Herbal Treatment for the Muscular and Skeletal System

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Introduction

Joints are and are not parts of the body. They cooperate through opposition and make a harmony of separate forces.
——— Herakleitos the Dark (c. 500 BCE)

It is not often recognized how profoundly herbal medicine can impact and treat problems of the muscular and skeletal systems. I often find that clients omit muscular and skeletal conditions when providing their case history, thinking that herbs would be of little use here. For this reason I always enquire about neuromuscular and skeletal conditions. In my practice as an herbalist, extending over twenty five years and involving over ten thousand clients, I have helped thousands of people suffering from scores of different muscular and skeletal problems. One of my earliest and best students, now a full time herbalist in her own right, Lise Wolff (AHG), of Minneapolis, also has wide ranging experience in this field. When she was an apprentice I gave Lise demonstration of the potency of herbs in this area; now she teaches me by sharing her expanding knowledge. Much of what I taught her she has verified in practice, adding to my security in teaching readers how to treat themselves.

Herbal treatment of muscular and skeletal problems can be found in the most ancient sources. Unfortunately, much of our knowledge of traditional herb uses in this field is constrained by the limitations of old medical terminology. The oldest sources often just use one word such as 'rheumatism' or 'gout' to describe virtually all muscular and skeletal conditions other than acute injuries. These terms are often applied to internal diseases. Thus, Hildegard von Bingen used the German folk medical term *vergichtige* (gouty) to describe any conditions she thought of as due to hardening processes. Medical terminology has also evolved so that the word 'rheumatism' was first subdivided into 'arthritis' (articular disease) and 'fibro-myalgia' (muscular pain). Arthritis is now divided into many different species, while fibro-myalgia remains very poorly defined. When asked if I have ever treated the latter I like to respond, "you mean the twenty five different kinds of fibro-myalgia?"

Even in modern biomedicine, the definition of muscular and skeletal conditions leaves much to be desired. We have a combination of too much detail and not enough. Pathological categories are based on microscopic lesions rather than an understanding of the natural history, development, and nature of the disturbance. Thus we have numerous differentiations of arthritis and hardly any differentiations of fibro-myalgia.

Sometimes the ability to use herbs to treat conditions effectively is merely a matter of imagination. If one is not aware that plant medicines can impact muscles, tendons, ligaments, connective tissue, autoimmune inflammation, joints, cerebrospinal fluid, synovial fluids, and the interstitial fluids the lubricate the muscles and tendons, then one cannot imagine that they are truly effective when these tissues are disordered by injury and disease. But herbs can impact all these tissues and therefore their healing powers in this area are profound.

Conventional medicine does not imagine importance of different kinds of injuries and aging factors in the formation of fibro-myalgia. It does not, in fact, believe that the injured body can heal itself. Therefore, it seeks only suppression and replacement.

Thus, in order to treat and cure muscular and skeletal conditions we must first realize that this is possible. Second, we must generate a language to define such conditions which is amenable to use with herbal remedies.

Homeopathic remedies are often used to treat muscular and skeletal problems based primarily symptoms. An admirable and useful system for the treatment of these conditions has thus been evolved. Indeed, my own confidence with herbs came from my initial positive experiences in this field with homeopathic remedies such as Arnica, Bryonia, Hypericum, Rhus tox., Ruta, and Symphytum. Readers interested in an excellent coverage of this topic are recommended to read Paul Herschu's *Homeopathic Treatment of Muscular and Skeletal Conditions* ( ).

Homeopathy brings us further along the conceptual and terminological path than biomedicine by defining very basic organ-affinities of the various remedies and symptoms leading to their exhibition. For instance, Arnica is for strains, sprains, bruises, and muscular injuries, Bryonia is especially useful for inflammatory conditions of the bursa and other lubricating surfaces, Hypericum is for nerve injuries, Rhus tox. (poison ivy) is for simple arthritic pain worse from overuse but better from slow limbering up, and Symphytum is for broken and injured bones.

Anyone who has attempted to treat muscular and skeletal conditions with homeopathic remedies has long ago found – unless they are brainwashed homeopathic fanatics – that the top thirty or fifty remedies will not touch a great majority of such conditions. There are glaring holes in the homeopathic materia medica. For instance, A. K. Bhattacharya, an Indian homeopath who treated tens of thousands of clients at his free clinic, says, "in the treatment of over forty thousand asthmatics at Baroda it was found that homeopathy was not sufficient in the majority of cases." Bhattacharya had to use traditional Ayurvedic herbal remedies to get better results. So, we cannot rely only on homeopathy for the medicinal treatment of muscular/skeletal problems.

In order to treat these conditions with herbs we need to improve on cconceptual framework and terminology. After those twenty five plus years of experience I have found that the best approach to this field is to define conditions and herbs by anatomical structure. Herbs have strong organ-affinities. Thus, the following fluids, tissues, and structures, with the herb affinities, should be carefully understood:

Fluids

Cerebrospinal fluid. Black Cohosh, Pulsatilla.
Synovial fluid. Bryonia, pleurisy root, comfrey.
Interstitial fluid. Gravel root, boneset, mullein.
Blood, blood vessels (bruises).
Lymph.

Tissues

Nerves. St. John's wort, prickly ash.

Muscles.
Bones. Boneset, comfrey, mullein, rue.
Cartilage.
Tendons and Ligaments.

Compound Structures
Brain.
Spine.
Joints.

Thus, a working knowledge of the physiological principles of the muscular and skeletal system is needed in which we understand the causes of inflammation, pain, and debility, so that these (rather than their effects) can be removed. Adherance to holistic principles requires an entirely different view of physiology and pathology.

In order to successfully treat muscular and skeletal problems with plant medicines we need to have a clear understanding of the different tissues involved, how they work and what can happen to them. We also need to understand that certain parts are analogous to others, even when they have been artificially separated in biomedicine. Finally we need to know which herbs do what.

Fluids, Tissues, and Structures of the Muscular and Skeletal System

The muscular and skeletal system has been constructed to support and move the body. It develops out of the *mesoderm*, or middle layer of the fetal organism. From the initial connective tissue cells develop cartilage, bone, tendons, and muscles. This should teach us about the underlying unity behind muscular and skeletal disturbances. Whether we are dealing with arthritis (inflammation of the joints), rheumatoid arthritis (connective tissue autoimmune disease), gout (deposition of uric acid), fibromyalgia (pain of the muscle fibers), rheumatism (the old fashioned name for muscular and skeletal aches and pains in general), osteoporosis, broken bones, or tendonitis, we should be aware of a continuity in origin and possible treatment strategy. All too often, this background unity is lost in the modern era of specialization.

The tissues arising from connective tissue are supplemented by those of other origin: nerves, synovial membranes, and various fluids. They interact so closely with connective tissue that their special diseases often interact with the connective tissues and demand the same remedies.

Although we should be aware of the background unity of the muscular and skeletal system, we also need to understand and recognize the individual parts. Sometimes we need to tailor treatment to a particular structure. Often a remedy will have an affinity to a particular area or part that is quite remarkable. For instance, osmunda *(Osmunda regalis)* has such an affinity to the lower back that it is sometimes called 'lumbago brake.' So reliable is this affinity that I have cured life long lumbago with this remedy alone, yet this valuable remedy often disappoints us when applied to adjacent areas that one would think might respond well to it.

In still other instances we need to attend to a complex structure made up of many parts, like the knee. We almost always have to consider the treatment of several different kinds of tissues or structures within such a complex. This often requires the use of more than one remedy. I started my practice on the homeopathic ideal – one remedy at a time – but long ago learned from experience that it is necessary to work synergistically on several tissues and structures at once in order to get results in muscular and skeletal conditions. The treatment of a single part of the complex will not do, since the whole problem depends on steady improvement in all parts.

Where should we start our account of this system? After years of experience treating muscular and skeletal problems I would start with the fluids that bathe the components of the neuromuscular and muscular/skeletal systems. Many connective tissue structures lack a direct blood flow. Water and food is brought into them through serous fluid. Allied fluids, the synovial, and the cerebrospinal, also lubricate and sooth parts of these systems.

Synovial fluid. When the blood reaches the capillaries, in the exterior parts of the blood, the larger cells (red, while, platelet) are retained, while fluids, oxygen, and food are pushed out of the capillary wall into the interior of the body. The cartilage, one of the main connective tissue structures, does not have its own blood supply, but relies upon this influx of blood plasma for feeding and waste removal. New food, replacement parts, oxygen, and water are brought in, while old junk is flushed out. We can sometimes feel what happens when junk builds up in a joint – it gives a pain or sensation like 'dirt in the joint.'

Cartilaginous materials form joints as different structures intersect. In order to maintain lubrication, they are lined by self-enclosed mucous membranes than form cavities. These, with other cavities in the body like the pericardium and the pleura are called synovial membranes. They contain fluids that lubricate them, the synovial fluids. These are comprised of the purified blood plasma seeping into the cartilage or mucosa.

There are a number of ways in which the fluids in the joints can be influenced towards health. In my experience, the major remedy that moves the synovial fluid into the synovial membranes, whether it be in the pleura, pericardium or bursa of the joints, is *Asclepias tuberosa* (pleurisy root). This simple member of the milkweed family, native to sandy plains in the eastern United States, has long been used in folk medicine as a remedy for pleurisy and bursitis. If the pleura are dried out and adhere we have sharp pains in the lungs, if the bursa are dried out we get heat, swelling, redness and pain on movement in the joints. The primary remedy for acute bursitis is homeopathic *Bryonia,* but the great remedy for lubricating the joints in chronic cases is *Asclepias.*

Another remedy of great importance in the treatment of joint problems is *Symphytum officinale* (comfrey). We are all aware of the enormous healing power of comfrey, often exerted through the constitutent *allantoin,* which stimulates cell growth. However, comfrey is also a drawing agent. When applied to the bones, it draws the fluids through the joints to improve feeding and waste removal, while also stimulating cell growth. Comfrey is both a mucilage (moistening, nourishing) and an astringent (pulling, puckering). Thus, in external applications comfrey can feed, cleanse, and move the connective tissue fluids to repair joint damage, broken bones, malnourished, dried out tissue, and carpal tunnel syndrome. I remember listening to one case history presented at an herb conference, where comfrey poultice drew blood out of the wrist. The herbalist and her patient (it was her mother) rightly went to the hospital and found that the bone was broken.

Serous fluid. The structures which move the joint – muscles, tendons, bones – surround the cartilaginous and synovial structures. They receive their own blood supply and are therefore bathed in the serous fluid that seeps out of the capillaries to become the interstitial fluids. This acts as their lubricant.

The limitations of modern biomedicine and science are demonstrated in the fact that this fluid is, when it is between the muscles, tendons, and joints, *unnamed.* Yet, from a holistic standpoint, it is the basis of health and treatment. In order to properly treat muscular and skeletal problems we need to keep such mechanical pictures in mind as we examine sick joints and structures. Is there enough blood? Enough nutrition, water, lubrication? Too much, or stagnation?

I remember the first time I observed this nameless fluid in action. I was called to help a horse down with laminitis – inflammation of the lamina or hoof. The lamina swells, causing a circular bone in the foot called the "coffin bone" to turn over. The horse is lamed and usually put down. Unfortunately, I was not able to cure the laminitis, but while examining the bottom of the manure-coated hoof I sprinkled half a dropper of mullein on the surface. My assistant and I were shocked to see an immediate surge of fluid out from around the coffin bone – one or two droppers worth. We then watched the tendon jerk on the coffin bone, trying to get it to go back into place, but blocked by the swollen lamina.

This curious event explained other experiences I had, where it seemed as if there was a fluid that traveled along the bones, tendons and muscles, causing them to glide more smoothly across one another or go back into place after having been dislocated or broken.

In my experience, the great remedy for stiff muscles and joints due apparently to the drying out of the serous fluid is gravel root. This great remedy balances the fluids in the kidneys (solid/water), and in the peritoneal membranes, and in the capillaries where the serum flows out into the interstitial fluids. In acute stiffness *Bryonia* is beneficial.

In fever the serous fluids are sometimes dried out as the body grabs any water it can and sends it to the most important places in the body, such as the brain and nervous system. This can cause dryness and inflammation, with sharp pains, in the joints. General wasting and malnourishment of the body also can cause loss of this important fluid. This is more likely to occur in old age, when tissue feeding and lubrication are compromised. In order to keep the muscular and skeletal system healthy we need to start by maintaining this fluid.

Sometimes we have the opposite condition to the above, where too much fluid flows into the joint or out of the joint into the surrounding tissues. This can be from an active cause – too much blood engorging the capillaries during fever – or a passive one – kidney and lymphatic stagnation backing fluids up into the joints. This causes an achy pain, worse in cold and damp weather, whereas a lack of fluid tends to cause sharp pains worse from heat.

The Greek word for dampness is *rheuma,* so the ancient term for dampness and pain in the joints was rheumatism. Because of the folk medical origins of this word, and because it does not distinguish between joint and muscle, modern biomedicine has thrown this word out. Instead, the words arthritis or fibromyalgia are used to designate inflammation of the joint or muscle fiber. The emphasis is placed on inflammation rather than fluid. However, very often the problem originates in the fluid, which

then gives rise to inflammation. This is why so many people experience rheumatic pains when the weather is cold and damp.

One of the best known remedies for joint pain in homeopathy is *Rhus toxicodendron,* or homeopathic poison ivy. This is used in rheumatic pains that are worse after inactivity, better from slow limbering up and warmth, and worse from overuse, cold and damp. *Rhus tox.* is particularly useful for pains in the knees and lower back. It cures the 'dirt' build up in inactive joints, but it is not well suited to deep, destructive processes and changes in the joints. Hence, it is of little value in serious arthritis.

Because the pains of *Bryonia* are worse from movement (due to dryness of the synovial and serous fluids), while the pains of *Rhus tox.* are better from movement (due to the warming, dispersing effects), these two remedies are contrasted and sometimes used one after another to assist a joint. A good homeopathic potency for each of these is the 12x.

Rhus tox. is not used in herbalism because it is toxic (the common name is poison ivy). Instead we use its nontoxic cousin sumach *(Rhus typhina, R. aromatica, R. coriara).* This remedy is an astringent, which means that it binds and controls excessive fluids, or the loss of fluids through membranes. Sumach is most beneficial when there are lower back pains and knee pains, like *Rhus tox.* Another astringent which is sometimes effective in lower back and knee pain is white pond lily *(Nymphaea odorata).*

A particularly valuable astringent for the joints, bones, and connective tissue is white oak bark *(Quercus alba).* This is one of the main ingredients in Dr. Christopher's bone, flesh, and cartilage formula. I didn't used to understand why he used this medicinal plant in this formula until I came to appreciate it more fully. Oak bark is very building to bone. It also moves congested blood, which is a problem when a joint has been injured (see below).

The full bone, flesh, and cartilage formula pioneered by Dr. Christopher includes oak bark and comfrey, which is regenerative to joints and tissues, mullein, which helps the fluids move down the tendons and muscles, wormwood, which is nourishing and breaks up scar tissue in the connective tissue, and black walnut, which is a major remedy for fibromyalgia. This is a wonderful remedy for general treatment of joint and connective tissue trauma.

