spleen qi deficiency
- with a cold compress - Stomach heat, Liver fire, ascendant yang, wind heat
- after vomiting- Stomach and Gallbladder disharmony, phlegm damp, ascendant yang, Liver fire

Accompanying features

- nausea, vomiting- Stomach and Gallbladder disharmony, cold affecting the Liver and Stomach, phlegm damp, Liver fire, ascendant Liver yang
- eye distension and pain - ascendant yang, Liver fire
- dizziness, vertigo- phlegm damp, ascendant yang, Liver wind
- postural dizziness - blood deficiency, yin deficiency
- cold extremities - cold affecting the Liver and Stomach, Liver qi constraint

deficiency, in particular blood and yin deficiency, respond best to herbal therapy, while the Liver patterns respond well to regular acupuncture, massage and deactivation of associated trigger points. Blood stasis patterns can do well with acupuncture, but will often need herbs to obtain a sustained result. Headaches due to external pathogens usually respond quickly to both herbs and acupuncture.

Biomechanical and ergonomic factors need to be addressed. Sleeping position, pillow height, computer keyboard and screen placement, office furniture and couch design are frequent factors in chronic headaches, regardless of the systemic pathology also present.

Selection of acupuncture points

Acupuncture points are selected on the basis of the pattern involved, the location of the headache and the presence of trigger points. During a headache, the main points will be selected from those that influence the location of the headache (Boxes 9.5-9.8). In between headaches, points are selected primarily on the basis of the diagnostic pattern. Points can be selected on the basis of their specific effects on headache (Table 9.1, p.419-420 of *Clinical Handbook of Internal Medicine, Volume 3*). Trigger points, when present, should be treated until they resolve.

Manual therapy

Massage and passive mobilization of the neck and upper back are helpful for alleviating muscular tension and deactivating trigger points. Strong massage is most suitable for the excess patterns. Patients with blood or yin deficiency patterns should be treated gently, as deep massage can irritate the muscles, aggravate tension and trigger points, and worsen the headache.

Hot Spot therapy

Hot spot therapy (see Appendix 2, p.923 of *Clinical Handbook of Internal Medicine, Volume 3*) is a method of self treatment of trigger points done at home in between formal treatment sessions. Hot spot therapy is particularly useful for Liver qi constraint and ascendant yang patterns. The most common location to find active trigger points potentially contributing to headache, is in the paraspinal muscles between T3-T10.

Hot spot therapy is not suitable for yin and blood deficiency due to the characteristic irritability of the tissues of the neck and upper back. Headaches and muscular pain of a deficiency type can be aggravated by hot spot therapy.

Medications

The following pharmaceutical medications are commonly used for headaches. Patients with chronic headaches will often be taking multiple medications, both preventively and for acute episodes. The use of preventive medication may

BOX 9.5 YANGMING DISTRIBUTION (FRONTAL)

Frontal headaches may be associated with trigger point activity in the muscles noted below, and with disorders of the Stomach, Spleen, Large Intestine, Liver and Gallbladder. Common pathology includes Stomach heat, Stomach and Gallbladder disharmony, Spleen qi deficiency, phlegm damp, qi constraint, wind heat and sinus congestion (see Sinusitis and Nasal Congestion, Vol. I).

Common points

- | | |
|---------------------|-------------------|
| Local | Distal |
| • yintang (M-HN-3) | • LI.4 (hegu) |
| • Du.23 (shangxing) | • St.36 (zusanli) |
| • G B.14 (yangbai) | • St.44 (neiting) |
| • Bl.2 (zanzhu) | • St.41 (jixi) |
| • GB.20 (fengchi) | |

Herbs that target the yangming area

- bai zhi (*Angelicae dahuricae Radix*)
- cang er zi (*Xanthii Fructus*)
- man jing zi (*Vitidis Fructus*)
- ju hua (*Chrysanthemi Flos*)
- sheng ma (*Cimicifugae Rhizoma*)
- chuan xiong (*Chuanxiong Rhizoma*)

Referred pain from trigger points

- sternocleidomastoid
- semispinalis capitis
- frontalis
- zygomaticus major
- masseter
- splenius cervicus

Characteristic

- Dull
- phlegm damp
- wind damp
- qi deficiency

Tight, constant

- Liver qi constraint

Splitting, pounding, throbbing

- wind heat
- toxic heat
- summerheat
- Stomach heat
- GB and Stomach disharmony
- Liver fire



BOX 9.6 SHAOYANG DISTRIBUTION (TEMPORAL)

Temporal headaches are associated with trigger point activity in the muscles noted below (especially sternocleidomastoid), and disorder of the Liver and Gallbladder, and qi and blood stasis. Ascendant yang, Liver fire, and Gallbladder and Stomach disharmony may be unilateral or bilateral. Blood stasis is usually unilateral. Temporal headaches often concentrate behind the eyes.

Common points

- | | |
|---------------------|---|
| Local | Distal |
| • GB.20 (fengchi) | • SJ.5 (waiguan) + GB.41 (zulinqi) |
| • taiyang (M-HN-5) | • Liv.3 (taichong) + LI.4 (hegu) |
| • St.8 (touwei) | • GB.34 (yanglingquan) + GB.21 (jianjing) |
| • GB.1 (tongziliao) | • Lu.7 (lieque) |
| • GB.8 (shuaigu) | |

Herbs that target the shaoyang area

- chuan xiong (*Chuanxiong Rhizoma*)
- chai hu (*Bupleuri Radix*)
- ju hua (*Chrysanthemi Flos*)
- gou teng (*Uncariae Ramulus cum Uncis*)
- bai ji li (*Tribuli Fructus*)
- shi jue ming (*Haliotidis Concha*)

Referred pain from trigger points

- sternocleidomastoid, [mastoid end of the sternal head, near SI.17 (tianrong)]
- trapezius [upper fibres, near GB.21 (jianjing)]
- temporalis
- semispinalis capitis [near GB.20 (fengchi)]
- suboccipital group

Characteristic

- Dull, background
- blood deficiency

Tight, constant

- Liver qi constraint

Splitting, pounding, throbbing

- ascendant Liver yang
- Liver fire
- GB and Stomach disharmony

Stabbing, boring focal

- blood stasis



mask the underlying pattern and can impede diagnosis and treatment. As treatment progresses, the aim should be to reduce all medications, including Chinese herbs, but this should be done slowly, following the patients decreasing requirements as their condition improves. Withdrawal of some medications can lead to rebound headaches if done too quickly.

