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**A-Z**

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of hydrotherapy

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Approved by the Oxford School of Chiropractic Ltd

# A-Z of Hydrotherapy

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# Preface

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We hope you will find this guide to obtaining the maximum benefit from your Hydrotherapy system, of interest.

Before purchasing a Hydrotherapy system the following points must be carefully considered.

**1. Power** – without sufficient power, therapy and benefits will not take place. Ensure that your pump is supplied to European standards of safety and insulation P55. This should be stated on the motor and in the system specification.

**2. Jet Positioning** – demand back and foot jets – these are the most important and without them 70% of the benefits will be lost (see pages 15-22). The more the jets there are, the more effective the system will be, as more of the body will be covered.

Jet positions as stated are in accordance with guidelines set by the Chartered Society of Physiotherapists.

**Back Jets** – in general, these should lie either side of the spine massage action is more beneficial to muscle and tissue than to bone (see page 8 'Contra Indications – Danger'). Some systems now offer a 'Custom Build' service where jets can be installed to your particular requirements and needs – ask your retailer for full details.

**3. Hygiene** – The Hydrotherapy/Whirlpool system must drain away dirty water left in the system and pump after each use. Rigid pipe is essential for this; avoid flexible pipes which are prone to sagging. It is preferable for systems to drain into the waste of the bath, thereby avoiding hard water dribble marks on the bath.

**4. Pipework and Jointing** – guarantees ensure a high quality of finish and workmanship to a system.

# Introduction

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Medicine today is gradually rediscovering the truth that was taken for granted hundreds and even thousands of years ago, but was gradually 'lost' as Western Man in particular began to apply a scientific way of looking at health and disease: the truth that mind and body are indistinguishably linked.

Illness or disease can therefore be influenced on any one of three levels:-

- a) anatomical e.g. by surgery
- b) physiological e.g. by drugs, acupuncture, homeopathy
- c) psychological and emotional

Although one approach may be appropriate in any specific disease, it follows that intervention on any one of these levels will have some effect on healing. Rather than seek to cure illness, therefore, we can prevent much illness by intervening at an early physiological or emotional level. If this can be done by ourselves, in our own homes, at the time of our choosing, then so much the better.

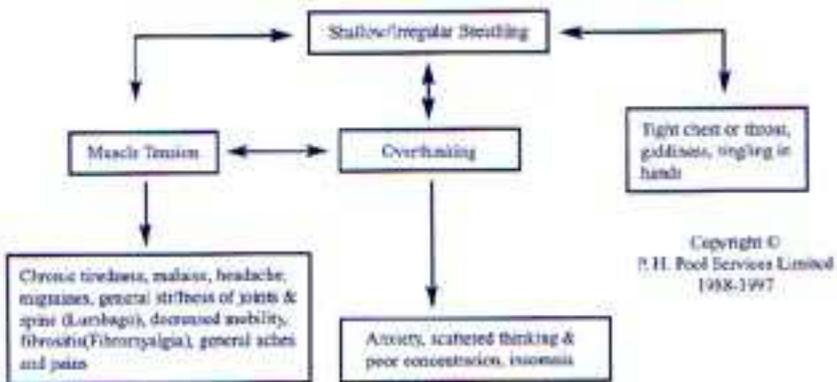
Hydrotherapy enables us to enjoy the benefits to health and general well-being through:-

- a) general relaxation and massage
- b) specific treatment of individual areas and conditions

The links between various illnesses and specific psychological states are becoming increasingly understood. We are often not aware of the attitudes, beliefs or negative thought patterns within us that cause disease, but they often 'run' our lives for us, bringing about frustrations unhappiness. Such emotions may be anger, criticism, resentment, guilt or unexplained fear or anxiety. It is much easier to become aware of; and then release, these negative attitudes when we give ourselves time for reflection, and are relaxed in body and mind. The use of hydrotherapy can help us achieve both.

# General Health and Well-Being

Our minds and bodies are affected daily by the stress and pace of modern living, and by the constant stimuli, whether they be noise, images from T.V., or advertisements. We are often conditioned to achieve more than is perhaps comfortable, and (often in childhood) to please others and not think too much of ourselves. All this affects our general level of muscle tension, the rate and rhythm of our breathing, and the stillness of our minds. Some of the effects of this can be shown diagrammatically thus:-



From this it is clear that great benefits can come about by improving our general relaxation. The fact that muscle relaxation, breathing, and our mental activity are directly linked means that improvement can be brought about by change in any one (or all) of them.

## MODE OF ACTION, PRINCIPLES OF HYDROTHERAPY

Hydrotherapy is effective in this way:- physiological changes in the body seem to be triggered initially by the buoyancy effect of water and the transference of heat into the body. In an ordinary bath, a film of water hugs the body, quickly cooling to body temperature. This 'wet suit' effect effectively prevents the transference of heat into the body. Hydrotherapy, with its circulating currents, breaks up this film and allows for immediate and effective transfer of heat, relaxing tense muscles and increasing blood flow to the tissues. The warmth has a sedative effect on nerve endings and therefore reduces pain and discomfort. The buoyancy effect eliminates the effect of gravity and allows for more freedom and comfort of movement of joints and muscles.

Because of this, the jet pressure gives a deeper effect, while the pressure of the water helps to eliminate oedema (fluid swelling) in the tissues. This pressure also has an effect on the light and deep touch receptors in the nerve endings, helping to distract the paincarrying fibres from passing their 'painful' messages to the brain. The pleasant sensation actually helps 'block out' the passage of painful impulses. (GATE Theory of pain). The pressure also tends to release endorphins, the same pain-killing substances that are released by vigorous exercise, massage or acupuncture.

In general, cold to tepid water is good for swelling; too much heat makes it worse. Cold water stimulates circulation to the tissues and reduced swelling; this attracts more 'repairing' cells to a site of injury and promotes healing.

The mechanical effects of hydrotherapy are therefore:-

- a) to stretch the tissues
- b) to stimulate the circulation
- c) to disperse fluid (e.g. blood or lymph)

These are of value in sport, for instance, for the treatment of cramps, muscle spasm or stiffness, deep or superficial scarring, oedema (inflammatory swelling) or deep bruising.

The stimulation of the circulation occurs without increasing the 'effort' or rate of the heart. In consequence there is less strain on the heart muscle, an improvement in problems related to poor circulation, an improvement in skin tone, and a reduction in the stress hormones circulating in the blood stream. The result is an increase in relaxation and general well-being.