Cerebrospinal fluid. The myelin sheath surrounding the nerves contains cerebrospinal fluid (CFS), which surrounds and baths the nerve. The CFS is most abundant in the brain and spine, where nerves are most numerous. It is a purified product of the blood, strained out in the ventricles, or cavities of the brain, and pumped throughout the nervous system to coat, soothe, and protect neurons. Ironically, the only nerves in the body which do not have their own coating of CFS are in the brain, where nervous tissue is so packed together that it has to share CFS. The entire brain is surrounded by the meninges, which contain CFS. It slowly descends down the spine, bathing the nerves there and is pumped out

along all the nerve sheaths to the periphery, where it is reabsorbed into the bloodstream. It has its own beat, independent of the blood.

A friend of mine working as a lab tech used to take spinal taps. She said the CFS was the most beautiful substance in the body, and that it shimmered like starlight. The medieval physicians believed that the soul resided in the ventricles. I believe, from personal experience with clients and myself, that the CFS is the physical vehicle of the soul. If it gets congested or bunched up, a darkness and brooding falls over the soul. Or conversely, a bound-up, brooding state of the soul can congest the CFS.

There is a point of tension where the CFS flows out of the cranium and brain into the spine and so to the body. CFS will often bunch up here and skillful chiropracters and massage therapists work on this area to get the fluid moving. Benjamin Palmer, the founder of chiropractic, was far more than a 'bone-cracker.' He worked almost entirely on the atlas, the pivotal vertebra at the top of the spine, upon which rests the cranium. He taught manipulation of the atlas *in order to help the soul incarnate more deeply into the body.* Another form of chiropractic is "Network," developed by Donald Epstein. This manipulates the CFS throughout the body by touching points to release congested CFS. When I had Network performed on me – the chiropracter held and released a single point in the area of the atlas, as it happened – I felt a wave go through my body as if a stone had been dropped in a quiet pond and radiated in waves from that point (which was where the chiropracter held her finger) outward through my whole body. This demonstrated to me that the CFS is integrated like a pond. Although it is pumped from brain to periphery and nerve messages appear to move up and down nerve tracts, the CFS acts like a quiet pond, emanating an impulse equally in all directions.

The remedy which has the greatest affinity for cerebrospinal fluid is *Cimicifuga* (black cohosh). It is an excellent remedy for "bunching up of cerebrospinal fluid," or in other words, congestion of the fluid associated with muscular injury. It is especially indicated in whiplash. *Cimicifuga* is important both for congestion and stiffness and spasm and chorea.

In order to effectively treat any complex problem it is necessary to know the anatomical situation and pathophysiology in fair detail. Oftentimes we don't know, or have to guess, or make wrong assumptions.

Synovial membrane. If the synovial membrane surrounding the fluid is torn, the fluid will leak out. This happens in when there are torn discs in the spine, a torn miniscus in the knee or a torn bursa in another joint. I have seen membranes in all of these joints torn and cured with *Hydrastis canadensis,* or goldenseal. This plant has a well established reputation for sealing tears, as the name indicates. Dr. Christopher used to pour the powdered root into the cut to stop the bleeding and close the wound. This only works if the wound is not infected or full of dirt. Weakness of discs and bursa often indicate goldenseal as a general nutritional tonic for the system, but it also treats the tear from sudden injury. The parts must not be inflamed for them to reseal.

Cartilage. The next tissue we encounter as we move outside the synovial membrane is the cartilage. Joints contain cartilaginous parts in order to provide structure, flexibility and cushioning. It is a pliable material that can bend, but still retains a pretty fixed shape. Along with bone and tendon, it is made from connective tissue, one of the four basic tissue types in the body, so there is some relationship between also these structures and what is good for one is sometimes good for the other.

The experience of holistic practitioners indicates that connective tissue and cartilage in particular requires the element silicon in order to maintain its flexibility and strength. See, for example, Bernard Jensen's discussion of silicon in *The Chemistry of Man.* Compare this with the homeopathic profile of silica, showing weakness of the connective tissue, i.e., hair, skin, nails and joints.

The first remedy we think of when there is weakness in the cartilage with lack of flexibility, irritation and even inflammation, is horsetail *(Equisetum)*, a plant rich in silicon. Some herbalists will say that horsetail, while it contains 35% silicon, cannot possibly provide any of this element to the body because silicon is not taken up except in complex biological molecules. In truth, we do not get anything from the 99.99% of silicon found in horsetail, it is the 0.01% or less that is in an organic form, in the fluids of the plant, preserved when dried or in alcohol, that is active. Horsetail teaches the body how to take up silicon. It really does not matter how much it provides itself. Many of us herbalists have seen it correct connective tissue weaknesses in dozens of cases, so this is a question mark only in the minds of theorists.

When silicon is low the skin, mucosa, hair, nails, cartilage, tendons and bone may be weak – some of all. Skin easily scars, mucosa is oversensitive and allergic, hair is thin and weak (plenty of split-ends) and joints are easily injured or inflamed. Another plant which sometimes works instead of horsetail is milky oat seed *(Avena sativa).* It is also blessed with a high silicon content.

Tendons and Ligaments. These tissues are essentially identical, the difference being that tendons attach to bones at one end and muscles at the other, while ligaments attach to the bones at both ends. The reader will, therefore, pardon us if we refer to only one when we mean both. These fibers arise out of the connective tissue and are therefore closely related to the cartilage and bone. With time and age they are often subject to hardening, stiffening, dehydration, and loosening. When the dried tendon is stretched too hard it fails to retract back to its original size. Thus, most of our concerns with tendons and ligaments have to do with moistening and nourishing them. As mentioned above, their lubrication comes from the bursa, where synovial fluid oozes out into the tendons, ligaments, muscles, and bones. Thus, most of our remedies are hydrating, lubricating, nourishing, or emollient (softening).

The chief remedies here are: *Eupatorium maculatum* (hard, calcified), *Polygonatum spp.* (too loose, too tight; lubricates), *Smilacina spp.* (lubricates), *Linum usitatissimum* (lubricates), *Salvia officinalis* (weak, atrophic), and homeopathic *Rhus toxicodendron* (tendonitis).

Muscles. There are two kinds of muscles, voluntary and involuntary, or striated and smooth. The former are under conscious control and are used to move the locomotor system. The latter are under the control of the autonomic nervous system and move without conscious input – like peristalsis in the gut. Most of what we are dealing with in the treatment of muscular and skeletal problems is in the first category, but the complex interactions of the intestines, uterus and bladder (smooth muscles) with the lower back and lower limbs sometimes makes it necessary to relax the smooth muscles in order to relax the voluntary.

Remedies for the muscles include: *Arnica montana* (strain, sprain, bruises, contusion), *Asarum canadensis* (spasm, better from warmth), *Bryonia alba* (inflamed, stiff; moves the back like a board), *Dipsacus sylvestris* (torn, chronic inflammation), *Eupatorium purpureum* (paralysis), *Lactuca virosa* or *L. scariola* (hard, tight), *Lobelia inflata* (spasm, all pretzeled up), *Urtica spp.* (paralysis, atrophy), *Valeriana officinalis* (spasm), *Viburnum opulus* (spasm), *Verbena hastata* (hyperextension), *Zingiberis officinalis* (spasm, better from warmth).

Bone. In the fetus and infant we see the process by which the cartilage is turned into bone through the deposition of calcium. The bones are not just calcium or mineral, but are threading throughout by blood vessels which carry in oxygen, food and fluid to nourish and lubricate the bones. Healthy bone is still slightly pliable while unhealthy bone is either decalcified and weak (easily broken) or excessively calcified and brittle (also easily broken). Healthy bone is about 70% calcium phosphate and 30% calcium carbonate. A small amount of silicon is also present – the substance which makes cartilage hard but flexible.

The outside of the bone, like the muscles and tendons, is serviced by the synovial fluid which trickles out of the pores in the synovial membrane to lubricate the movement of the structural parts o the body. When a bone is broken it is very important to encourage this fluid to lubricate the muscles, tendons and bones so that the bone can slip back in place. Even when bone is healthy, this fluid should be present in sufficient amount.

Remedies for the bone include: *Calcium phosphate* (osteoporosis), *Equisetum spp.* (broken bones), *Eupatorium perfoliatum* (broken bones; sets, regrows), *Eupatorium maculatum* or *purpureum* (broken bones), *Polygonatum spp.* (bone spurs), *Quercus alba, Symphytum officinale* (broken bones), *Urtica spp.* (broken bones), *Verbascum* (gets broken bone in the right place).

Nerves. Nerve cells or neurons are another of the four primal cell types of the body. They do not arise in the mesoderm, with the cartilage, bone, and muscle, but in the ectoderm (to serve thinking and sensing). Nerves in both the voluntary and involuntary trees combine with the muscles to form the neuromuscular system which guides movement.

The basic unit of the nervous system is the *neuron* cell. The characteristic of the neurons is that they convey an electrical impulse.

They have long legs and arms; one end receives the charge, it is conveyed along the nerve to another end, jumps a gap called a synapse to another neuron and so moves through the nervous system. Countless neurons are bound together into nerve tracts, so that the impulses are reinforced.

The synapse is a point of interest in the nervous system – sort of a 'weak link,' where the system can break down. The synapse consists of a terminal nerve ending on one side and a receptor on the other nerve. In between is a little dab of fluid which conveyes the electric impulse across the chasm. The synapse has to be a good conductor. Fortunately, the electrolytes in the body fluids make the synaptic fluid a good conductor. The very low level of electrical charge allowed needs to be 'kept in its place' to prevent a sort of random misfiring and chaos. This tendency is 'kept in check' by the general neatness of the body in its arrangement of electrical charges: negative on the inside of the cell and positive on the outside.

The nerves are surrounded by a protective membrane called the myelin sheath, which is contructed out of connective tissue, so that it is embryologically and therapeutically 'under a different planet,' so to speak, from the neurons themselves. This means that diseases of the myelin – the main one is MS (multiple sclerosis) – are to be treated by connective tissue remedies rather than neurological remedies.

An example of this was demonstrated by my friend Richard Reardon, an herbalist and holistic healer in Pasadena. He uses boneset *(Eupatorium perforatum)* to treat osseus and cartilaginous problems. A friend of his was suffered from MS. The disease had progressed to the point were he could barely walk with a walker. Boneset tea returned him to about 95% of full capacity – there were still some issues with bladder control

I am not sure of the exact mechanism of cure in the following case but it involved a related remedy. A ninety seven year old woman had been fit as can be for her whole life and never used medical drugs until she developed severe, debilitating pain in the left hip and down the leg. It was sharp and shooting in some places and felt like ants walking (formication) in others. The doctor thought it was caused by stenosis of the spine pinching the nerves. She was on an opiate pain relief patch that upset her digestion, causing emaciation (so she was on an appetite stimulant as well). The drugs made her miserable, but controlled the pain. To my surprise, prickly ash *(Xanthoxylum)* and St. John's wort *(Hypericum)* did not do much for her. These were the remedies I use for sharp nerve pains due to pinching. I gave gravel root *(Eupatorium purpureum)* for the stenosis and to my surprise it stopped the pain within minutes. I didn't think stenosis could respond that quickly. I gave her gravel root and prickly ash (to be sure). We found we had to cut the dose of gravel root down to a fraction of a drop because it increased her blood pressure markedly. This led me to believe that the problem was due to some sort of electrolyte imbalane in the myelin sheaths, the kidneys, or the spine, or all three, causing pressure on the nerves. Her blood pressure was otherwise normal.

The primary nerve remedies are *Hypericum perforatum* (pain, injury, inflamed nerves, red streak up limb from wound), *Xanthoxylum americanum* (extreme pain, writhing in agony; debility, wasting of nerves), *Betonica officinalis* (pain with frenzy), *Galium aparine* (neuroma, ganglion), *Valeriana* (cramp), and *Viburnum opulus* (cramp).

Nerve Sheaths. It should be remembered that the sheaths of the nerves are composed of connective tissue rather than nervous tissue. They arise out of the mesodermal tissue while the neurons arise from the ectoderm. Thus, the two tissues are not related. When disease strikes the nerve sheaths – inflammation and deterioration is known as multiple sclerosis – the condition will not respond to nervines but to connective tissue remedies.

Joints. The joints are a complex of all the tissues described above. They contain synovial fluids and membranes (which arise out of the endoderm), connective tissue cells (mesoderm) differentiated into cartilage, tendon, ligament, bone, and muscle, neurons (ectoderm), and blood brought in by the circulation. Thus, joints respond to many different remedies.

Circulation and Blood. The last component which we seek to address is the blood which circulates into the muscles, joints and bones to provide the life-giving food and oxygen for the tissues. Normally, the circulation and blood are not an issue, but if there is damage through injury clots of blood can form which block the nerves in particular, causing pain, and cause other kinds of damage in the motor system. Therefore, for the treatment of muscular and skeletal conditions we need plenty of good remedies to break up congealed blood. It is also true that a lack of circulation to the extremities – cold hands and feet – can be related to poor nutrition and health in these parts.

Remedies for the circulation and stagnant blood include: *Achillea millefolium* (bruise, red and blue), *Angelica* (bruise; yellow/green, gray/blue), *Arnica montana* (bruise, red and blue), *Carbo vegetabilis* (bruise, blue and yellow), *Conium maculatum* (homeopathic only; bruise blue and black), *Sambucus canadensis, S. nigra* (bruise, pale, blue and edemic; especially of wrists and ankles), *Sassafras officinalis* (sooty black complexion, bruise).

Physiology of the Muscular and Skeletal System

It is often enough simply to understand the major structures of the body and how they operate in health and disease in order to understand and plan effective therapy. Thus, the last section provides enough knowledge for simple, effective, safe treatment of most muscular and skeletal problems. However, conventional biomedicine and science have delved deeper into organic processes, explaining the cellular and biochemical foundations which underlie the simple structures and pathology described above. Often, this level of knowledge obscures, rather than illumines, our understanding of pathology and health, because it is too detailed and therefore condusive of a fragmented, materialistic,

nonholistic method for looking at the organism. Nevertheless, an understanding of functions on this more microscopic level is often beneficial for therapy. Sometimes it is necessary simply to fascilitate discussion with physicians and scientists.

Connective Tissue. Connective tissue cells are one of the four basic cell types in the body. They responsible for developing the support systems used from the level of the cell to the body as a whole. They secret substances to form an architectural matrix (or "ground substance") around cells so that when they pile up on top of one another they won't crush each other under the mounting pressure. Normally we can't see this framework, even under the microscope, but in certain areas of the body it becomes so predominate that it creates tissues and structures that are visible to the naked eye, such as cartilage and bones. Cartilage cells, or chondrytes, which bear up under the most pressure of any living cells, are surrounded by the most elaborate structural material, while blood cells, which circulate freely possess only a slight, flexible architectural matrix.