Analgesics and Non-Steroids Anti-inflammatory Drugs (NSAIDs)

This group includes aspirin, paracetamol, indomethacin, ibuprofen, naproxen and diclofenac, the most common

medications used for common headaches, and widely available over the counter. In Chinese medical terms they tend to be cooling and dispersing to qi, yin and blood. Overuse may damage Liver and Stomach yin.

Ergotamine (Cafergot, Ergodryl)

Ergotamine is used at the onset of a migraine headache. It produces vasoconstriction peripherally, and in high doses can damage peripheral epithelium and contribute to blood stasis, thrombosis and gangrene.

BOX 9.7 TAIYANG DISTRIBUTION (OCCIPITAL)

Occipital headaches can be caused by trigger point activity in the muscles noted below, or be associated with invasion of an external pathogen, Kidney deficiency, Liver qi constraint and pathology of the Urinary Bladder, Small Intestine and du channels.

Common points

Distal

- SI.3 (houxi) + 81.62 (shenmai)

Local

- GB.20 (fengchi)
- Du.16 (fengfu)
- Bl.10 (tianzhu)
- Lu.7 (lieque)
- GB.41 (zulinqi)
- 81.60 (kunlun)

Herbs that target the taiyang area

- qiang huo (Notopterygii Rhizoma seu Radix)
- gao ben (Ligustici Rhizoma)
- ge gen (Puerariae Radix)
- chuan xiong (Chuanxiong Rhizoma)

Referred pain from trigger points

- low and middle fibres of trapezius
- sternocleidomastoid
- semispinalis
- splenius
- suboccipital group
- multifidus

Characteristic

- Dull, heavy
- wind damp

Dull, empty

- Kidney deficiency

Tight, constant

- wind cold
- Liver qi constraint

Splitting, pounding, throbbing

- ascendant Liver yang



BOX 9.8 JUEYIN DISTRIBUTION (VERTEX)

Vertex headaches are associated with the pathology of the Liver (Liver qi constraint, ascendant yang, cold in the Liver and Stomach), and deficiency of qi and blood. A vertex headache is distinct and localized, and should be distinguished from a headache that involves the Urinary Bladder and du channels and which extends down to the occiput and neck.

Common points

Local

- Du.20 (baihui)
- Bl.7 (tongtian)
- GB.20 (fengchi)
- Du.23 (shangxing)

Distal

- Liv.3 (taichong)
- Bl.67 (zhiyin)
- SI.3 (houxi)
- Bl.60 (kunlun)

Herbs that target the jueyin area

- wu zhu yu (Evodiae Fructus)
- gao ben (Ligustici Rhizoma)
- gou teng (Uncariae Ramulus cum Uncis)
- tian ma (Gastrodiae Rhizoma)
- shi jue ming (Haliotidis Concha)
- chuan xiong (Chuanxiong Rhizoma)

Referred pain from trigger points

- sternocleidomastoid
- splenius capitus

Characteristic

Dull

- qi and blood deficiency
- Liver qi constraint

Tight, boring

- ascendant Liver yang
- cold in the Liver and Stomach

WHOLE HEAD

When a headache involves the whole head it extends down to the eyes in front and the hairline on the rest of the head. It may feel superficial, with sensitivity on the scalp, or feel deep inside the head. When acute it is usually due to an external invasion. When chronic, dull, heavy or 'empty', it may be due to prolonged Kidney deficiency or the clogging effects of phlegm damp; when splitting, ascendant Liver yang, Liver fire or toxic heat are implicated.



Pizotifen (Sandomigran)

Used to prevent migraine headaches, pizotifen is a serotonin antagonist and also has some activity as an antihistamine. Side effects include dry mouth, drowsiness, increased appetite and weight gain. Pizotifen is pungent, warm and dispersing, and may disperse and damage zheng qi and yin.

Sumatriptin (Imigran)

A strong drug used at the onset of migraine. Used frequently, it can lead to increased frequency of headache. Sumatriptin is pungent, warm and dispersing to qi and yin. Side effects include flushing, feelings of heat, weakness and fatigue. ■

Please see William Maclean's *Clinical Handbook of Internal Medicine, Volume 3* for a detailed discussion of herb and formula recommendations. For compliance reasons those sections cannot be presented by Mayway.

Bio: William Maclean, M.Sc Chin. Med. is an internationally renowned practitioner, teacher and author from Australia, with 25 years of clinical experience in the field of Chinese medicine. Will teaches in the Masters programs at the University of Sydney and University of Technology Sydney, and lectures to students and practitioners around the world. In addition to his long years in practice, Will is the author (with Jane Lyttleton) of the Clinical Handbook of Internal Medicine series Volumes 1, 2 and 3, the Clinical Manual of Chinese Herbal Patent Medicines (revised version coming soon!), and the recently published Clinical Handbook of Chinese Herbs: Desk Reference.