The sensory effects are more complicated, but are two main types, reflex and psychosomatic.

a) **Reflex**

The effects occur via the sense receptors in the nerve endings and do not depend on one's conscious sense. These lead to changes in the superficial and deep blood flow to the tissues, and changes in muscle tone.

b) **Psychosomatic**

The effects are due to one's conscious awareness of the sensations brought about by hydrotherapy. Massage in any form is a stimulus, which, if given

for a short period can refresh a limb or joint which is stiff or tired. More prolonged exposure, however, will depress one's response, reducing sensory distractions and leading to a relaxation. This applies to one's whole body, just as much as to a part of it. This means that brief use of hydrotherapy can be used **pre-sport** to warm-up, invigorate and lessen the risk of injury (immediately before a game).

**After rigorous exercise** hydrotherapy is of benefit in promoting recovery and preventing subsequent stiffness. (This is because the greatly increased blood flow to exercised muscles may cause fluid to 'spill out' into the tissues, which may then become swollen, tense and stiff). Hydrotherapy will promote the return flow of the lymph and drainage of waste products from the muscles, hastening recovery.

**In injury**, pain and muscle tension are virtually synonymous, as nature seeks to prevent movement in a damaged limb by causing the local muscles to tighten up and provide 'natural splinting'. It is this spasm which is the cause of most of the pain. Reduction of the spasm with gentle pressure is therefore sought until the local muscles and the body as a whole are suitably relaxed. A more direct approach is then possible, with higher pressures, to disperse local collections of fluid (blood or lymph) at the site of injury and to produce mechanical effects on the tissues themselves. (In acute injury, avoid direct pressure, for 48 hours as the tissues are vulnerable to further damage; seek only to induce general relaxation and reduction of muscle spasm initially. This does not apply in simple stiffness due to over-use when there is no direct injury).

Following any injury, chemical substances released from damaged tissues cause local irritation and swelling (oedema), which may be increased by bruising when blood vessels are damaged. This causes pressure which leads to pain. The water pressure of hydrotherapy spreads the oedema and increases the area of absorption. This disperses the swelling and reduces the pain, even if the tissues are not yet healed. It is useful to try to work the swelling away from the centre of the injury (along the length of muscle, if within a muscle, or outwards in all directions if within the soft tissues). This applies to muscle stiffness, muscle sprains and bruises.

# Mind and Body

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In recent scientific literature there has been a growing awareness and acceptance that the mind can and does affect the state of the physical body. Now, unlike thirty years ago, very few doctors would argue against the statement that 'Mental stress can cause physical disease'.

Past emotional or mental pain and stress can create a distortion in our bodies, usually by the over tightening of muscles. Often, we fail to release these points of tension even after the emotional or mental cause has been resolved. Constant stress from work, family problems, etc., will lead to huge decrease in the flexibility and ease of movement in our bodies, which in turn causes a distortion in posture. This interferes with the efficient working of the body systems, causing stiffness in the joints, tense sore muscles and congestion, or even malfunction of an internal organ.

Hydrotherapy offers an excellent way in which to regain and maintain a relaxed, healthy and pain-free body.

A body in a state of ease and balance can significantly help us to handle an often over-stressed modern life.

Shoulder and neck stimulations and massage is particularly effective for easing and encouraging blood supply to areas of the brain responsible for co-ordination, immune system, appetite and emotional attitude to anxiety and stress.

Obviously accidents, injuries to neck area can cause restriction of blood supply but even habitual daily routines such as poor posture (office work) can lead to background symptoms such as fatigue, headaches and craving for sweet foods.

Correctly positioned jets will help the neck, shoulder area regain efficient blood supply in this most important of areas of our body.

# Contra-Indications/Dangers

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**Any form of massage, including hydrotherapy, should be avoided where there is infection or thrombosis, or around a malignant tumour.**

**After a heavy meal** – massage and heat will interfere with the digestive process and may cause vomiting or fainting – wait for a minimum of two hours before using the hydrotherapy system.

**Medication** – discuss with your doctor the safety of hydrotherapy treatment used in conjunction with your prescribed medication before using the hydrotherapy system.

**Under the influence of alcohol/Non Prescribed Medicine** – It is unsafe to use the hydrotherapy system while under the influence of alcohol.

**It should also be avoided (unless under medical supervision) in conditions involving:**

... poor peripheral circulation (i.e. painful cramps on walking, leg ulcers, or diabetic foot problems).

... severe and recent bruising, as it may increase the swelling if used in early stages.

The following list of symptoms and signs may help in identifying the conditions described. If suspected, medical advice should be sought.

**Rheumatoid Arthritis** – The acute early stages, or later flare-ups (i.e. when the joints are hot and swollen).

**Infections/Inflammations** – hot, red, swelling, tenderness and pain, often throbbing.

**Thrombosis** – (deep vein) – swelling, sometimes hot, sometimes congested and blue, sometimes pale and shiny. Hard and tender muscles; pain on stretching and walking. Usually sudden onset with no history of injury.

**Tumours** – Firm or hard swelling, often not painful, or painful at night or at rest.

**Circulation Problems** – avoid heat in limbs with poor circulation; the increased metabolism may exceed the blood supply and increase the risk of tissue breakdown and the formation of an ulcer.

**Severe and recent bruising** – avoid heat which may increase bleeding into the tissues.

**Back Jet(s)** – It is inadvisable to direct massage action on to the spinal column itself; where there has been injury, recent surgery, or prolapsed disc problems.

Care should be taken where there is a skin condition such as eczema, psoriasis, pressure ulcers or dry and cracking skin.

Elderly users should take care not to have a powerful jet centred on the spine. The ideal positioning of back jets for all situations is to either side of the bony spinal column as shown in fig 2B (Page 24).

Where bruising, ligament sprains and tears have occurred several short periods of massage action are beneficial, rather than leaving the whirlpool in action for a long, continuous period.

## **UNDER SUPERVISION**

**Epilepsy/Spasticity** – the feedback on benefits received for children with these conditions have been very positive, but for safety reasons, stress the need for supervision.

# Positive changes your body goes through as you use the Personalised Massage System

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When under stress (whatever the cause) the chemical changes in the body can cause the blood pressure to rise and the pulse rate to become faster than normal, which can cause symptoms like palpitations, panic attacks, anxiety, etc. Having regular hydrotherapy treatments can reduce these symptoms by slowing down the process of stress reaction, as the warm water and sensation of the passive massage allows the body to relax and unwind under the custom-built jets positioned for your particular body shape and condition.

AT THE FIRST TREATMENT:

**After five minutes:** Blood pressure and pulse rate return to normal. (Normal adult resting pulse = 60 – 80 beats per minute and blood pressure 120 over 70 mm).

**After ten minutes:** Circulation improves in hands and feet, making them warmer.

**After fifteen minutes:** The muscles relax and become more receptive to passive exercise; fibrous tissue becomes more pliable and responsive to stretching, encouraging the release of lactic acid and other toxins from the system.