This architectural framework is produced by crisscrossing long chains of proteins and sugars called collagen. The principle molecules making up these fibers are chondritin and glucosamine sulfate. This is the same material that makes the cellulose or wood fiber in plants. Cellulose is indigestible in the human GI tract, though it can be digested by cows and other animals with a special stomach called a rumen. Chondritin and glucosamine sulfate are supplemented in the diet to increase the strength of connective tissue, but their mode of action is unexplained since they are indigestible.

Inside the delicate architectural matrix is a padding, lubricating substance that keeps connective tissue from collapsing or losing fluids. This substance is 'thixotrophic,' i.e., it gels from movement rather than, as normal, from sitting quietly and cooling off. This causes joints to slowly stiffen up, when over used or over heated. (Black walnut hull decoction, when stirred, is also thixotrophic – this might explain its use for joints and connective tissue).

The structural matrix is found throughout the body. The blood vessels are surrounded by it and the blood cells themselves have slightly firming matrixes around them. The skin is held firm, smooth, and pliable while the features (ears, nose, lips) are developed around pieces of cartilage surrounded by the ground substance. Organs – heart, lungs, stomach, intestines, spleen, liver, uterus are held together and held up by architectural framework. The muscles are surrounded by fascia or sheaths of connective tissue cells and matrices. Collagen strengthens the hair and nails. The major structural elements of the body – cartilage, tendon, ligament, and to some extent bone – all arise from intensified crisscrossing of collagen. Even adipose tissue arising out of connective tissue cells is buoyed up by the architectural ground substance.

Cartilage. Cartilaginous tissue is used to construct hard but plastoid structural tissue. Some of the cartilage in the infant develops into bone while some remains to be used for its hard but pliant structure. It makes up the structure of the lungs and the joints between the bones. Some joints, as in the ribs, do not need to bend much, so the cartilaginous interfaces and connections here are not very complex, but other joints – shoulders, elbows, hands, hips,

knees, feet – need to bend a lot. To facilitate movement cartilage forms various hard but pliant capsules, structures, and linings. These, with bones, tendons, etc., produce the various moveable joints. Within the moveable joints we find enclosed spaces – the bursa – which are lined by synovial fluid.

The cartilage cells or chondrites are loosely spread out inside the extensive architectural framework that keeps them from getting crushed by the pressures exerted upon them by the joints. Both the cells and the matrix have a positive charge on their walls from stored electrons. The same processes that charge the cell walls also charge the architectural frame. The electrolytes sodium, potassium, calcium, and magnesium are especially active in maintaining this charge. Lack of potassium in particular, and of replacement parts also damage the structural framework. These are the wood-like or cellulose fibers – glucosamine sulfate and chondritin.

If the cartilage and its framework become weak through lack of nutrition or poor electrical charge, the structure will start to wilt. This will happen all over the body, leading to premature wrinkles and joint deterioration. Here I want to mention a rather obscure herb which is little used at present but which seems to have an affinity to this area: *Apocynum androsaemifolium* (spreading dogbane, werewolf root, medicine lodge root). I have definitely seen cases where this remedy in small doses has gotten rid of wrinkles when they seemed premature or sudden in onset and not related to the healing process. Another problem for which werewolf root is remedial is joint conditions arising from high impact injuries. Finally, it is also beneficial helping people recover from the use of cortisol. All of these indications fit together. As mentioned below, cortisol suppresses joint rejuvenation. Werewolf root is terribly powerful and should only be used in the smallest doses – 1 drop, once a day is plenty.

We can already begin to see some of the solutions which have been offered to mitigate joint deterioration. Potassium, which contributes to cell wall and architectural membrane charge, is chronically short in a diet based on modern processed food. Lack of building blocks for chondritin and glucosamine sulfate also weaken the tissues. In answer to this need, supplement companies have introduced these substances onto the marketplace. These products are made from chopped up cartilage from veal calf tracheas that has been partially broken down. They have helped a lot of people and are used by many doctors, even inside mainstream medicine.

An important problem with this approach is noted by Dr. William Ferril (2003, 324). "The human body cannot digest wood." Chondritin is a cellulose fiber which is not broken down in the digestive tract. If it were broken down, it would cease to be chondritin and would enter the body as a few amino acid and sugar fragments. If it is not broken down but enters the body anyway it would cause a catastrophic immune response which would damage the joints and connective tissue throughout the body, since the immune cells would be looking for chondritin anywhere.

What then might explain the action of chondritin and glucosamine sulfate? One possibility is that they stimulate a mild immune response – perhaps through the immune cells lining the gut wall – and this stimulates activity in the cartilage. Just a tad of heat and destruction caused by a few animated immune cells in the architectural framework might stimulate a resurgence of interest in the body on rebuilding these tissues.

This whole issue opens up another issue for the cartilage in the joints. This is the mechanism that lies behind rheumatoid arthritis. The cartilage is highly susceptible to immune attack and this is one of the first places that autoimmune disease attacks when there is excessive immune activity in the body.

There is a constant flux in the balance between the joint regenerative hormones and cortisol. During the night the regenerative hormones are more active in the joints, but just before dawn cortisol is secreted to inhibit this process.

Boney (osseous) tissue. The basic unit of the bone is the osteocyte, or bone cell, which develops out of connective tissue cell. As they create bone mass they are infiltrated by calcium phosphate to harden up the bones but some fibers of collagen matrix reside between the layers of bone to insure bendability. Meanwhile, about eight per cent of the osteocytes remain in an inchoate, non-calcified condition to generate new bone tissue. Thus, at any given moment, the bones are rigid, yet bendable, yet regrowable. Blood vessels penetrate into and between the layers of bone to provide nutrition and water and take away waste products.

Within some bones there is an open area where the bone marrow resides. In some areas of the body the bone marrow serves as the source of stem cells which produce red blood cells, white cells, thrombocytes, and replacement cells for diseased parts of the organism. Surrounding the bone is a layer called the periosteum, which is more pliant and regenerative – that is why a blow to a bone can sometimes cause a swelling in the periosteum. The ends of the bones are articulated with cartilage to pad the pressure between bones and to create joints. The bursa in the larger joints seeps out synovial fluid which lubricates along the interfaces between the bones, tendons, and muscles. Without this oft-forgotten fluid the bones would not glide as smoothly, a situation that we find when the muscles are inflamed and dried out and movement is painful. When a bone is broken it is a good idea to increase the lubrication of the area by increasing this secretion so that the bones will go back into place more readily. Several remedies will be mentioned which enhance this lubrication – *Asclepias tuberosa, Bryonia alba, Verbascum, Eupatorium perf.,* and *Eupatorium purpureum.*

Ligamentous tissue. The sinews develop out of the cartilaginous cells and matrices. They can be torn by awkward movements, often the result of athletics. Unfortunately the collagen cannot regenerate itself completely – it is a cellular secretion not a living tissue – so tendon and ligament damage is considered to be permanent in conventional medicine and is often treated with surgery.

There is empirical evidence that the tendons and ligaments can be treated by herbs. This is one of the main funcions of Dr. Christopher's *BF&C* formula. A remedy which has, to my knowledge, repaired torn sinews is *Smilacina* (false Solomon's seal).

Like other tissues generated by connective tissue cells and constructed out of ground substance, sinews – though hydrophilic or water-loving – are subject to drying and malnutrition with age. This makes them incapable stretching out as they should or of retracting to their original position after stretching. This condition is well treated by *Polygonatum* (true Solomon's seal).

Muscle Tissue. Muscle cells do not arise out of the connective tissue cells but do arise out of the same layer of the fetus, the mesoderm. They form bundles of long lines of cells. If these lines were teased apart the muscles would not be able to work. They need to be aligned and subject to neural stimulation.

Muscles require high levels of magnesium, calcium, and potassium to operate. Magnesium, assisted by calcium, keeps the muscles from going into spasm. Because of this the muscles are always competing with bone to get calcium. In the average person there is enough of each, but in some people we find a combination of long, thin, weak bones and twitchy muscles. These people need to work on their nutrition and digestion. Potassium is also needed because it works with insulin-like growth factor (the insulin for the muscles) to get blood sugar into the cells. The muscles need a constant supply of blood sugar and if they don't get it they will start to atrophy. These people tend to get corpulent in the middle and atrophic in the extremities – the high blood sugar, high insulin type prone to type II diabetes. We need strong muscles to prevent this disease.

Muscle growth and strength is regulated by hormones associated with the mineralocorticoid side of the adrenal cortex. These are called anabolic hormones because they stimulate growth. This includes what Dr. William Ferril (2003) ranks as level one, two, and three hormones. The first are the most dominant, less so in descending rank.

Level one includes growth hormone, thyroxine, and testosterone, which stimulate muscle activity, and cortisol, which sends up blood sugar levels when we exercise and minimizes lactic acid build up afterwards, but also opposes excessive muscular development and tears down protein (that includes muscles) if there is not enough blood sugar.

A level two hormone that is triggered by exercise is very important in facilitating the activities of the above hormones. This is insulin-like growth factor (IGF). It is the insulin for the muscles, helping them to take up blood sugar. Insulin predominately brings blood sugar into the brain and torso, and when it is high it converts sugar into storage fats and fattens up the organism. IGF keeps the muscles active and reduces insulin and blood sugar levels.

When insulin is dominant over IGF we get the exaggerated diabetic build mentioned above in association with low potassium. This is what Bernard Jensen's teacher, V. G. Rocine, called the "carboferic," or carbon-carrying constitution. In modern medicine it is called the "apple" build. The person is stout through the middle, with small hands and feet that get even smaller as the years go by. Muscle strength is lessened. After an incapacitating injury we sometimes see this build develop and type II diabetes appear. The IGF levels drop as the muscles in the extremities are not developed while the insulin levels rise along with fat deposition in the middle of the body.

Another hormone that inhibits IGF is high estrogen. This brings down growth hormone levels. Estrogen tends to create a different body than that described above – pear-shaped, and in middle age, red and hot. We often see this in middle aged women. The thyroid function is also suppressed, and they tend more towards hypothyroidism than diabetes.

"Level three" hormones direct blood flow to or away from the exercised muscle. These include epinephrine, norepinephrine, histamine, serotonin, and dopamine. If epinephrine is low norepinephrine will be high. The former directs blood to the brain, heart, liver, and muscles, but the latter directs it only to the

brain. The latter will tend to produce a thin person with hypoglycemia. Histamine has an effect similar to epinephrine. Serotonin and required for healthy muscular activity. Low dopamine produces Parkinsonism.

Epinephrine supports the "fight-or-flight" response, but it is also needed just for exercise. When the muscles are active the heart also has to be active to get plenty of oxygen into the blood and the liver needs to be active to get rid of the extra lactic acid produced as a byproduct of exercise. The brain is active to make sure we fight or fly appropriately.

Muscle fibers move the body in all directions but themselves are capable of only one movement – contraction. The body, through a system of levers and pulleys (bones and joints), exploits this one kind of movement to make movement possible in all the directions that it needs. Contractility often shows up in the pathology which affects the muscles. If they are damaged or undernourished or even overstimulated they react by cramping, beginning with a little twitch, moving up through cramps to torsions, tetanic spasms, and paralysis. Dry, undernourished muscles also often go into contraction.

The tissues mentioned above are highly dependent on the alkaline minerals or elements for health. Sodium is high in connective tissue or cartilage, lymph, blood, and bile. Calcium is high in bone. Magnesium, calcium, and potassium are high in the muscles. Chronic fluid loss, sweating in the summer, a diet poor in minerals, or anything which leaches them out, will create trouble in the various tissues. The nerves are high in phosphorus, which is more plentiful. The homeopathic cell salts that combine these elements – calcium phosphate, magnesium phosphate, potassium phosphate, and sodium phosphate are good for these systems. The same is true for silica and calcium fluoride.

Muscular and Skeletal Constitutional Types

It is not enough that we should know the anatomy and physiology of a system. We should also be able to recognize when the tissue is prominent in a person. Hippocrates taught the student of medicine to look at the living in order to understand illness. If we can see the dominance of cartilage, muscle, or bone in the body we will see it in health and disease. Because this system arises out of one cell type – the connective tissue cell – the constitutional types produced are all closely related and easy to spot. They are all in the *pitta* or medium group.

The mesoderm, or middle layer of the fetus, develops into the connective tissue of the body – cartilage, bones, tendons, ligaments, and muscles. These structures are therefore related in origin and function. The heart, as the largest muscle of the body, also originates out of the mesoderm, but the other major viscera of the body originate in the endoderm, or inner layer, which infolds to create glands, bowels, and organs. Nerves are evolved in the ectoderm, or outer layer. They combine with muscle fiber to create workable, moving muscles.

When the mesoderm and the connective tissue cells are dominate in a system they produce the mesomorph or *pitta* type. These people are active, endowed with strong muscles and bones, a strong heart, and a strong immune system. The regulatory hormones which are dominant in their system are the mineralocorticoids, including the androgens, which stimulate activity and immunity. The mesomorph or *pitta* type can be further subdivided according to which tissue is dominate in the system. By learning these types we learn to see

the elements of the muscular and skeletal system shining forth from the individual.

For more detail on the constitutional typing system used here refer to Dr. Bernard Jensen's *The Chemistry of Man*, in which he goes over the system developed by his mentor, Dr. Victor G. Rocine, over through many decades of research.

Osseous (Turtle)

A preponderance of bone creates the tall, thin to medium, angular type of which Abraham Lincoln was a prime example. Many politicians and industrialists have the boney or osseous build, including George Washington, Jefferson Davis, Johnny Cash, Franklin D. Roosevelt, Eleanor Roosevelt, and Lyndon Johnson. This is one of the most powerful and long-lived constitutional types. They are subject to osteoarthritis from hardening of the cartilage and bone. I call this the "turtle" constitution. Rocine called it the "calciferic," or calcium-carrying constitution. He says it is ninety per cent male.

Sensory-Osseous (Deer)

When the bones are more dominant in a woman they tend to produce the "deer" constitution, the long-limbed, graceful, fashion model type. In this constitution the sensory nerves are highly developed, to give sensitivity to art and design. Therefore, the deer type really belongs among the constitutions in which the nervous system is developed. Yet it possesses strong, flexible bones and resembles in some measure a female example of the boney or osseous turtle type. Julia Roberts would be the archetypal representative. This type is ninety per cent female. The late King Hussein of Jordan is an example of the rare male deer type.

Neuro-Osseous (Rabbit)

There is an old Indian saying that rabbit is the little brother of deer. There is also a story that the animals set out a test to see who was the fastest: deer or rabbit. The winner was to get a pair of antlers. On the day of the race rabbit asked to be excused to go to the bushes to relieve himself. He was away along time and some of the little animals got suspicious and investigated. They found rabbit cutting a bunch of short-cuts through the briar path. Outraged, the animals awarded the prize to deer.

The rabbit person is a little smaller and more nervous than the deer type. Both are prey not predators, so they both are a bit anxious, but deer knows that she will triumph by grace and charm, while rabbit is just plain insecure, so he tries to cut corners and sometimes alienates people. If we watch rabbit eating we see that he is one of the only animals that can eat and watch the predator (ourselves) at the same time – so we would say that the sympathetic (fight-or-flight) mechanism is turned on at the same time as the parasympathetic (eat and digest). This makes for a constant level of nervousness and a low function of the digestive system; rabbit must eat constantly to keep up his energy.