**After twenty minutes:** Aches and pains experience a decrease in severity.

**AFTER 3 TREATMENTS:** The immune system is improved.

**AFTER 5 TREATMENTS:** Emotional stress and physical tension are noticeably reduced.

**AFTER 10 TREATMENTS:** Pain relief is longer lasting and there is a greater sense of well being.

**AFTER 20 TREATMENTS:** There is a heightened resistance to disease and depression. The skin is clearer and “glows” with health. Muscle tone and mobility improves.

# Positive changes your body goes through with Customised Hydrotherapy Massage

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## Improved Circulation

Increased blood flow

Brings fresh oxygenated blood and other nutrients to the cells, removes waste products and destroys invading bacteria and viruses (such as gut infections, colds, flu etc.) with its white corpuscles, encouraging a healing process.

Stimulates the flow of Lymph

The lymphatic system has no pump to circulate it through the body and relies on the movement of muscle to propel it.

A healthy flow of lymph helps to maintain the correct fluid balance in the tissues, to defend the body against disease, conserve protein and to remove waste products.

## Improved Mobility Correct jet positioning is essential

Provides passive exercise

And so improves muscle tone.

Provides localised massage

Relieving tension, emotional or physical discomfort

Relieves Pain

Passive exercise and localised massage using the hydrotherapy jet system, stretch the fibrous tissue, improving mobility of the joints and muscles, relieving cramp and fibrositis, and speeding recovery time of muscle or ligament tears and sprains.

## Cleansing the System

Softens and stimulates the skin

Skin is the organ of touch. It communicates messages of relaxation or stimuli via the peripheral nerves to all of the body's organs, while eliminating waste and regulating the temperature of the body.

Stimulates the sweat glands, eliminating waste (sweat is a mixture of water, salts, uric acid, amino acids, sugar, lactic acid and ascorbic acid).

**Culminating in a general feeling of well being**

# Water Temperatures

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## **Hot 37°C (98°F)**

Use for short periods, i.e. maximum of 5-10 minutes, jet pressure low to medium. Results: increase in blood flow, circulation and relaxation. Avoid use for long periods in severe/recent bruising and circulation disorders.

## **Warm 36°C (96-97°F)**

Use of 10-15 minute periods. Jet pressure medium to high. Results: increased circulation and skin tone, easing of tense and tired muscles, relief from tension and stress, dispersing of fibrositic nodules, relaxation of the whole body.

## **Tepid 35°C-37°C (93° – 95°F)** (Body gains heat above 93°F)

Use for 10-20 minute periods. Jet pressure medium to high. Results: relief from insomnia, increased circulation and skin tone, improving muscle tone thus firming shape. Helps reduce flab on thighs and waist.

## **Cold Below 34°C (93°F)**

Use for 5-10 minute periods, or as long as is comfortable. Results: excellent for increased circulation to stretched, over-used muscles. Invigorating and refreshing.

It is particularly refreshing and energising to start with warm water and medium to high pressure jets and leave cold water tap on to cool water gradually until the temperature becomes uncomfortable. (Water level is maintained by overflow fitting).

## **TREATMENT OF SPECIFIC CONDITIONS**

It is useful to supply water pressure locally as described above. This can be refined by applying a fine jet to the specific 'trigger' points round joints or in the muscles. These are so named as they are very tender to direct pressure, and often coincide with the Acupuncture points described in Chinese medicine. Tender or 'crystalline' areas on the soles of the feet may be related to problems in other parts of the body, such as the spine in back pain, and pressure applied to these may prove helpful (See Reflexology diagram).

In the following A-Z, some local points are shown as well as a few distant points useful in certain conditions. The figures referred to are on page 29. In addition it is helpful, as mentioned earlier, to consider various emotional and mental states that can often underlie specific conditions, and learn to change them.

# Sports Activities

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The hydrotherapy system is a relaxing and passive way to warm-up before a match or practice session, conserving energy for the game or competition itself.

**For all sports**, start with warm water and medium to high pressure, customise water jets and leave cold water tap on to gradually cool water until the temperature becomes uncomfortable. This will invigorate and stimulate the muscles, before play.

**Football** – concentrate on lower back (for the twisting and turning of direction during play) thigh jets (to assist quadriceps), calf jets (for gastrocnemius/soleus muscles) and ankle and foot jets (for toes) to prepare for sprinting action during play. The shoulder jets will help to warm-up neck muscles before heading the ball, and the goalie will benefit from the thigh jets aimed at the torso (latissimus dorsi muscles) to assist diving for the ball.

**Squash** players will benefit from using the hydrotherapy system as for footballers but concentrating more on the calves, before a game, to build up speed and muscle strength.

**Tennis** players should pay particular attention to using jets for their shoulders and wrists, which can bear considerable strain from heavy hitting services and returns. Hydrotherapy before a match or practice session will loosen joints and makes movement more supple, open and flowing. Pay particular attention to shoulders, neck, glutes and calves.

**Cricketers** will need to concentrate on using customised jets for elbows, wrists, thighs and calves, with bowlers paying particular attention to opening up the shoulder girdle, with high pressure shoulder jets, for maximum freedom of movement.

**Golfers** should pay attention to the region of their lower back, hips, shoulders and wrists by applying high pressure customised warm water jets accordingly. Using the highest back/shoulder jets direct them (2) 45° towards the upper trapezius muscles to alleviate the strain that the golf swing creates by the head and neck-remaining static while the shoulders rotate. Finish with a cold water session to “lock” heat inside the body before competing in cold water.

**Weight lifters** need to concentrate on their shoulders, back, hips, thighs and ankles particularly after competition when the body has endured considerable strain!

**After all sporting activities**, a twenty minutes session of medium to low pressure warm water jets will relax the body and increase lymphatic drainage-remaining build-up of lactic acid from the muscle tissue which in turn reduces stiffness sometimes suffered later on, and stretch any tense muscles. Reduce the temperature before getting out to reduce the risk of light headedness.

## Sports/Athletics

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Cold baths improve athletic performance by reducing the body temperature and preventing overheating. Using cold water jets in the morning can protect you against heat exhaustion for most of the day.

Prolonged physical work makes our body temperature rise, which causes a rush of blood to the skin to allow it to be cooled by sweating. This deprives the muscles of the glucose and oxygen that they need to work well. Unless we slow down at this point, we will become exhausted. However, if we start by having a long immersion in cool water, this will reduce the body's core temperature and delay the overheating process.

However, this approach will not be useful for sprinters and other athletes whose events are over quickly. These athletes would need to avoid becoming really chilled. Instead, a 20 minute warm bath steadily decreasing the temperature with optimum positioned high pressure jets will get the system 'bouncing' and leave you feeling invigorated.

# A-Z

of Hydrotherapy

## CONDITION

## COMMENTS

### Angina

Various causative factors may be involved. Relaxing in the buoyant atmosphere of the hydrotherapy system will relieve the stress related factors which play a part in this disease. Water temperature must never be higher than 37°-38°C (body temperature) while cool low pressure jets (under supervision) will improve blood circulation and muscle tone. Use shoulder, back and foot jets.

### Aches & Pains

Use warm low/medium pressure, shoulder, back, hip, thigh, calf; ankle and foot jets.

### Arthritis

Low/medium pressure. Tepid-warm water. For large joints, treats the points indicated in the diagram.

### Rheumatoid Arthritis

In acute stages, when joints are hot and swollen, use only cool, low pressure, under supervision.

### Osteo-arthritis

Low/medium pressure. Tepid or warm.

### Ankylosing Spondylitis

Immersion in water aids stretching and mobility, and muscle relaxation.

### Anxiety

Warm. Low/medium pressure. Particularly foot jets directed at Solar Plexus Reflexes.

### Back Pain

One of the most common physical causes on inability to work, affecting the 'white-collar' worker, the 'blue-collar' worker, the labourer, the typist, and the housewife alike. Back pain will affect 80% of us at some time in our lives. The spine is our physical support and closely related to our 'standing' in life, our attitudes (rigid or flexible) and our sense of security and belonging, especially to our sense of responsibility (supporting others) and to our sense of being supported, whether by family, colleagues or employees.

The spine consists of bones (the vertebral bodies), separated by the 'shock-absorbers' – the vertebral discs. The vertebrae are also connected by joints behind and supported and held in position by muscles and ligaments. In a healthy spine, all the parts function as a unit. Each vertebrae being able to tilt forward and back, and also rotate in either direction on the one immediately above and below. The spine also contains and protects the spinal cord the main nerve highway of the body, supplying connections from the brain to the whole body; these enable us to move, to feel pain, pleasure, temperature and touch, and enable the working of the body and all its different organs to be controlled and co-ordinated.

The efficient functioning of the spine is hindered by:

- a) Poor posture, often related to chronic stress, whether mental, emotional or physical, and also to depression.
- b) Damaged spinal muscles or ligaments, resulting in imbalance of the spine through muscle spasm. This is more likely to occur in a person who is nervous, tense, fatigued or depressed and most likely to make movements that catch the body unprepared, with resulting injury.
- c) Pressure on nerve roots by a prolapsed disc (sciatica) or by swelling in the tissues from inflammation due to injury.

### **Hydrotherapy can help in the following ways:-**

- 1) Preventative** By generally reducing the effects of stress, tension and fatigue and toning the spinal muscles, the risk of injury is lessened.
- 2) Curative** By acting locally on injury tissues, lessening inflammation and oedema and diminishing reflex muscle spasm, it helps reduce pain. By improving the blood supply, repair and healing is accelerated. By eliminating the effect of gravity, pressure is removed from the disc and joints and stress on the supporting muscles and ligaments is lessened. (Cold water is helpful with inflamed, tender

tissues, and warm water with injuries with swelling or accumulation of tissue fluids, and with painful spasm).

**Back pain (Upper)**

Treat upper points as in Fig 2b, point M, (Fig 10) and other tender points. Warm low/medium pressure. Shoulders, back and foot jets.

**Back pain (middle)**

Treat local points (Fig 2).

**Back pain (lower) (lumbago)**

Treat local points (Fig 2), E and M (Figs 9 and 10) full set of jets. Particularly lower back, hip, thigh and foot jets.

**Colic (Flatulence)**

Excess gas, abdominal distension/discomfort, caused in the main by diet (e.g. eating fruit with other foods that take longer to digest will cause the fruit to ferment in the gut). Medium pressure, hot water jets applied locally while massaging the abdomen with the palm of the hand in a clockwise direction, can relieve the pain and discomfort of colic. It will also improve peristaltic action thereby relieving constipation. Try rolling onto side, using thigh jets for maximum effect.

**Constipation**

As for colic use massage points N & O) (Fig 8).

**Cramps**

As for general relaxation. Treat muscles directly with warm low/medium pressure. Cramp is a painful muscle spasm which results from excessive contraction of the muscle fibres and usually occurs during or after exercise, due to a build up of lactic acid in the muscles. The jets will gently massage the affected part, relieving the cramp by stimulating blood circulation and flushing out lactic acid. It also prevents the muscles becoming stiff later. Commonly, calves and thigh jets can be useful here.

**Degenerative Joint disease**

(see Osteo-arthritis)

**Elbow ('tennis')**

Tepid –warm. Medium pressure to local points (Figs 3, 4 & 5). Shoulders and back jets together with foot jets directed at the outer edge of the feet.

<b>Computer Keyboard Symptoms</b>	Head and chin tend to 'jut' forward leading to compression of the joints and structures of the neck, in turn hindering efficient circulation and nerve conduction in the arms. Shoulder and upper back jets are crucial to ease these symptoms. Lower arms suffer from static muscle contraction and Hydrotherapy will assist lymphatic drainage in this area, thereby reducing congestion in tendons and muscles and decreasing the possibility of inflammation. See Figs. 3 & 4 – Interosseous Membrane.
<b>Energy/ Exhaustion</b>	See Post Viral Fatigue Syndrome and Immune System as for general relaxation. Also point out N on both limbs (Fig 8) which is helpful in increasing levels of energy. Try foot jets directed at Solar Plexus, Head and Spine Reflexes.
<b>Fatigue</b>	(see Tiredness).
<b>Fibrositis (fibromyalgia)</b>	As for general relaxation. Treat local tender points. Warm medium pressure. Full set of jets giving total body coverage.
<b>Gout</b>	Cold-cool. Low pressure – helps reduce the heat and pain
<b>Headaches</b>	As for general relaxation and treat neck points (Fig 1). Use shoulder, back and foot jets; see Reflexology chart for neck and head reflex points.
<b>High blood pressure</b>	(as for Parkinson's Disease). The regular massage from the hydrotherapy jets will reduce stress. Massage points N (Fig 8), K3 (Fig 10a) and P6 (Fig 12). Remember heat reduces blood pressure, and cold raises blood pressure, always finish by reducing the temperature of the water to reduce the possibility of fainting, Wrap up warm and allow yourself recovery time before (non-competitive) exercise. Shoulder, back, hips, calves and foot jets are recommended.
<b>Hip pain</b>	Treat local points A, B, C and D (Fig 6, 2 & 7). Shoulder, hip and ankle jets, and see Reflex Shoulder cross reflex.