The rabbit person is thin-boned, slender, nervous by temperament, yet intelligent, sensible, a bit cautious, inclined to learn from bad experience and follow good advice (think of Peter Rabbit and his mother). Rocine called this the 'nervo-osseous' or 'atrophic' type. He associated it with the 'consumptive' type

of nineteenth century medicine who was prone to tuberculosis. The body uses calcium to wall off the tuberculosis bacteria and therefore a shortage of this important element causes susceptibility to this dread disease. In the rabbit constitution calcium is short. There is not enough to feed the bones completely, making for long, thin, sometimes incompletely filled out bone structure, coupled with muscular twitchiness and nervousness – calcium helps magnesium sedate the muscles. Rocine commented that this type was the product of intermarriage and malnutrition, and noted that it was found in the British Royal family. The gene seems to have entered with the wife of Edward VI, for the slenderness and nervousness afflicted both his sons, the Duke of Windsor and King George III. The long, lean build is still evident in Prince Charles, but left the family with the entrance of Princess Di, a charistmatic elk type who birthed two sturdy elkish sons.

Rabbit medicines are characterized by their nutritive properties; especially their ability to build strong bone and relaxed, strong muscle. They are considered 'trickster medicines,' because rabbit is the trickster in the Great Lakes region. Nettles is one such remedy, it is highly nutritious but will trick the city-slicker who is unfamiliar with the plants of the country. Another rabbit medicine is horsetail. One winter the Indian people around Red Lake in northern Minnesota were starving because the snow was so deep the deer couldn't feed and were dying. Rabbit was asked for help, since he is one of the few animals that runs on top of the snow, and he granted his permission to allow the people to live off him, but only if they put down food in the horsetail patches, where rabbit liked to hang out in the spring. Another rabbit medicine is wild yam. It grows in the thickets where rabbits like to live and it has roots that look like bones and cris-cross under the soil (they also called 'devil's bones'). Wild yam strengthens the bones, especially of the hip-joints, and relaxes the muscles. Bittersweet vine *(Celastrus scandens)* is another rabbit trickster medicine, used as an emergency food in the winter time.

Muscular (Elk)

This type is equally easy to spot. They usually have a large chest, due to the predominance of the heart, a robust complexion, large muscles, and an active body. They are usually very popular – the homecoming king and queen are likely to be selected from this type. Examples include Teddy Roosevelt, John F. Kennedy, O. J. Simpson, Princess Di, and Tina Turner. This people are naturally magnanimous, but not deep, at least in their ordinary social relations. They are so used to being looked up to that they develop a persona, almost always a warm one. They are loved and venerated, like Princess Di, but if they fall off their pedestal they are despised, like O.J. (Notice the characteristic nicknames: Teddy, JFK, OJ, Di). This type is slightly more predominately male than female. They have large, strong hearts, active livers and kidneys, and good health generally, but in their elder years are disposed to heart disease from irritation of the blood vessels, and have a medium life expectancy. I call them the "elk" constitution because they are natural born leaders. Rocine called this the "myogenic," or muscle-generating constitution.

Ligamentous (Wolf)

This type looks a lot like the preceding, but is more sinewy, less effortlessly charismatic, more tough looking, like a wrestler. Their charisma comes through their toughness. George W. Bush, Johnny Depp, and Paul Wellstone would be good examples. Ligamentous people tend to be idealists, either defending or attacking the entrenched political system. They make excellent revolutionaries and generals. They are like coiled springs, ready to erupt and drag whole armies and populations with them, willingly or unwillingly. They have a very strong will. They seek to produce massive changes in society, for better or worse, or create massive military changes. Examples from history would include generals such as George Patton, Stonewall Jackson, Philip Sheridan, Guiseppi Garibaldi, and Ulysses S. Grant. Some of them can be fairly small, like Napoleon, Grant, or the late Senator Wellstone. Some of them are vehement and active, like Patton, Jackson, Depp, Wellstone, and Sheridan, though a few look seedy or haggard, like Grant. The type is slightly more male than female. A female example of this sinewy constitution would be Madonna. Rocine called this the "desmogenic," or band-generating type. I call them the wolf.

Cartilaginous (Fire, Horse)

The cartilaginous type has a predominance of pliable, bendable cartilage. Cartilage prevents wrinkles and creates smooth, shining skin, shining eyes, lips, and hair. These types are bendable, elastic, and active. They love dance, singing, and movement. About ninety per cent of them are women – Isabel Duncan, Cher, and Joni Mitchell are excellent examples. They almost sparkle, or better yet, spark. They love to inspire others with song and dance. They are usually tall and slender, not graceful like a deer, but acrobatic. They have wider shoulders than hips, and the round forehead of the fire type. Rocine called this the "silivetic" or silicon-bearing type.

It is an irony of constitutional prescribing that a person's strength is often their weakness. Whatever they are strongest in is what they use the most and therefore wear out. It is also true that congenital weaknesses wear out, of course, but the opposite is equally true. Not only do the above constitutional types help us to evaluate and understand individuals and their needs, but typology helps us to learn to see the underlying components of the body – more sharply emphasized in one than in another. Hence, we learn to see in the ligamentous person the typical problems of the ligament.

Pathology of the Muscular and Skeletal System

Modern biomedicine has subdivided arthritis into numerous races and clans requiring different medical treatment. These subdivisions were not recognized in traditional medicine. To be effective, complimentary and alternative medicine need not develop care or management plans for each species of arthritis. The old physicians basically treated these conditions as deposits of damp, cold, heat or toxins irregardless of their pathological differences – often with success. The energetic approach emphasizes the underlying tissue imbalance. Treatment along these lines is eminently satisfactory. I have seen this in countless cases.

In the traditional Western medicine of our past only a few basic muscular and skeletal conditions were recognized. The old herbal literature used the

terms rheumatism and gout to describe various kinds of stiffness, swelling, inflammation and weakness of the joints, muscles and tendons. The word *rheuma* means "damp" in Greek. It refers to the idea of the "phlegmatic humor" or dampness flowing into a joint or muscle and becoming stuck. The rheumatism of olden times should be loosely translated into modern terminology as fibromyalgia, osteoarthritis, and even rheumatoid arthritis.

Gout refers to a deposit of hard material (uric acid), often on a toe, which becomes inflamed. In the old literature it was usually associated with rich eating (true) while "rheumatism" was associated with overwork, injuries, exposure to damp and cold or chronic pain after malaria or fever.

Another theory which we tend to find in nineteenth and early twentieth century medicine is "lithiasis." A generalized calcifying, mineralizing influence was acknowledged which created deposits in the muscles, joints or kidneys to cause fibromyalgia and osteoarthritis. Very often, the same remedies which were used to eliminate kidney stones were sought out for rigidification of the moveable frame. These remedies were called "antilithics." Gravel root would be a prime example.

Another valuable theory about the origins of muscular and skeletal discomfort must be adopted directly from oriental medicine. Although Western folk doctors treated arthritis and muscular pain with remedies for bruising, they did not have the full theory of "stagnant blood" found in traditional Chinese medicine. This teaches us that blood can stagnate in an area, due to poor circulation and bad character of the blood, or due to bruises and the formation of clots. This stagnant blood produces pains of a dull or sharp, fixed nature. Very often, old injuries will retain congealed or stagnant blood which will cause pain and limitation of movement.

Strains, Sprains, and Muscle Injuries. If a muscle is overextended or pulled it is strained. If it is pulled harder some muscle fibers and the blood vessels that serve them are torn – this is called a sprain. Usually the best treatment is with agents that mop up the congealed blood – *Achillea* (yarrow) and *Arnica.* Serious injuries tear large masses of muscle fiber, teasing apart the fibers and causing loss of focused motion.

Muscle fibers are not generally rejuvenated after death. However, much can be done to improve muscle health after injury. As with nerves, though muscles are not regenerated, they are not always dead when they appear to be motionless and useless. This is because they the last thing they do before dying is to keep themselves alive, though they are now functionless. If their innervation and blood supply can be improved some contractility may return. *Asarum canadensis* (wild ginger) is an excellent warming remedy that loosens up contraction and spasm in old injuries where the muscles are "cold" and less active than normal. This is a valuable therapeutic hint I got from my friend Lise Wolff, registered herbalist (AHG).

Another problem is due to the teasing apart of muscle fibers. Once this happens the muscle cells, though still contractive, cannot move together well as a unit. The part is underused and the muscle atrophies. I believe this condition is curable by the aptly named teasel *(Dipsacus spp.),*

which gets its name from its use teasing fibers of wool into line. This is a remarkable healer for the deepest muscle tears and injuries.

Additional remedies which assist the muscles are lady's mantle and shepherd's purse. The former repairs tears in sheets of muscles while the later improves muscle nutrition when there has been atrophy. Both are useful in hernia. Wormwood is also useful in atrophy and scar tissue.

Very often in fever, especially "intermittent" fevers attended with alternating chills, we get pain in the muscles and bones. There is a build up of lactic acid, which the liver cannot keep up with – lactic acid or whey as a drink can stimulate removal of this from the muscles. One thing that is interesting is that a lot of the remedies for high testosterone (bitters) are also beneficial for this kind of fever and for the liver. Thus we see a connection here. In my humble and unscientific opinion, testosterone levels must go up somewhat during stress and this stimulates the muscles, which back up the lactic acid and the liver. This makes sense: anything getting in the way of sex and procreation needs is frustrating and testosterone builds up to get rid of the problem.

Fibromyalgia. This is the chronic condition associated with the muscles. It has as many origins as there are types of muscle trauma. This condition used to be called "rheumatism." Modern physicians preferred the more correct name fibromyalgia, meaning pain in the fibers of the muscles, to the traditional unscientific name rheumatism, meaning "dampness." Lack of lubrication of the muscles causes pain, worse on movement (homeopathic *Bryonia*), congestion in the muscles causes stiffness, spasm, and pain *(Phytolacca, Cimicifuga),* wasting and withering causes paralysis and cramping (nettles, chickweed), inflammation in the muscles causes a heavy muscular ache (dandelion root), inflammation and spasm from old injuries, worse from cold, better from heat (wild ginger, *Asarum*), severe muscle damage and scarring *(Dipsacus, Artemisia absinthium).* Severe spasm in muscles is well met by supplements of magnesium, homeopathic magnesium phosphate, or Lobelia (torsion).

Dr. Broda Barnes (1976) shows that fibromyalgia, arthritis and "bad blood" can all be symptoms of hypothyroidism. Early thyroid researchers found that when thyroxine levels were low a mucus-like substance composed of mucopolysaccharides and water appeared in the tissues, giving rise to muscle and joint pain. (This reminds us of the "thickened humors" traditionally associated with "bad blood.") Despite considerable research proving this relationship, the connection of low thyroid to muscular and skeletal pains has been largely ignored. Herbalist Phyllis Light has brought the relationship between hypothyroidism and fibromyalgia to my attention.

Bruised and Broken Bones. Bruise to the periosteum, or more sensitive lining of the bone can result in swelling and a permanent tumor. The major remedy for this in homeopathy is *Ruta graveolens.* The only remedy I am familiar with for this condition in herbalism is *Polygonatum spp.* (true Solomon's seal). This indication comes directly from "the vulgar

folk of Hampshire" via John Gerard (1597). Solomon's seal root looks like a bone with a periosteal covering.

When the bone is broken I follow the American Indian tradition by using boneset. There are a lot of know it alls who say the name has nothing to do with setting bones, but this has literally caused American Indian people perplexity or laughter since it is their main bonesetting remedy. It is amazing in this capacity. The standby in Anglo-American herbalism is *Symphytum* (comfrey), but I find that this causes the bone to overgrow on the surface and along the seam, whereas boneset goes back down to the core and regenerates from the inside out. Comfrey will also seal a bone up before it is properly set, whereas boneset, mullein, and gravel root will all increase secretion around the bone, get it snuggled into place, and then start setting it up. Comfrey is probably best in old people, where it is simply hard to get bone growth started.

Osteopynia, Osteoporosis, Rickets, and Poorly Nourished Bones. Bone can be undernourished in two different ways. First, there is the bone itself, made from osteocytes or bone cells, then there are the connective tissue fibers or collagen in the bones which make them flexible. It happens that both of these are stimulated by boneset, so that is a good all around remedy for all kinds of bone problems.

A general bone growth formula used by many herbalists is nettles and horsetail. These plants contain plenty of calcium and silicon respectively, which build up the bone and collagen fibers. This sometimes is used for bonemending.

Bone nutrition is poor in some people. Rocine called this the nervo-osseous or atrophic constitution. Bones are long, slender, thin, and less strong. These people tend to be long and thin. They need plenty of nutrition, beginning with nettles.

The specific for rickets in the nineteenth century was *Osmunda regalis* (Royal fern, buckhorn brake, lumbago brake) , which is a superlative remedy for bone nutrition. It is nearly specific for lumbago.

Osteoporosis can be helped by any of the above but it is well treated by the homeopathic cell salt *Calcium phosphate,* or a calcium hydroxyapatite supplement, or by the use of good soup bones high in calcium phosphate.

Joints, dry. With age the tissues start to dry out and cartilage, which has no direct blood supply, is one of the early tissues to feel this effect. It is most important to keep the joints lubricated. Dietary oils are good here, as they are for the neuromuscular system and the bones. However, dryness in the joints responds to *Asclepias tuberosa* (pleurisy root), which relubricates the bursa or synovial linings of the complex joints. Mullein and gravel root open up the pores of the synovia to lubricate the surrounding cartilage, bone, tendon, and muscle. True and false Solomon's seal are also beneficial to nourish and build the cartilage and joints. A good general formula for preventing simple arthritis is: pleurisy root, true Solomon's seal, and gravel root.

Dry joints led to osteoarthritis, or simple arthritis, as well as joint injury.

Joints, damp. The ancients attributed joint and muscle pain to excess fluid. The Greek word for dampness is *rheuma,* so the ancient term for these conditions was rheumatism. Because of the folk medical origins of this word, and because it does not distinguish between joint and muscle, modern biomedicine has thrown this word out. Instead, the words arthritis or fibromyalgia would be used to designate inflammation of the joint or muscle fiber. The emphasis is placed on inflammation rather than fluid. However, very often the problem originates in the fluid, which then gives rise to inflammation. This is why so many people experience rheumatic pains when the weather is cold and damp.

The best known remedy for cold and damp in homeopathy is *Rhus toxicodendron,* or homeopathic poison ivy. This is used in rheumatic pains that are worse after inactivity, better from slow limbering up and warmth, and worse from overuse, cold and damp. *Rhus tox.* is particularly useful for pains in the knees and lower back. Because the pains of *Bryonia* are worse from movement (due to dryness of the synovial membranes and lack of fluid in the muscles), while the pains of *Rhus tox.* are better from movement (due to the warming, dispersing effects), these two remedies are contrasted and sometimes used one after another to tonify a joint. A good homeopathic potency for each of these is the 12x.