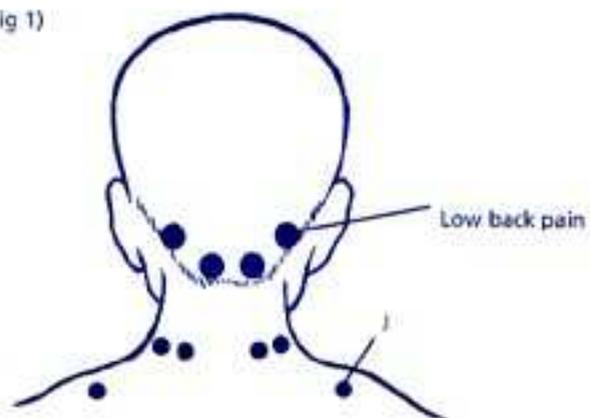
<b>Immune System</b>	Alternating hot and cold water can have the effect of boosting the immune system. The blood responds to alternate temperatures by moving away from the body's exterior (cold) and from deeper tissues (hot). This keeps the circulation 'bouncing' and will increase (temporarily) the white blood cell count which help the body's disease fighting mechanism. To achieve this effect with your hydrotherapy system start with a temperature of 40°-43°C and after 10-15 mins, steadily decrease the temperature using the medium to high jets. Use shoulder, back, hip and foot jets.
<b>Insomnia</b>	As for general relaxation. Treat local causes of pain if a factor. Full set of jest, especially foot jets.
<b>Involuntary muscle spasm</b>	This can manifest in a number of ways. Most commonly as:- Cramp (in the limbs), Colic (in the stomach/bowel) and Angina Pectoris (in the heart). It is important to have a doctor to identify the area of concern before advising on hydrotherapy treatment.
<b>Joints</b>	See Arthritis or sprains.
<b>Knee pain (Chronic)</b>	Treat local points E (Fig 9) and anterior knee points (Fig 8). Use foot jets directed at outer edge of foot.
<b>Ligaments Sprains/tears (mild-moderate)</b>	Start with cool water, work up to warm. Keep affected area as close to jet as possible. Good for wrist, ankle, hand and finger strains. Medium to high pressure, but avoid latter if sprain severe. Cold water jets (after plaster is removed). Use foot jets directed at outer edge of foot.
<b>Lumbago</b>	See low back pain. Use hip and foot jets. See reflex chart and direct foot jets at lumbar area of feet.
<b>Migraines</b>	As for general relaxation treat neck points, J (Figs 1, 2 and 6) and L (Fig 7). Use warm water. Foot jets directed at head, neck and shoulder reflexes.
<b>Muscles</b>	Tense, painful or injured muscles will also be respond to warmth, plus massage jets applied locally to tender points. Generally shoulder, back, thighs, calves and foot jets.

<b>Myalgic Encephalomyelitis (ME)</b>	See Immune System and Post Viral Fatigue Syndrome.
<b>Neck</b>	(see page 8).
<b>Nerves</b>	(see Anxiety).
<b>Nodules</b>	(see Fibrositis).
<b>Neuroma</b>	Exquisitely tender, gritty nodules in ligaments (especially round joints). Prolonged cool, high pressure until discomfort eases.
<b>Osteo-arthritis</b>	(see under Arthritis).
<b>Pain relief</b>	Use warm string pressure for cramped, tense and fibrositic muscles (especially shoulders and neck J). See reflexology chart, as foot jets can be especially beneficial here. Use tepid-warm, low or medium pressure for long-term aches and pains, e.g. in osteoarthritis of knees, hips and hands.
<b>Parkinson's Disease</b>	If taking medication, blood pressure may be reduced by the medication; therefore the water should not be so hot as to reduce it even further. A temperature of 37°-38°C will be high enough. Gradually reduce the temperature of the water with low to medium pressure jets before getting out. Take it easy by spending 10 minutes in the beginning and gradually increase the time spent in the bath to 20 minutes. Try reflexology, directing the jets to work on the head and spine reflexes (a foot map is located at the back of the A-Z of Hydrotherapy) together with shoulder, back and hip jets.
<b>Post Viral Fatigue Syndrome</b>	(see Immune System). Use full set of jets.
<b>Pregnancy Ante-natal</b>	A hydrotherapy system is ideal for the typical backache of pregnancy, but avoid hot water. Shoulder, back, hip, thigh and foot jets (see reflex chart).
<b>Post-natal</b>	This support action of water and the massager jets, aid the re-toning of lax abdominal muscles. Thigh jets can be used while lying on side.

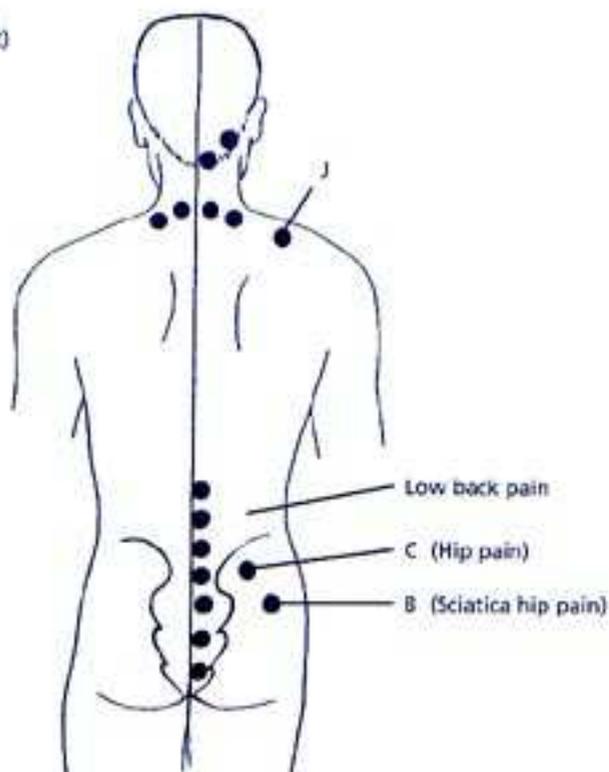
<b>Relaxation</b>	Warm/gentle pressure – 15 minutes minimum. The buoyancy effect of the water allows muscles to relax. The warm massage action soothes the nervous system and the body responds deeply to being immersed in this comforting environment. Full set of jets giving total body coverage especially foot jets.
<b>Rheumatoid arthritis</b>	(see Arthritis/Aches and Pains).
<b>Sciatica</b>	Treat local points low back, A (Fig 6) and E (Fig 9) warm gentle pressure. Recommended jets are hip, thigh and foot jets directed at heel and outer ankle.
<b>Shoulder/neck</b> (see page 8)	Treat neck joints, J (Fig 1, 2 and 6) and P (Fig 3). Note that in many shoulder and neck problems, particularly when we are ‘shouldering’ too many burdens or responsibilities, tender points can often be found along the upper spine, or just inside the inner edge of the shoulder blade, Fig 2(b). A ‘frozen shoulder’ where movement of the joint is stiff and painful will often respond to treatment of points Q and R (Fig 2c) and P (Fig 3), and K1 and K2 (Fig. 2b). Pain over the upper part and back of the shoulder blade can be improved by treating the points in Fig 2 (c) and S, (Figs 11 and 12 just above the knuckle of the little finger, on the edge of the hand); warm except where the tissue swelling is apparent in acute injury, then use cold/gentle. Reinforce the above tips by using foot jets directed at reflex points (see reflexology chart).
<b>Sinuses</b>	High/medium jets aimed at all the toes of both feet, will help clear sinuses and the symptoms of head colds (for a more potent effect aim jets at web of fingers too).
<b>Skin</b>	Skin tone improved by relaxing effect of warm water which increases blood supply, followed by the stimulating effect of cold. See cleansing the system. Under Positive Changes your Body goes through with Customised jets.

<b>Spasticity</b>	(Muscle Rigidity) usually treated with physiotherapy, however, may also be helped by the warmth of the water and the massaging action of the jets (under supervision). Use warm, low/medium pressure to start, building up to tolerance over a period of two to three weeks. The positioning of the jets will play a big factor in the success of the treatment, especially for Torticollis (wryneck). Use shoulder and back jets with foot jets on neck and shoulder reflexes (see reflexology chart) together with ankle jets which will work on the cross reflex for maximum effect.
<b>Stiffness</b>	As for general and local muscle relaxation.
<b>Stomach/Colitis</b>	As for colic use massage points N and O (Fig 8).
<b>Stress</b>	See Improved Mobility (Positive Changes your Body Goes Through).
<b>Tiredness (chronic)</b>	As in Relaxation. To revitalise flagging energy for short periods only use warm/medium pressure followed by cold/strong pressure. Full set of jets especially shoulder, back and foot jets.
<b>Toothache (chronic)</b>	Consult your dentist. To ease the pain, massage points D (Fig 7) for upper jaw pain, and K (Fig 11), for lower jaw pain. See reflexology chart and direct floor jets beneath all toes of both feet.
<b>Vulnerability to viruses</b>	Can be reduced by easing tension in the body and stress in the mind – warm/gentle. See body/mind effects and Immune System.
<b>Wrist</b>	Treat local points.
<b>X</b>	For Xtra powerful, massaging jets.
<b>Y</b>	Y not install a hydrotherapy system, you deserve it!
<b>Z</b>	For Zest; after Y, you'll have much more of it. Also for zzzz – a regular good night's sleep!

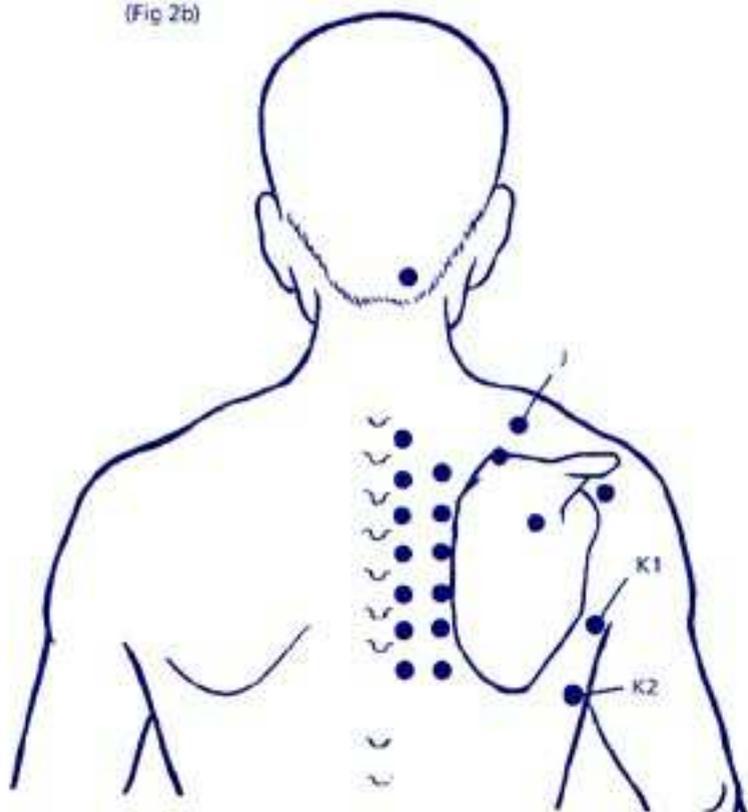
(Fig 1)



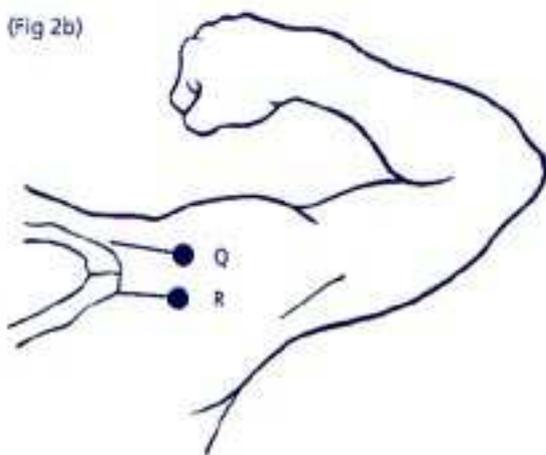
(Fig 2)

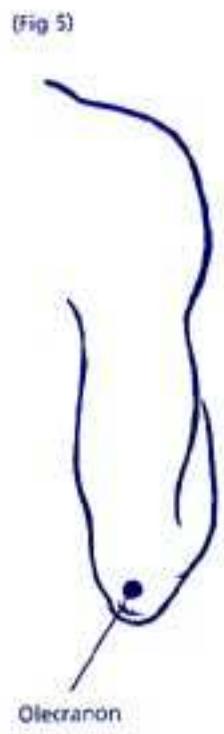
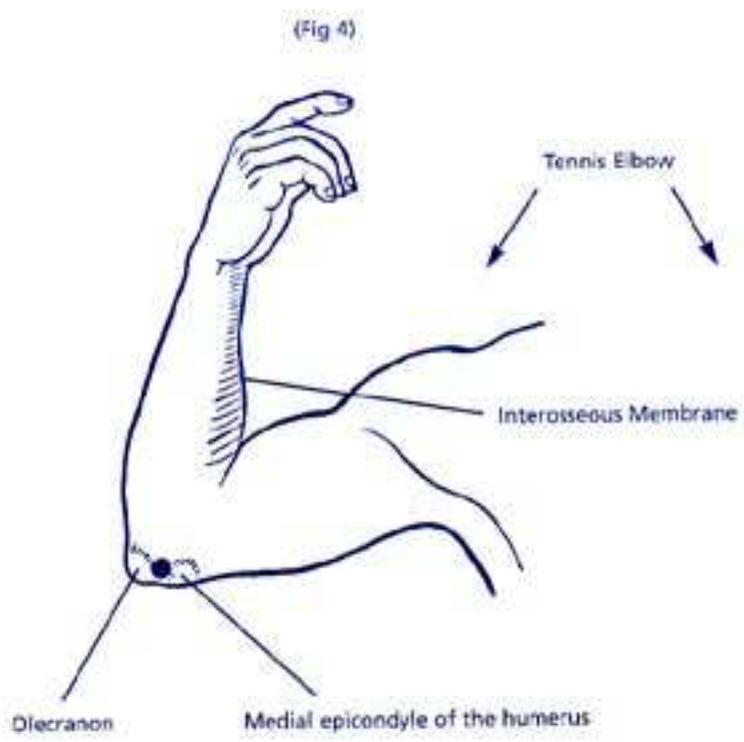
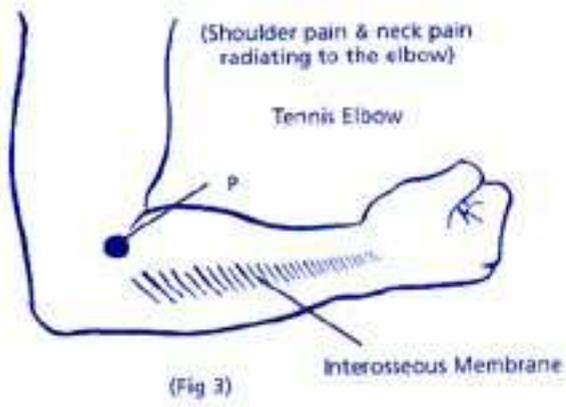