Rhus tox. is not used in herbalism. Instead we use its nontoxic cousin sumach *(Rhus typhina, R. aromatica, R. coriara).* This remedy is an astringent, which means that it binds and controls excessive fluids, or the loss of fluids through membranes. Either there is too much synovial fluid flowing into the joint, or too much flowing out into the tissues surrounding it. Sumach is most beneficial when there are lower back pains and knee pains, like *Rhus tox.* Another astringent which is sometimes even more effective is white pond lily *(Nymphaea odorata).*

A particularly valuable astringent for the joints, bones and connective tissue is white oak bark *(Quercus alba).* This is one of the main ingredients in Dr. Christopher's bone, flesh and cartilage formula. I didn't used to understand why he used this medicinal plant in this formula until I came to appreciate it more fully. Oak bark not only stops the free running of fluids into or out of a joint but also stops the loss of calcium from bone. It also moves out congested blood, which is a problem discussed below. Dr. Christopher combined oak bark with comfrey, which is regenerative to joints and tissues, mullein, which helps the fluids move down the tendons and muscles, wormwood, which is nourishing and breaks up scar tissue, and black walnut, which is a major remedy for fibromyalgia. The connection between thickened fluids, hypothyroidism, fibromyalgia or rheumatism and black walnut will be discussed further, under the muscles.

Joints, hot. Acute osteoarthritis is usually due to the joints getting dried out or not moving enough to flush the toxins. In this case we need homeopathic *Bryonia* (lubricate dry bursa), homeopathic honey bee or *Apis* (hot, red, swollen, painful), or herbal *Agrimonia* (pain in the joints).

Joints, cold.

Rheumatoid Arthritis. Probably the worst disease among the chronic muscular and skeletal pathologies (not counting various nerve degenerative diseases like MS and Parkinsonism) is rheumatoid arthritis. This is a "connective tissue" or "autoimmune disease." The immune system becomes so overactive that it attacks the body itself. One of the first places it goes after is connective tissue. This can be the mucosa in the nose, the lining of the small intestine (food allergies, enteritis), the red blood cells, or the cartilage in the joints. As the cartilage is attacked and inflamed it gets swollen and malformed. This causes the typical misshapen and inflexible finger and hand joints seen in rheumatoid arthritis.

The following description of rheumatoid arthritis is rendered in Thomas Sydenham's *Processus integri* (1689, 1847, 245):

The sad list of symptoms begins with chills and shivers; these are followed immediately by heat, disquietude, thirst, and the other concomitants of fever. One or two days after this (sometimes sooner) the patient is attacked by severe pains in the joints, sometimes in his wrist, sometimes in his shoulder, sometimes in his knees – in this last joint oftenest. This pain changes its place from time to time, takes the joints in turns, and affects the one that it attacks last with redness and swelling. Sometimes during the first days the fever and the above-named symptoms go hand in hand; the fever, however, gradually goes off whilst the pain only remains; sometimes, however, it grows worse. . . . Its violence, indeed, may vary; so that, after the fashion of gout, it may come on of odd times, and in periodic fits. This, too, may happen after the aforesaid pains have been long, violent, and afflicting. Then they may cease of their own accord: the patient, however, shall be a cripple to the day of his death, and wholly lose the use of his limbs; whilst the knuckles of his fingers shall become knotty and protuberant (as in gout), with the knots showing most on the inside.

With all this, the stomach shall be strong, and the patient be sound in other respects.

In order to be able to combat rheumatoid arthritis we are going to have to know how to fight one of the most difficult disease entities to combat in the body – autoimmune disease. The conventional doctors use prednisone or cortisone, which suppresses the immune system and therefore the inflammatory disease, but this causes untold damage to the body. People swell up with big moon faces and hardly feel or look like themselves. Something about the immune system connects with our sense of self (remember, the T-cells are coded to recognize self versus not-self), so that when it is suppressed we do not feel like ourselves. I remember one woman who quit prednisone on the third day because, as she said, "this stuff eats my soul." She said she'd rather die than fall under it's power. Fortunately, we found a good remedy for her autoimmune disease – Crohn's disease. Gravel root brought it under control and she is alive and well to this day. – And that is also an excellent joint remedy.

There are two basic causes of auto-immune disease. If the mineralocorticoid side of the adrenal cortex, with its heat and immune promoting factors is overactive, then there will be a sheer excessive immune response, inflammation, and oxidation. The cartilage is naturally susceptible to immune excess and the problem may lodge here. On the other hand, if there is overactivity of the opposing side, the glucocortiocoids, a syntoxic state will obtain in organism with a toleration of toxins up to a point – at some point an excess of toxins will cause an autoimmune over-reaction. This is why a number of the more holistic doctors have associated with "bad blood" or toxicity with autoimmune disease and rheumatoid arthritis. Note the theory of Dr. Barnes, mentioned above. Another physician who subscribed to this idea was the late Dr. Rudolf Weiss. He recommended dandelion root for rheumatoid arthritis based on the theory that it was a form of toxicity and recorded success.

There are basically two tissue states which will be associated with rheumatoid arthritis: heat/excitation (when the system is overactive) and toxic/stagnation (when the inflammatory responses have been suppressed and then overact). In the former condition we would recommend such remedeis as rosehips, peach, hawthorn, and sheep sorrel. In the latter condition we would think of dandelion and its analogues, the blood-cleansers, especially devil's claw.

Edgar Cayce developed a formula for healing rheumatoid arthritis which is simple and apparently quite effective. Dissolve 1/2 cup of epsom salts in a shallow dish, in water as hot as possible, and bath the hands. Afterwards massage in peanut oil. Repeat for five days straight. I have not tried this formula, but my friend Sheila Kern, a nurse, herbalist, and massage therapist in Harrisonburg, Virginia, has often used it with success.

I consider this usage to be particularly backed up by the 'doctrine of signatures,' since the peanut in the shell looks like rheumatoidal changes in knuckles and fingers and a clump of peanuts coming out of the ground looks a lot like a rheumatoid hand or foot. Thinking less magically, but still by analogy, it ought to be remembered that the peanut can cause severe allergic shock and death by overstimulation of the immune system. Rheumatoid arthritis is caused by long term, slow overstimulation of the immune system. Thus, we have an illustration of the 'doctrine of signatures' and the 'law of similars' (like treats like).

Energetics of the Muscular/Skeletal System

Conditions of the muscular and skeletal system often arise from injuries that are not related to the tissue state model or to any kind of traditional humoral diagnosis. The nature of the injury (high or low impact, sharp or dull instrument, etc.) and the tissue in involved (bone, muscles, cartilage, tendons, joints, blood vessels, etc.) often determine the remedy needed for correct treatment. However, there are underlying tissue states which influence the direction in which the injury evolves or which themselves cause a slow, chronic illness in the muscular and skeletal system independent of injury – arthritis, fibromyalgia, neuralgia, etc. In fact, this system (when the influence of injury is

sorted out) reflects rather closely the characteristics of the dominant pathway for dealing with stress in the body. Undoubtedly, this is because the muscular and skeletal system is so heavily stressed. Thus, we look for conditions due to heat, dryness, dampness, cold, constriction, or relaxation. Even in the nineteenth century, as for example in the work of J. M. Thurston (1900), we find that structural conditions and remedies were sometimes analyzed in terms of the tissue states.

Irritation. This condition is due to an over-emphasis on the mineralocorticoid side of the adrenal cortex, causing auto-immune over-reaction. The connective tissue and joints are especially prone to this sort of auto-immune disease. Indeed, auto-immune disease is often known as connective tissue disease. Sometimes inflammation in the joints or bursa is due to lack of fluids, rather than innate irritability of the tissues and should be treated by moistening agents – see under dry/atrophy.

Research has shown that vitamin C and flavonoids, both of which occur in conjunction with plant acids, can reduce arthritis and synovitis in some people. Richard Lucas (1982, 119) gives a case history where bioflavonoids proved promptly successful. The patient was "a 38-year-old man with knee joint bursitis, symptomized by extensive swelling, extreme tenderness, local heat, limitation of movement, and severe pain." These, of course, are exactly the kind of symptoms we associate with the hot/irritated tissue state. They are most common in joint pains due to autoimmune disease.

I had a similar case. While teaching at Deep Portage, Minnesota, a woman came up to me after the herb walk suffering from a flare-up of rheumatoid arthritis. The prednisone from her doctor was not holding back the problem. Her mildly twisted fingers and hands were red, swollen, tender and noticeably warm. Her tongue was red. In the gathering darkness I found what I thought was a wild cherry tree and had her nibble the leaf. This promptly reduced the symptoms. However, after looking at the tree in daylight we came to the conclusion that it was some kind of exotic fruit tree, not a wild cherry. A year later she came up to me while I was teaching in White Earth reservation in northwestern Minnesota and showed me her hands – the leaves (whatever they were) continued to keep the inflammation checked beautifully.

Characteristic indications: Joints hot, red, swollen, tender; very painful on movement; sharp pains on movement; bursitis, synovitis; nerves inflamed, tender and sensitive, shooting pain along the nerve; autoimmune or rheumatoid arthritis; tongue flame-shaped, red/pink or carmine.

> ***Prunus avium.*** Cherry is a member of the rose family, many members of which are useful to reduce heat and inflammation. This is not the wild cherry of North America *(Prunus serotina),* so frequently used in American herbalism, but the cherry native to Asia, domesticated for its fruit and cultivated throughout the world.
>
> Cherry fruit is sweet, sour and cooling. The bark is used for fever and bronchitis. Maurice Messegue (1979, 92) prefers the wild cherry, from which the domesticated variety was obtained by selection. He cites cherry stem tea as a diuretic that everybody in Europe has heard about.

Generally, diuretics, acting on they do on the balance of liquids and solids in the body, has the ability to remove arthritic or gouty deposits.

Ludwig Blau, Ph. D., discovered that a bowl of fresh cherries relieved his gout. He mentioned this to his doctor, who made a clinical trial. The cherries cured twelve people on an unrestricted diet. Relief has been obtained from different commercial varieties of cherry, including the sour cherry. Dr. Blau reported these results in *Texas Reports on Biology and Medicine* in 1950 and subsequently cherry juice became a folk remedy widely used for gout (Richard Lucas, 1981, 105).

The two basic remedies with a proven track record in gout are cherry and nettle. Although both may reduce deposition of uric acid, they are very different in their activities, the first sedating, the second stimulating – the two conditions are opposite. One formula cited by Richard Lucas for gout incorporated nettle and apple peels together.

Specific indications: Arthritis; knees swollen, stiff and painful; aching and throbbing in the knees; arthritis in shoulder and arm; gout (cured symptoms given by Lucas); rheumatoid arthritis (sweet and sour cherries; Sondra Boyd).

Prunus serotina. Wild cherry bark and birch, combined and applied topically is a traditional remedy for "fulminating auto-immune arthritis," according to Cherokee herbalist Sondra Boyd. Birch contains wintergreen oil, a stimulating anodyne or pain-reliever.

Prunus persicaria. I have seen the wonderful affect of peach leaf and twig on autoimmune excess heat conditions affecting the mucosa, and I suspect it would also act upon the connective tissue.

Rosa spp. Rosehips are sour, sweet, cooling, and astringent. They contain, in addition to vitamin C, high amounts of bioflavonoids. Many vitamin C supplements are made entirely from rosehips.

Richard Lucas (1982, 183-7) collected numerous case histories where arthritic pain, especially back pain, was cured by the use of vitamin C, sometimes abetted with calcium supplements. This regimen was first introduced by Dr. Paul Harrington, an orthopedic surgeon, in Houston, Texas. He treated over 40,000 patients with back pain and disc problems with vitamin C (2,000 milligrams/day) and found that 80 % reported increased relief from pain and increased mobility. The cases cited by Lucas included several where the people were in traction and several where the pains extended down to or arose in the sacrum.

Some years ago I gave rose petal tincture for a mild respiratory problem. The next day the man felt less tension through the shoulders and chest and people in his Tai Chi class observed that he was not holding his shoulders so high. Since that time I have noticed that this lessening of tension through the chest often occurs when rose is administered.

Crataegus oxycantha. Hawthorn berries are used for the cardiovascular system. They have also been found to be effective in the treatment of autoimmune disease. They are a member of the rose family.

Sambucus canadensis, S. nigra. Elderberry juice or wine has long been used as a remedy for neuralgia, trigeminal neuralgia, and sciatica. Several European doctors tested elderberry juice and confirmed these traditional uses in clinical trials (Richard Lucas, 1982, 194).

Achillea millefolium. In acute arthritis, "when there is a marked temperature, a strong infusion of *Achillea millefolium* and Composition will induce sweating and so reduce temperature" (Lingard, 1958, 10).

Lactic acidum. Lactic acid has long been used to cure cramping after exercize, pain, stiffness and tenderness in the muscles from influenza and rheumatism or fibromyalgia from muscular stiffness. The reason for its activity is unknown, though it is certainly homeopathic, since lactic acid buildup is the cause of all these problems.

I have personal experience with this remedy. One morning I work up with an influenza and muscular stiffness so severe that I literally could not go out to the car to get at my remedy kit – in those days I had only a portable set of tinctures. I looked around for something to help me in the kitchen and found a bottle of concentrated whey. Thinking that like would treat like, I took a tablespoonful in water. The effect was immediate on loosening up my muscles; I did not need to go to the car. The influenza passed in about forty-eight hours.

Thomas Sydenham's *Processus integri* (1689, 1847, 246) recommends whey in rheumatism, or what we would today call fibromyalgia. "With young persons, and those who have not over-indulged in wine, rheumatism may be dispelled simply by spare, and very cooling diet, provided that it be moderately nourishing." The following is the specific diet he recommends. "Let the patient live on nothing but whey for four days; afterwards taking, besides the whey, some fine wheaten bread once a day as his dinner, until he is thoroughly convalescent. During the last days he is allowed a little bread at supper. When the symptoms are giving way, he may take a little tender chicken boiled, or some similar digestible food. Every third day, however, he must be limited to the whey alone – and this until his strength has wholly returned."

Tension. The moving parts of the body are often subject to tension and binding. Muscles become contracted, spasmodic or twisted. Nerves are pinched, causing sharp pains on movement. Inflammation in joints causes tension, shortening and eventual destruction of muscles and tendons. Deep chills and fever cause flu-like symptoms which can last a short time or become chronic. This can be a cause of autoimmune or rheumatoid arthritis.

Characteistic indications: Tension and pain, worse from movement, pressure and cold; constriction of breathing; severe spasms causing (through lack of circulation) weakness and atrophy; achiness, soreness, stiffness and exhaustion, as from a flu; fibro-myalgia, rheumatoid arthritis; pulse wiry, tense, hard, obstructed.

Lobelia inflata. This is the great remedy for torsion of the muscles, especially where the problem originates in the parasympathetic system or smooth muscles. "Spasm" is not a strong enough word; the muscles are torqued or twisted and sometimes this extends to the entire frame. Lobelia is good in combination with black cohosh if there has been whiplash and person was twisted during the accident. It is often used in combination with other remedies to bring them into the right parts of the body and this is especially the case when we are dealing with muscular problems.

Valeriana officinalis. Valerian is described more fully elsewhere. It is a strong relaxant with an affinity to the smooth muscles of the pelvic and abdominal regions, sometimes also the lower back. It often controls pain, temporarily or long enough for healing to set in. Valerian is relaxing and cooling, which indicates that it should be used in a hot, inflamed condition.

Viburnum opulus. The European guelder rose or crampbark contains valerianic acid, and although it is not as acrid as valerian, it is also a muscle relaxant with an affinity for smooth muscles, the uterus, pelvic and abdominal regions and the lower back. The American *Viburnum trilobum* probably can be used in its place.

Humulus lupulus. Hops contains a compound which, on drying, turns into valerianic acid. It is therefore a powerful smooth muscle relaxant like valerian and crampbark. Richard Lucas (1982, 182, 197) collected several case histories where hops in vinegar were used for treating muscle spasms in the lower back caused by overwork. One woman commended it for dramatic relief of pain from "knots" in the muscles. Fomentations and poultices are also applied to neuralgia and sciatica for relief. Hops is relaxing and warming.

Agrimonia eupatoria. Agrimony is a member of the rose family which is sweet, acrid and astringent. It reduces heat, swelling, redness and tenderness, such as we associate with the heat/irritation tissue state – like so many members of the rose family. It's true genius, however, is in resolving tension, and for this reason it has a general relationship to the muscular and skeletal system. It also tightens joints where appropriate.

Agrimony with vinegar and mugwort was used in the time of Chaucer for a sore back. Culpeper (1652) cites the former as a remedy to "strengthen members that are out of joint." J. H. Oliver, a British medical herbalist, recommended it for acute rheumatic or muscular pain. "Add four drops (not more) to half a tumbler of warm water; stir well; and take a dessert spoonful every two hours until all pain ceases" (quoted by Richard Lucas, 1982, 133).

Dr. Bach used the flower essence of agrimony for arthritic pain when the patient felt the characteristic symptom – torture. He recorded an arthritic case where the joints were swollen, hot and red and the patient felt tortured by the pain. In my experience, the herb picked before

flowering works better than the flower essence. I use small doses, as both Bach and J. H. Oliver recommended. I suspect that agrimony has the ability to increase cortisol output, thereby directly soothing pain and irritation.

Potentilla spp. Cinquefoil has properties that are similar to agrimony. However, it has more of an affinity to the hands and feet. The five-leaflets conjoined like a marijuana leaf are a signature pointing to the hand. Skeptics may laugh, but I personally have experienced the precise healing benefits of potentilla on the hand. I have also been instructed by some of my Indian friends in the manufacture of potentilla salve for healing the hands and feet.

Liriodendron tulipifera. Tulip poplar is sweet and acrid, making it a nourishing antispasmodic. It is relaxing to the sympathetic nervous system. I first learned about it as a heart tonic. However, I subsequently learned from Southern herbalists Phyllis Light and Darryl Patton that it is also a traditional arthritis remedy. The latter pointed out that it is a cousin of cucumber tree, which was the chosen antiarthritic of his mentor, Tommie Bass, and that it possesses the same properties in lesser measure. Since I have a hard time getting cucumber tree, I have to use what I can get. Tulip tree is much more common and available, though it does not grow in Minnesota. There was a single tree growing in a sheltered spot overlooking the Mississippi on the Univesity of Minnesota campus, but it was destroyed to build a parking lot for the heart hospital.

A fifty two year old woman had been having headaches and muscular pains for over thirty years, since a serious car accident. (Truck hits car). She was a thin, dry *vata* type, so I figured the best anodynes would be moistening and nourishing. A combination of mullein leaf, black cohosh rhizome and liriodendron bark, in tincture, gave the first appreciable relief she had ever had, after years of drugs and alternative therapy. Subsequently, wormwood proved especially effective for her, probably because it is well suited to cases where there is scar tissue.

Cimicifuga racemosa. Black cohosh is sweet and acrid, so it acts on both tension and drying out. It increases internal lubrication and nutrition, but also gets the internal fluids to move, so it is a powerful antispasmodic. It works especially well in women with low estrogen as a general nutritive tonic. It is especially beneficial after menopause, in women who develop rheumatic pains in the "belly of the muscle." However, it is also indicated when the origin of the disease lies in an injury producing tension or spasm. Black cohosh is also highly specific in cerebrospinal injuries, when there is "bunching up of the cerebrospinal fluid." A specific indication is pain and tightness in the attachments of the trapezius muscles to the upper outside shoulder blades. If the traps are hard, black cohosh will prove excellent. If hard on one side only the injury was disproportionate in force and it may be well to add some lobelia (one dropperful in an ounce of black cohosh; three drops a day for six weeks). I don't know how many cases of whiplash I have helped with

black cohosh. Many cases of "fibro-myalgia" (inflammation, tenderness and pain in the muscles) are due to old whiplash cases.

Caulophyllum thalictroides. Blue cohosh has some capacity to break up old muscular soreness from whiplash that my friends Lobelia and black cohosh do not, according to my friend Julia Graves. "So I now include it on the whiplash team!" Another friend, Phyllis Light, notes that it should really be considered in cases where there is spasm, not only in the female sphere – where it is most famous – but in other areas of the body.

Lactuca scariola, L. virosa, L. canadensis. Wild or prickly lettuce is an important remedy when there is stiffness and coldness in the muscles, with deep achy pain, need for limbering up, stiffness on movement. The characteristic pulse is hard and slow – showing that cold is fighting against the heat of life. If the heat of life were dying down, to create cold the pulse would be slow and soft.

Dipsacus sylvestris. This large thistle is a common weed in the Great Lakes states and elsewhere. It grows in annoying abundance, covering whole patches of land in nasty thickets. It is easily recognized in winter or summer by the tall, gaunt stalks, topped by large thistle-heads. The stalks are covered with harsh prickles and clasped by large leaves which join around the stalk to form a cup which catches water – a signature or sign that it is a remedy for the joints. Fuller's teasel is native to Europe and was once used to card or tease wool. The Japanese Teasel has long been used for joint problems in oriental medicine. William LeSassier first introduced me to its use and taught me about its valuable properties.

When a large joint has been wrenched or torn, teasel is often needed. It is suited to wrenched, torn, inflamed, chronically swollen and painful muscles, usually the result of injury. When whole sheets of muscles are inflamed, or there are spots of inflammation here and there, Teasel will often prove beneficial. It is especially suited to shoulder-injuries and lower-back pain.

Here is another good case history from Lise Wolff. A middle aged skiier tore his anterior cruciate ligament. An MRI revealed that it was "completely torn and shredded." Lise gave teasel, 3 drops, once a day for a month. The patient, now pain free, flew to another city to have surgery at a specific hospital. The doctor looked at the MRI and said, "that certainly is a torn ACL," but surgery found only two "tiny buckle tears."

Teasel has an affinity for large-framed people who, when they move suddenly, seriously throw out some joint. Often there is chronic inflammation, which predisposes the muscles to weakness and strain. As William says, it is useful for people "who once had a use, but have lost it," because of damage and incapacity, or to people "who have taken a wrong step." It is sometimes beneficial for fibro-myalgia, although here it is joined by Solomon's seal, black cohosh and lobelia. This catchall diagnostic category does not really tell us much, and we must look to the

cause of the injury in order to under stand the kind of medicine needed. Because teasel is good for deep inflammation in the muscles, I have used it successfully several times to help people suffering from that dread disease, Lyme. It sometimes causes an aggravation as it ferrets the spirochetes out of the deeper muscles and reanimates the system.
Teasel is rarely found in herbal commerce. It is a biennial. The taproot is picked when the basal rosette of leaves has reached a large size, usually in late summer or fall of the first year of growth. Any variety will do---the cultivated or wild.

Eupatorium perfoliatum. The common name for this plant is boneset: pronounced "bon-a-set" or "bone set." The name indicates the use as a bone-healing medicine. This tradition is widespread among Indian people in the Great Lakes and Appalachia, as well as among rural people in the same areas. One of the Anishinabe (Chippewa) names for boneset translates as "bone. . . to repair." The famous Anishinabe herbalist Keewaydinoquay learned about it from her mentor, Nomequay, and used it herself on a compound fracture which she treated when she was alone on an island in Lake Michigan.

Although I have heard of using boneset as a bone-healing remedy from many different folk medical sources, this application is not mentioned in the nineteenth century literature of profession medicine and the scholarly writers tell us that there is no history of any such usage. Modern herbalists repeat this line and tell me that the use is only based on a misunderstanding of the name.

I gave several case histories for setting bones with boneset in *The Book of Herbal Wisdom.* One woman who based her therapy on my book reported the following. She flew off a dirt bike in Arizona, landed on her shoulder and shattered the ball of the left humerus, but not the socket. The doctors initially told her that they thought her arm would have to be amputated at the shoulder! She took boneset, mullein and lobelia, did energy work, shamanic healing and prayer. Two weeks later she had surgery. The surgeon said, "it was as if I had opened up a different person." The fragments were all forming back into place and the bone was healing beautifully. She added comfrey the night before and after the operation. I saw her six months later and she looked entirely healthy.
Another woman suffered a spiral fracture of the tibia. Her husband put her on boneset tea. On the third day she was sipping the tea and he was doing Reiki energy work on her when they both heard a click. "What happened?" he asked. He saw her eyes widen. "I just felt the bone go back into place," she replied. This case too healed perfectly.

My friend Lise Wolff pointed out a signature indicating boneset in bone healing. The stalk snaps like a broken bone when it is picked, unlike many plants. Here is a case history from Lise. A tall, thin, athletic women, aged 34, came for menstrual disorder. Recently she had crushed her fingers in a window. Lise gave boneset, false Solomon's seal and yarrow. The pain went away and she slept well that night, for the first time. Two weeks later she had complete range of motion and no pain. The doctor said, "then it wasn't a crushed bone, the x-ray must be wrong."

Another herbalist who has long used boneset – in decoction – for bone setting is Dick Reardan, of Altadena, California. He taught me deeper mysteries about this plant. In one case a horse was missing four inches of bone in its leg. Instead of putting it down, he poulticed it with boneset continuously for weeks and the bone slowly filled in until it healed completely and normally. Dick offered his observation that boneset did something like "return the cell back to a more primeval stage," so that it could regrow. A student listening in put his finger on the main idea: "it returns to the stem cell phase." None of us know if this is the case, but it is certainly a possibility I wish to report because of the potential value in regrowing damaged bones and other tissues.

It is interesting to contrast the magic of boneset with its cousin gravel root. The former seems to return the cell to its primeval adaptability, while the acts latter in the same but opposite direction. To the best of my knowledge, gravel root percipitates the crystal of individuality and begins the movement towards self-development according to the great blue print of individuation. This is deep stuff of the kind which American Indian medicine is based upon – which scientists dismiss laughingly as the superstitions of ignorance.

Boneset is primarily used in influenza when there is an aching, crushed feeling in the bones, with shivering and chills – the typical flu of northern climates. It probably increases circulation to the periosteum to relieve these symptoms and treat broken bones (herbalist Halsey Brant). It is indicated in broken and crushed bones, slow healing, soft spots that do not heal as well as surrounding tissue. The tea is intensely bitter, but many people with broken bones crave the taste. Tea, tincture or homeopathic preparation can be taken.

Atrophy. This is a very important tissue condition affecting the muscular and skeletal system because dryness and atrophy can cause lack of lubrication in joints, impaired movement, pain, withering and finally hardening of muscles, joints and tendons. Lack of nutrition causes loss of strength. A number of serious arthritic conditions (scleroderma, psoriatic arthritis) are associated with intensely dry, partched skin. This condition can arise from a lack of fluids or from a too strong emphasis on sodium retention and potassium excretion. We see this in the MC pathway and in the adrenaline excess pathway.
Characteristic indications: Skin and mucosa dry; wasting, withering, thinness; atrophy of muscles and tendons; joints dry and crackly, sometimes painful on movement; movement restricted and weak.

Arctium lappa. Burdock root is oily, moistening and lubricating. It has long been used when there are dry, stiff joints. There are also tendencies to the deposition of calcifications in the burdock picture. The person may be thin, dry and hardened up. A similar picture is found in the following remedy.

Asclepias tuberosa. Pleurisy root is a bitter, sweet, nourishing, lubricating plant that not only increases internal secretion in the pleura, but in the bursa. It's action is gentle and it combines well with other

agents. It is beneficial when severe heat has burned out the fluids lining the joints, resulting in adhesions in the joints. I mentioned this fact in *The Book of Herbal Wisdom*.

My friend Jennifer Tucker, an experienced herbalist in State College, Pennsylvania, put this information to work when she had a frozen shoulder. Little motion was left in the left shoulder. "It looks like an old, advanced scoliosis," said the physical therapist. She was in the waiting room, reading my book when she hit the part about *Asclepias tuberosa* and joints. She knew it was the right remedy. "I'm afraid we may have to do surgery," said the physical therapist. "We're not making any progress." "Oh no," replied Jennifer. "You wait. I know what plant to cure it with now." She went home, dug up a plant in her field (which has some of the best pleurisy root I've ever seen) and started chewing it. Even on the first day motion was increased 20%. Now the physical therapy exercizes worked. In 60 days, to the pleasant surprise of the PT she had normal range of motion. Now one would never know she had a problem.

Angelica archangelica, A. atropurpurea. Angelica and its cousins and analoges, osha root *(Ligusticum porteri)* and bear root *(Lomatium dissectum)* are oily and moistening to the muscular and skeletal system. The latter is perhaps the oiliest of the group and almost begs to be used as an "oil" to lubricate joints.

A tall, thin sixty-two year old man came to see me about a number of problems – I won't go into the rest of the condition. He walked stiffly and joked about telling his kids (they were quite young) that he needed "oil" to lubricate his hips. His complexion was gray/yellow, the skin was dry and the hands were somewhat red/purple, showing poor circulation. When we gave him *Angelica atropurpurea* (I use the local, wild species) his faced reddened, the skin became moister, the hands less purple and he got up and started dancing around the room like a hula or belly dancer! Old hippies never die. They know enough to trust herbs. We "put the hip back in the hippie."

Betula lenta, Betula spp. Birch oil is an old traditional remedy for the joints and skin, both in Europe and North America. It is sweet, faintly acrid and warming, removing dryness, spasm and cold in the joints and muscles. "It is most amazingly effective in relaxing cramped muscles and it relieves the pain of the knee ligaments from hours of sitting cross legged like nothing else" (Julia Graves). The oil is emollient on the skin, loosening and lubricating hard scar tissue from acne and other causes.

Linum usitatissimum. Flaxseed is usually used fresh, but if allowed to cure it will turn into linseed oil. This is now toxic for internal consumption, but can be used externally. Dorothy Hall (1988, 214) gives an extensive account of the use of raw linseed oil externally. She describes how it strengthens ligaments and connective tissue that is torn, strained, cut, too relaxed or too tight. It also restores elasticity to the skin and tendons after burns. She uses it for repetitive use injuries. Bernard Jensen

(1979, 37) recommends a drop of sterilized linseed oil (from the drug store) in the eye to prevent the irritation from smog.