(Fig 2b)

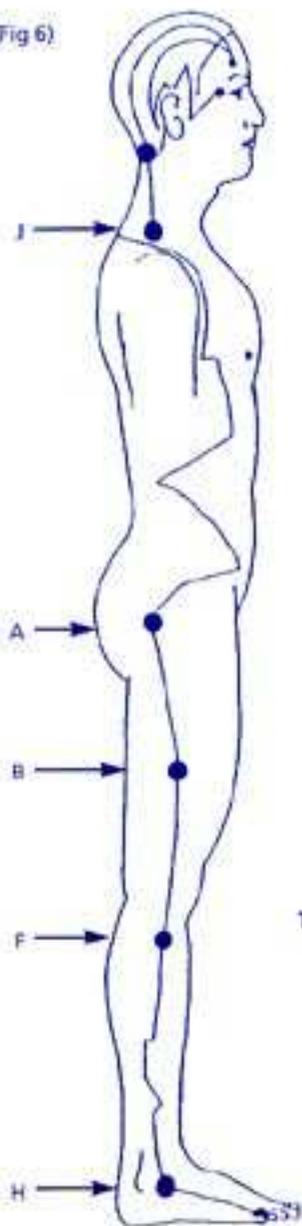


(Fig 2b)

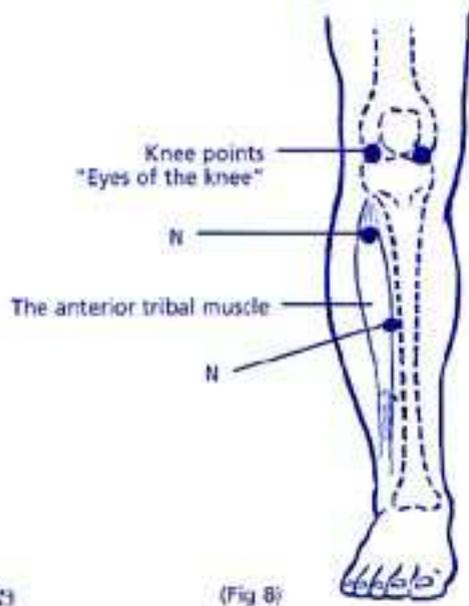
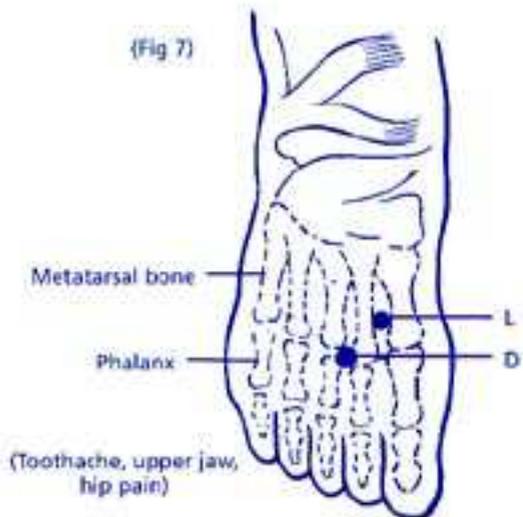


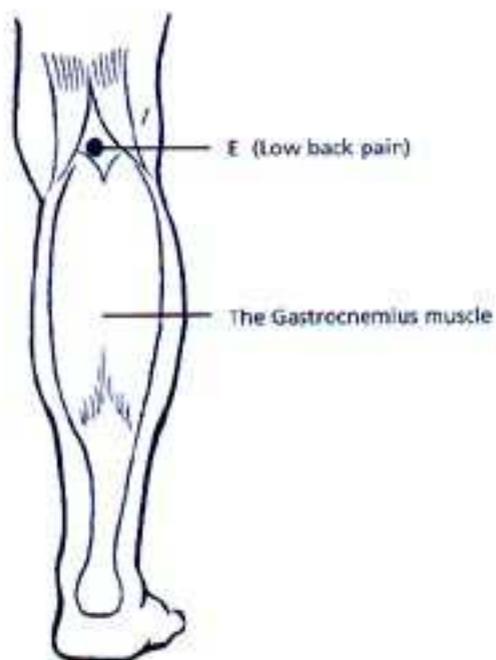


(Fig 6)