Medicago sativa. Alfalfa herb, seed and sprouts have been used in herbalism and naturopathy much in the twentieth century. It has a nicely sweet and bitter taste that indicates its nutritive/alterative action. It is particularly used where there is acidity in neurasthenic persons. Acidity can be a cause of arthritis and fibromyalgia.

Anne Wigmore, of the Hippocrates Institute, introduced the use of alfalfa spout juice as a cleansing diet. I have known several AIDS patients, back before the era of the protease inhibitors, who could hardly survive without it. Alfalfa is both sustaining and cleansing.

Alfalfa tablets, made from the mature leaves and flowers, have often been used as a general arthritis remedy. Richard Lucas (1982, 179) collected eight cases of lumbago and lame back cured by alfalfa. Both upper and lower back pains were cured. Most of the patients used alfalfa seed tea. It seems to be indicated in people who are dry and perhaps atrophic.

Stellaria media. Chickweed is cooling, moistening and loosening. Though not oily – like burdock – it has an action on lipid metabolism. It removes lipid deposits and improves lipid usage. It is an excellent remedy for lipomas, or fatty tumors. Culpeper recommends chickweed poultices externally on tendons that are hard and cramped up.

Equisetum arvensis. Horsetail contains a high level of silica (about 35%), but its action probably depends upon the tiny amounts of silica that are in solution. Doctors say that we already have enough silicon in our bodies to be healthy. Take away the water and 97% of the body weight is silica compounds. However, that doesn't mean we have it in the right places or that it is available when needed. There can be too much in one place and not enough in another. Horsetail helps directs silica to the right places.

This plant has long been used to strengthen the hard surfaces throughout the body. It is especially indicated when the nails, skin and hair are weak, so that the nails are ridged, pitted, broken, thin, misshapen and there are little irritations and hangnails about the bed of the nails. The nerves are also affected; these people are a bit nervous. They sometimes pick their nails. Sometimes the hair is thin and breaks easily or there are lots of split-ends. Or again, the skin remains tender long after an injury and a scar forms which is unnecessarily large, a keloid scar. In some people the mucous membranes are weak and they get allergies and hay fever sensitivities to all kinds of stuff because the membranes are easily irritated. Or the bladder gets inflamed, not do to bacteria, but weakness of the linings. Horsetail is especially good for the kidneys. All the internal organs are affected, as well as the nervous system and the mind. The Horsetail person, though full of ideas and energy, easily be comes nervous and feels like they can't handle the situation, or they lack confidence.

The hard and semi-hard parts of the muscular and skeletal system are especially affected by a lack of silica. Horsetail is the superlative remedy for strengthening and rebuilding the cartilage in a knee or elsewhere. Some times it makes knee-replacement operations unnecessary. Here it should be used with Solomon's seal, to ad just the tension on the joint as healing progresses.

This is an ancient, dinosaur-era plant, which has survived on low, sandy, wet ground near the edges of swamps and streams. Sand is composed of alumino-silicates. Sandy, wet soil is a signature for the kidneys and kidney stones, and Horsetail is used to rid the body of such deposits. Also, the stalk is filled with clean, filtered water, another kidney signature. I picked a stalk and bent and twisted the joint between my fingers. To my surprise, I found that there was a flexible material in the joint, so that it turned without breaking. How like cartilage, I thought. The round tubes are like various hard tubes and sheaths around the body – bronchial tubes with their cartilaginous rings, tubules in the kidneys, blood vessels and nerve-sheaths. The rough-ridged stalks look like finger nails, the smaller ones feel like a horse's tail when run through the fingers and there are little scales at the joints that look like hangnails. Finally, horsetail gives "grit" to the nerves and "flint" to the will.

The young stalks are picked in early summer. Only those growing in the shade should be used, since the sunshine generates compounds in the plant which are a little bit toxic. They should be crushed and broken up to release the water from the insides, or they will rot. Because they are high in silica, they cannot be eaten directly, but should be taken as a tea. The stalks can also be made in a tincture or salve. Both *Equisetum arvensis* and *E. hyemale* may be used.

Polygonatum spp. True Solomon’s seal is an extraordinary medicine for the muscular and skeletal system – probably the most important remedy for this system that I have ever encountered. It is suited to a wide range of problems affecting the joints, ligaments, tendons and muscles. It tightens or loosens tendons and attachments (depending on which is needed), strengthens and repairs joint damage, soothes or even cures many kinds of arthritis in the joints, and works nicely with repetitive-injury problems such as tennis elbow, jogger's knee and carpal-tunnel syndrome. True Solomon’s seal is moist, sweet and slightly acrid, so it is suited to dry/atrophic conditions affecting the tension-bearing structures.

True Solomon’s seal was originally introduced into English language herbal medicine by John Gerard in l597. The old Greek and Roman authors dismissed it as a poisonous plant. However, only the blue-black berries are toxic, the roots are sweet, edible and medicinal.

"Galen saith, that neither herbe nor root hereof is to be given inwardly," Gerard (1635, 905) comments. "But note what experience hath found out, and of late dayes, especially among the vulgar sort of people in Hampshire, which Galen, Dioscorides, or any other that have written of plants have not so much as dreamed of." These clever folk-healers used Solomon's seal extensively. "If any of what sex or age soever chance to

have any bones broken, in what part of their bodies soever; their refuge is to stampe the roots hereof, and give it unto the patient in ale to drinke: which sodoreth and glues together the bones in very short space, and very strangely, yea although the bones be but slenderly and unhandsomely placed and wrapped up." Moreover, the said people do give it tin like manner unto their cattell, if they chance to have any bones broken."

Gerard reports several other valuable uses. "The root stamped and applied in manner of a pultesse, and layd upon members that have been out of ioynt, and newly restored to their places, driveth away the paine, and knitteth the ioynt very firmely, and taketh away the inflammation, if there chance to be any." It is also beneficial for bruises. "The root of Solomon's seale stamped while it is fresh and greene, and applied taketh away in one night, or two at the most, any bruise, black or blew spots gotten by falls." It is also good for internal bruises. The root stamped and the juice drunk, "helps any inward bruise, disperseth the congealed and clotted bloud in very short space." This will be beneficial during healing from a broken bone, which is usually surrounded by congealed blood. It is beneficial for many of the complications associated with broken bones. It is used "against inflammation, tumors or swellings that happen unto members whose bones are broken, or members out of ioynt, after restaruration."

"That which might be written of this herbe. . . would seeme unto some incredible," he continues. "But common experience teacheth, that in the world is not to be found another herbe comparable to it." My own experience validates these comments.

Solomon's seal is one of those plants which demonstrates the truth of that oft-ridiculed idea, the doctrine of signatures. The white roots look like bones, joints, knuckles and vertebra. When dry, they look even more like a bone, because the outside covering and the inside begin to look different – like the periosteum covering the bone. Then there are little spurs. These suggest an affinity to bone spurs. Solomon's seal usually cures spurs and bunions by correcting the tension on the muscles and tendons which cause malformation of the bones. It decalcifies, as needed by the body, breaking down spurs and deposits, yet it recalcifies, builds up and repairs bones. Most white roots contain or act on calcium. One of my students, a polarity-therapist, noticed the way the leaves fold around the stems. They resemble the way muscles fold around and attach to bones.

Solomon's seal is the superlative remedy for tightening or loosening tendons, ligaments and muscles. It adjusts to the right tension. It is useful for ligamentous looseness, where the ligaments are stretched and don't hold after an adjustment. I helped one fellow who had a ligament in his foot that was stretched an inch too long. The doctors wanted to cut out a piece and sew it back together, but Solomon's seal tincture rubbed into the area corrected the problem in about a week. A veterinarian was stiff and arthritic because of old football injuries when he was a cornerback at Ohio State. He had suffered from broken bones, a torn shoulder joint, calcification and stiffness and arthritic pain all over the place. Solomon's seal cleared out the majority of the problems in a

month. It is great for athletes (and old athletes), not only because it corrects so many muscular and skeletal problems, but because it adjusts to the right tension, thus avoiding injuries and "off-periods." It is good for spinal problems because it helps get the bones in the right places, as Gerard points out.

Solomon's seal is the great medicine for arthritis in the joints, while black cohosh and teasel are for rheumatic pains in the muscles. Although it will not al ways cure, it will almost always palliate and remove pain – even in rheumatoid arthritis. It is a good remedy for hip dysplasia in dogs, as I have seen again and again. Here's a report from a friend in California who adopted a little shitsu stray of unknown age. "Gave the Giz his first dose two nights ago at bed time. Next morning I let him out to potty. When he was through, he came bounding bak in the house. I watched him as he ran down the hallway. He was almost free of 'tanglefoot.' I have given him a couple more doses and it appears to be holding." Later on the report is cure for Gizmo and I'm asked to send more out for another dog who is doing well on it.

Solomon's seal is nearly foolproof for repetitive use tendonitis (and if it fails we still have other remedies such as homeopathic *Rhus toxicodendron* or comfrey poultices). One of my students worked in a jewelry-making factory. One Christmas she made Solomon's seal salve and brought jars for everyone as presents for her coworkers, because they suffered from repetitive-use injuries. It cured all twenty-plus people and they started using it for arthritis on themselves and their relatives – that's how we learned about its properties as an arthritic medicine.

William Salmon (1710, 1045), the last of the great Renaissance English herbalists, gives some additional information. "Taken at a time morning and evening . . . is said to cure ruptures when the guts fall into the cods, a cataplasm of the root being applyed outwardly." The macerated roots in wheat or rye meal are applied outwardly to seal green wounds and "strengthen a weak back."

Smilacina racemosa. False Solomon's seal is related to the true and has similar properties. It is also a remedy for injured, weak, pained, withered tendons and connective tissue. It appears that it has somewhat more influence on nerve pains than its cousin.

My friend Lise Wolff, registered herbalist AHG, is a great apostle of the benefits of false Solomon's seal. I taught her about the true, but she found the false and used it with about the same success. However, we both agree that there are cases where one works and the other does not. Lise says it is especially indicated when bruises complicate muscular and skeletal injuries, and for the pain associated with such bruising. Lise calls it a "general muscular/skeletal troubleshooter." It often helps when the indications are not entirely secure – but the same can be said for true Solomon's seal.

Lise shared her first three case histories with false Solomon's seal – the ones that taught her about the remedy. A thirty-eight year old man had pain in the knee following surgery on it three years previous. Now he cannot walk without the aid of a brace on the leg. Lise gave him the

tincture, 3 drops, 3x/day externally and internally. Two weeks later he called to say that he walked four miles to his deer stand in the woods without the aid of the brace and without pain. The cure was permanent. (Unfortunately, the original condition was not specificied).

Her second case was a middle-aged woman with lack of mobility in the neck. The vertebra were out of place for a week. She couldn't get to her chiropractor for another five days. "Here, slather this stuff on," said Lise, giving her some false Solomon's seal. The vertebra went back into place and the pain was relieved in three days. "Nowadays I prefer to spray a mist on the area," notes Lise. "If it is the right remedy it will provide instantaneous pain relief. If it fails to give relief, it is not the right remedy. The more they use, the better they feel." Small doses are not always the best.

The third case was a man in his fifties had a benign boney tumor under the tongue which caused no problems. It had been growing for about ten years. He also had a bunion on his foot. False Solomon's seal topically, 1-2x/day eliminated both in two months.

Lise tells me that *Smilacina* is especially effective in late term pregnancy, when the bones start to pull apart as women ready for delivery. It takes the pain away and probably assists in healing the stretched ligaments afterwards.

Here is one case history from my own experience which may prove helpful. A woman in her late thirties had pain in the gall bladder duct (which was dilated) and crest of the right hip. I gave angelica for the digestive pain – no improvement. I gave false Solomon's seal for the hip joint. That evening she had a fever. At night she broke out into a oily, smelly sweat. Both hip joints hurt – pain radiated down the leg. In the morning she was better, the original pain in the iliac crest, as well as the pain in the joints, was gone. She also noticed that her voice was better.

Symphytum officinalis. One of the many names for comfrey is "knitbone," indicating its ancient reputation in healing broken bones. The large, mucilaginous leaves were originally lightly broken, moistened and placed over the broken bone to form a natural cast. Comfrey contains allantoin, a substance which stimulates cellular reproduction and growth. However, there are problems with *Symphytum.* The remedy tends to cause rapid overgrowth of tissue, resulting in the formation of bony calluses on the break with poor regrowth in the deep pains of the bone. Thus, it sometimes must be stopped quickly after starting. It also can contain pyrolizidine alkaloids, making internal consumption questionable. (External use is o.k.)

Comfrey is particularly indicated in elderly patients, where cell division is slow and the likelihood of overgrowth is nil. It is also good when overgrowth is desirable – it toughens up the skin on the feet of dancers and the fingertips of needle workers. Like most mucilages it is drawing, hence it will not only strengthen joints, tendons and bones, but draw out inflammation and toxins.

One of my students in New York state healed a terribly torn rotator cuff in her husband. The doctor called it "shreaded" and she herself could feel

the shreads as she popped the ball back into the socket in between chiropractic visits. Finally, the D.C. recommended surgery. Instead, daily poultices of comfrey were tried. In six weeks the shoulder was virtually normal in sensation and had 95% range of motion.

Comfrey poultices have repeatedly cured carpal tunnel syndrome. Also see *Polygonatum* and *Rhus toxicodendron*. Between these three remedies it is almost impossible to fail to cure or dramatically improve this famous condition.

Apium graveolens. Celery seed has an ancient and persistent reputation as a curative medicine for arthritis. It is salty, moistening, softening and cooling, and it should be especially beneficial for those who are thin and dry, with hardening. It opens the kidneys and procures more urine, removing minerals that might otherwise remain. Celery juice can also be used instead of the tea or tincture of the seed. A rather detailed symptomology is given by homeopath William Boericke (1927, 64). It is frequently recommended by contemporary herbalist Jim Duke.

Specific indications: Rheumatism, gout; painful stiffness; bursitis in the shoulder, with pain and stiffness; facial neuralgia; neuritis; arthritis in the knees, painful, badly swollen and somewhat deformed (symptoms from case histories, Lucas, 1981, 48-50).

Verbascum thapsus. Mullein is one of those very common plants which has entered deeply into folk lore and herbalism. It is native to Europe but widely spread. It is a biennial producing in the first year a basal rosette of leaves, and in the second sending up a straight stalk of leaves topped with yellow flowers. The leaves have long been used in herbal medicine. They produce a salty, mineral rich tea, which indicates that the plant is moistening and softening. Most of the emollients in herbal medicine are salty. According to one tradition, the leaves should be damaged a few days before harvest to increase the healing properties. Mullein is especially used for the treatment of dry, relapsing coughs, where the trachea and lungs are dry. The cough is deep and hacking, shaking the whole frame and finally, after months of irritation, sometimes breaking a bone. What is less well known is that mullein is an important remedy for the muscular and skeletal system. I had to learn about this mostly through personal experience, rather than by following the books – mullein is not apt to appear on the top of most people's lists as a muscular and skeletal remdy.