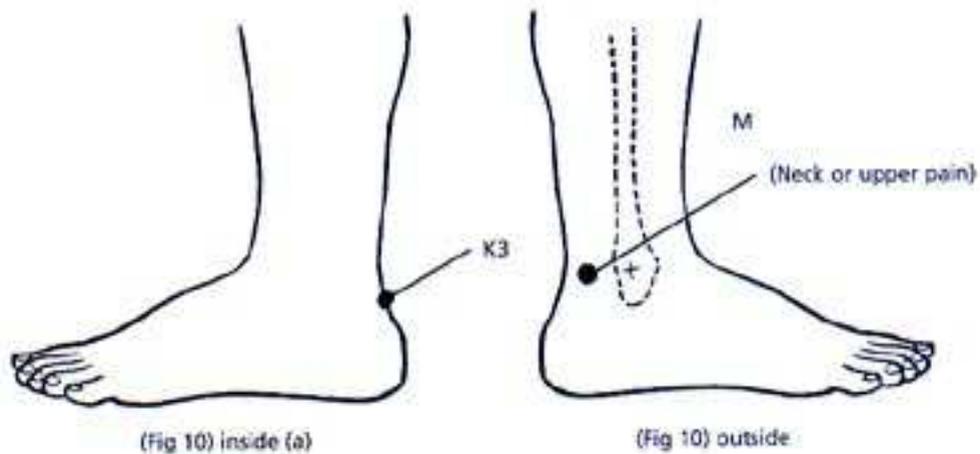


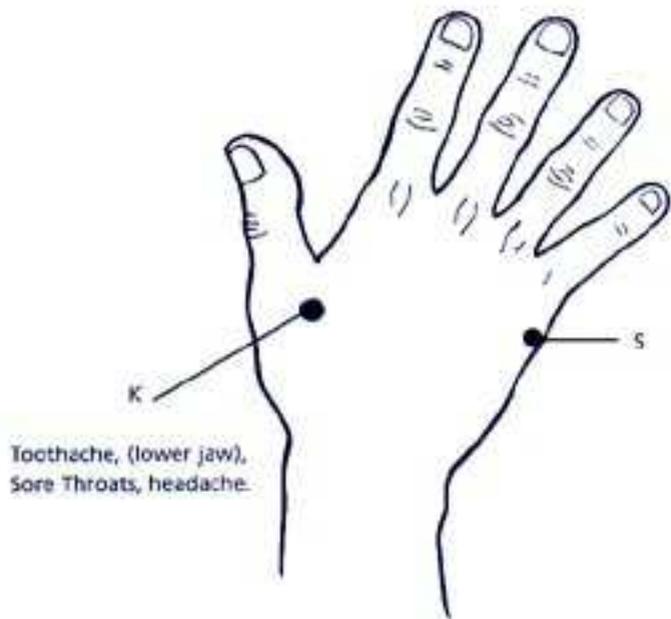
(Fig 7)



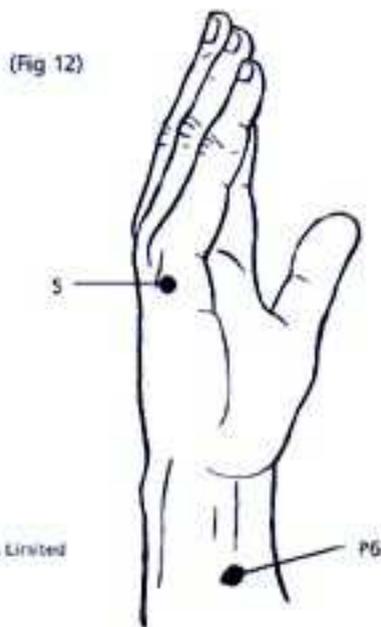


(Fig 9)



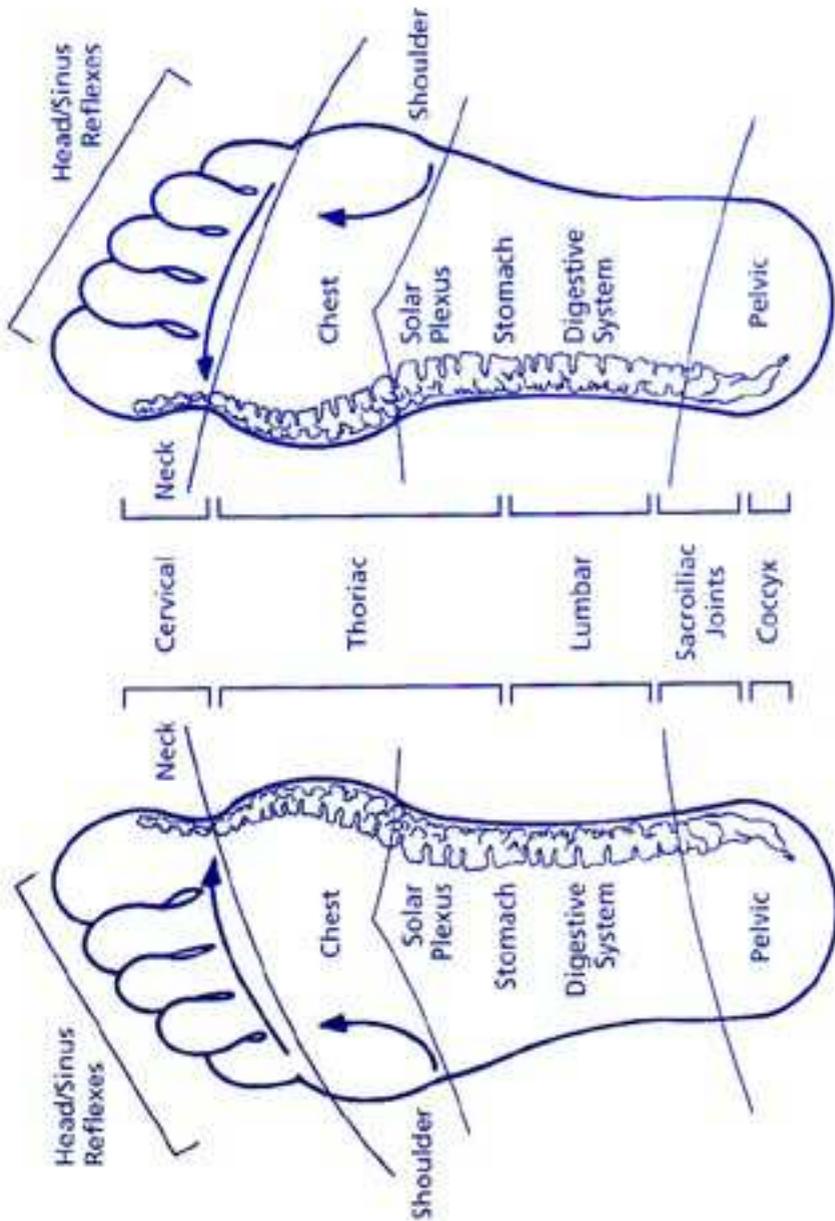


(Fig 11)



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# Reflexology Chart



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# Hydrotherapy – A Seasonal Guide

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## **Spring**

After the winter let hydrotherapy help you get back into shape. It will help you fight the flab, tone up your muscles, soothe away stiffness and invigorate you. Hydrotherapy will also help you recover from the effects of increased activity brought on by warmer days and lighter evenings. Use hydrotherapy to ease back pain from gardening, muscle strains from vigorous exercise and inflammation of joints from over-use. It will also help provide relief from lumbago.

## **Summer**

Hydrotherapy is perfect for warming up, and in preparation for sporting activities, maintenance of muscle tone and suppleness, and for easing bruising and sporting injuries.

## **Autumn**

As the weather turns cold and damp, hydrotherapy will help with those seasonal aches and pains, muscular rheumatism and arthritis in the joints. It will also help improve circulation.

## **Winter**

Hydrotherapy offers a wonderful way to relax at the end of a cold grey winter's day, as well as helping skin tone and soothing arthritic joints.

After all this, remember that hydrotherapy boosts the morale and is great fun.