It has a moistening, lubricating effect on the synovial membranes as well, so that it is hydrating to the spine and joints. It is often indicated in back injuries. People with such injuries sometimes think they are untreatable and incurable, but an increase in the synovial fluids will make the spine more pliable and comfortable. The vertebra will slip back into place more readily, pain and inflammation with decrease and the condition will get better. Mullein also has a rather unbelievable ability to "get bones in the right" place when they have been broken or are out of place. I have seen this several times. It will set a broken rib or digit, getting it back into place quickly. I remember watching it visibly dampen

around the coffin bone of a horse as we placed it on the manure covered hoof.

This property I first thought of as plain "magical," then I saw that there was some kind of physical secretion that assisted in the work. At any rate, my friend Julia Graves noted another "magical" effect. "I put cupping glasses over my chest after I rubbed the oil on to pull out the cough: it felt like with ease and in three waves it almost physically pulled something out of my chest. I never felt anything like that before in years of cupping! I thought of the signature of the cupping doctor:" the long, tall stalk pulling sap up from the ground. "Something got pulled out."

Another friend, Michigan herbalist Jim MacDonald, looked at the signature in the opposite way. "I think of the root, after the first year, holding all those minerals for strength and plans for straight growth, which appears in the second year. Therefore, I have long used a tea of mullein root to straighten the spine. It will take kinks out of the spine."

Relaxation. When we are relaxed calcium leaves the bones; it returns when we are active. Relaxation of the locomotor structures therefore causes demineralization, osteoporosis, easy breakage of bones, rickets, chronic ulcers on the legs and poor immunity. As calcium continues to move into serum it deposits out as hard, nodular swellings, forming swollen glands, joints and varicosities. Chronic ulceration on the lower legs may be due to relaxation and lack of good return venous blood flow – passive venous congestion.

Characteristic indications: Overly relaxed and overly flexible; joints not well knit together by tendons; weakness of the bones, osteoporosis, easy fracturing; poor development of bone marrow, ricketts, low immunity; arthritic deposits with weakness; chronic leg ulcers; skin soft and moist; pulse relaxed.

Osmunda regalis. This beautiful fern is almost unused in modern herbalism, but it is a reliable specific for lower back pain, earning it the name lumbago brake. As the name buck horn brake indicates, it is an "elk medicine" strengthening to the kidneys, i.e., the ability to hold water and maintain stamina. It is best known as royal fern.

Gerard (1597), who so often shows himself to be skilled in wound-healing and bone-setting, valued osmunda in dispersing clotted blood. It first appears in America in the herbal of Samuel Henry (1819), misidentified but already applied to rickets. Beal P. Downing (1851), called it the "only and absolute cure for rickets." He also says it is "good for aged women about the change of life, and is good for those who cannot hold their water." The only modern author to give it a lengthy description is Finley Ellingwood (1919, 211). Maude Grieve honors "lumbago brake" with a short mention.

Osmunda is a great remedy for bone nutrition. It also acts on discharges, free secretion of fluids and relaxation of the kidneys and bowels. When the organism is relaxed calcium is removed from the bones. When the kidneys are weak, this is effect is exaggerated. Ellingwood writes that osmunda is specific for "diseases of the bones, from malnutrition. Weakness of the osseous structure, rickets, diarrhea and dysentery. . . in poorly nourished patients." You get a weak child,

who has never had good bone nutrition, with weak bone marrow, and hence, poor immunity. It is also specific for backache in adults. They feel unsupported, financially worried, out on a limb. "It is also useful in weak back, especially in those cases where, with weakness of the muscular structure of the back, there are symptoms of incipient disease of the spinal vertebra. It has been used also in subluxations." It gives wonderful support to the lower back. I myself can testify from personal experience. I had backache from age 13 onwards, never cured except for osmunda. It corrects the problem in a few days; the cure lasts for months. The world definitely does not support my activities.

Grieve (1931) rightly informs us, "the actual curative virtues of this fern have been said to be due to the salts of lime, potash and other earths which it derives in solution from the bog soil and from the water in which is grows." It is mineraly, astringent and mucilaginous. "Its soothing influence on mucous membranes is remarkable," comments Ellingwood."

In order to obtain the mineraly/astringent properties put the young leaves in a bottle in the sun for about three hours. This gives a beautiful, mild, mineraly drink that reminds me of Tolkien's "entdraughts." This is one of my all-time favorite herbal preparations. Add alcohol to preserve, though it will produce a very mild tincture. For the mucilaginous effect, decoct in the sun for longer than three hours.

Specific indications: Tendencies to bone disease, bone malnutrition, weakness; tendencies to fluid losses (leucorrhea, diarrhea, frequent urination), demineralization, rickets; lumbago, weak back, weakness of the muscular structure of the back, osteoporosis, subluxations; diarrhea with acute or protracted fever, with weakness; in convalescence after such fever; in poorly nourished persons, with low immunity; hernia; frequent urination; female weakness, severe leucorrhea, menopausal problems; sprains, bruises, clotted blood, broken bones, bones out of joint (wound symptoms from Gerard); most especially of all, *lumbago*.

Rhus typhina. Sumach has properties similar to those of its cousin *Rhus toxicodendron* (poison ivy), used in homeopathic doses for muscular and skeletal soreness. The symptoms are worse from rest and better from limbering up, which means they are articular rather than muscular. Sumach restrains the run off of fluids from the kidneys. Many such remedies are good for lower back pain and knee pain. This whole round of associations, also including impotence, is called “kidney yang deficiency” in China. Lise Wolff has used sumach considerably for very sore and painful lower back, cold sensations moving up the back from the feet, and back pains lingering long after severe back labor.

Quercus alba. Oak bark is a powerful astringent and also high in minerals (it is very dense). It has a strong remineralizing and calcifying influence. Dr. John Christopher taught its use for dental caries. I don't care what anyone says, I have seen it work personally in myself, students and clients and have even gotten x-rays to prove the effect. It is also good in decalcification of the jaw bone, from infection. Finally, it has potential for osteoporosis. Dr. Christopher also used it in his bone, flesh and

cartilage formula, with comfrey and several assistant herbs. This formula has worked wonders on damaged structural tissue.

Salvia officinalis. Sage is oily, astringent and warming. It is suited to cases where fluids are actively being lost (menopausal night sweats, febrile sweating, aging in men or women) and to the dry state which occurs afterwards. It is an excellent remedy for older, dried out people.

Dried out tendons are a specific indication for sage. I go to take the pulse and the tendon alongside where I put the fingers is weak or nonexistant. An additional indication from Julia Graves. She notes that sage lotion, applied to the neck, will "give incredible results." In addition, sage thins the blood and removes blood stagnation and clotting. It is an important remedy for chronic leg ulcers, according to Eva Graf.

Aesculus hippocastanum. Horse chestnut is a hot, stimulating astringent which is suited to cases where severe tension is associated with passive venous relaxation or congestion. Thus, it is one of the astringents which ironically cures tension, though the astringents are generally tension-producing.

The name "horse chestnut" derives from the use of the nut of this plant (with or without the hull) as a liniment. It is specifically used to prevent spasms in horses after a work-out. I have collected this usage from many parts of the country, though it is seldom mentioned in the books. There was (or may still be) a liniment made from the horse chestnut. Evelyn Snook gave a recipe in which the hulled nuts are macerated in witch hazel extract. My friend Yago Myers, a native herbalist says, "yeah, when I was working out for competition there was nothing like that horse liniment to sooth my muscles afterwards." Needless to say, horse chestnut is too active for internal use.

Collinsonia canadensis. This hot, stimulating astringent has properties similar to the preceeding. It is probaly called "horse balm" for a similar reason.

Torpor. As we have seen, Greek medicine considered arthritis or rheumatism to be caused by dampness *(rheuma)* flowing into and thickening in the joints. This etiology survived into the nineteenth century, when rheumatism was still associated with "humor" or "impure blood." As mentioned above, bad blood and arthritis or rheumatism associated with infiltration of water and mucinous material in the tissues can be caused by low thyroid. We now know that there are many different kinds of arthritis, some of which are definitely due to autoimmune excess (hence, heat/irritation). Still, it appears that many of the "specifics" for this condition in folk medicine (alfalfa, poke root, devil's claw, dandelion, etc.) are from the alterative or "toxic/stagnation" category which also sometimes treated hypothyroidism.

Characteristic indications: Fatigue; hangover like feelings; dull, heavy; limbs stiff, achy, difficult to move, without limbering up slowly; pains after exertion and from damp and cold; stiff in the morning, after sleeping; chills with a flu-like feeling, dull and heavy aching in the bones or joints; arthritis with

irregular inflammatory or febrile cycles; hypothyroidism; urine dark; pulse wave indistinct or oppressed by heavy, filmy blood.

Chimaphila umbellata. "Rheumatism root" is an old name for this remedy, testifying to its one-time popularity in this complaint. It is suited to conditions where the symptoms are aggravated by edema from kidney weakness. It will replace diuretics when well indicated. Pipsissewa is more fully described under the kidneys. "Gouty arthritis" (David Winston).

Phytolacca decandra. Poke root is a traditional medicine for arthritis. It can be used externally as a rub or taken internally in small doses. Poke berry is less toxic and is sometimes used in place of the leaf or root. A berry a day is a standard remedy. J. I. Lighthall recommends the following dosage: tincture of the root, 3-10 drops, three to four times a day. Tincture of the berries, a teaspoonful four times a day. He writes, "I have known the tincture of the berries to cure the worst cases of arthrodial or joint rheumatism when other remedies have failed." It is especially indicated in chronic rheumatism of the large joints, hips and knees, and the extremities, toes and feet. Phytolacca is my personal arthritis remedy. When my knees are feeling creaky a dose corrects the problem. Age, however, is working against me.

Taraxacum officinalis. Dandelion root is white and chalky on the inside, showing that it is high in alkaline contents. It will quickly alkalinize the blood, removing an unhealthy acidic condition. This is also a signature for bone-healing. It mineralizes bones that have been inflammed or infected in some way. The root is bitter, sweet and salty/mineraly, showing that it will increase secretion and excretion, tissue nutrition and elimination. It acts regeneratively on the liver and kidneys. The leaf has properties similar to the root but it is somewhat more diuretic.

Dandelion is suited to infections and inflammation which have settled in the bones and muscles, around the sinuses, mastoids and ears. I have several times used it for inflammation of the jaw bone, followed by white oak bark for recalcification. The evidence of the reclassification showed up several times on x-rays. It is likewise beneficial when there is heat and inflammation in the muscles. A specific indication is swelling, redness, heat and tension in the sterno-cloidal-mastoid (SCM) muscle. This symptoms seems rather obscure (a homeopathic sort of indication – which is where it comes from) but I have used it susccefully quite a few times. "SO specific for this," agrees my friend Julia Graves. She reminds us of the psychological profile from the flower essence world: workaholics, overstriving, with tense muscles.

Dr. Rudolf Weiss (1985) considered that dandelion leaf was the essential remedy for the treatment of rheumatoid arthritis. He felt that it cleansed the liver, and this was the starting point from which chronic degenerative joint disease began. Weiss recommended dandelion as a tea, fluid extract or juice. The latter was his preferred method. In severe cases

he added watercress juice which contains sulfur and is more stimulating that dandelion.

Weiss gives a case history in which a 61 year old woman was suffering from all the classic symptoms of rheumatoid arthritis: gradual appearance of swellings in the joints of the hands and feet, symmetrical and spindle-shaped, smooth, shiny skin, brittle, discolored nails, heat in each swollen joint, an "irregular low fever," some weight loss and a general ill feeling. Under Dr. Weiss's care she was returned to virtually normal state in three months. He gave both dandelion and watercress juice.

Dandelion greens should be picked in the spring for maximum taste. They are more bitter as summer progresses. John Heinerman (1994, 116) warns that dandelion juice by itself, or combined with watercress juice, can give the sensation of a "natural high" when it hits the liver, which might be disturbing to older patients.

Harpagophytum procumbens. Devil's claw is a remarkable illustration of the doctrine of signatures. This desert plant has misshapen seed pods that look like the clawed hand of the devil, or of a person with rheumatoid arthritis. In the wild they catch grazing animals and slice up their ankles, sometimes tangling them to death. As an herbal remedy it is a bitter alterative and warming stimulant suited to stagnation and depression.

The bushmen of the Namibian desert and the inhabitants of the coastal cities use devil's claw as a remedy. They consider it to be a liver and kidney remedy. Apparently these people seem to think of it as a systemic cleanser, and attribute problems with cleansing to these organs, as we do in folk-medicine in the West. They especially value it for rheumatism and gout aggravated by damp, cool rainy weather in the fall and winter.

Devil's claw was imported to Europe and widely used in Germany (which ruled Namibia until 1919 as a remedy for arthritis. German physicians tested devil's claw and confirmed this application. They also extended its range of application. They noted that it reduced blood sugar levels in type II diabetics and high cholesterol levels. These uses indicate that it is an antidote to the diseases of modern times, diabetes and heart disease, based upon our refined carbohydrate and lipid diet, i.e., Gerald Reaven's Syndrome X. This in fact was the conclusion of Dr. Siegmund Schmidt, of Bad Rothenfelde. Several doctors felt it was a general cleanser to the entire system. Dr. A. Vogel, the Swiss naturopath, determined that it increased the amount of uric acid thrown off by the kidneys. This does indeed confirm that it is a liver and kidney remedy. All of these researchers report no side-effects.

The active part of the plant is the secondary tuber or root. Devil's claw is usually administered as a tablet or tea. One tablet, three times a day is sufficient. If taken as a tea it will taste bitter; sugar should not be added as it is believed to counter the effect of the remedy. Usually no effects are observed for the first two or three weeks. A course of nine weeks is suggested. Discontinue for two to three weeks, then resume if

needed. Richard Lucas (1982, 61-72), in addition to collecting most of the above information, supplies ten case histories out of "many thousands."

Inula helenium. Elecampane is best known as a respiratory remedy and is discussed at length under that chapter. As a bitter alterative it cleanses the lymphatics, perhaps including the lymphoid tissue of the gut. Billie Potts (1998, 35) notes that elecampane is beneficial in rheumatic stiffness. This usage was not unknown to the ancient authors, but has been forgotten in modern times. Yet, it is somewhat predictable, since so many of the bitter alteratives have application in arthritic problems.

Hydrastis canadensis. Goldenseal will almost always seal the herniated disk in a short time, unless there is a great deal of tissue and nerve inflammation. The heat of the injured tissue seems to interfere with the cure. In this case, the Goldenseal has to be assisted by St. John's Wort. If this does not work, try Prickly Ash, the remedy for the very worst nerve pain and damage.

I have seen many miraculous cures of weak and torn disks from goldenseal. One of my students came to class one day with a painful, sad expression. She was holding her neck stiffly, her face was red and hot looking. She said she had a torn disk in the neck. The day before she had seen a neurologist and a chiropractor, and they said there was only a minute chance she would not need surgery. I asked the other students what she needed and they replied, "St. John's wort." We gave her some and she felt much better. The next day I helped her find more specific remedies. In particular I gave Goldenseal. That was on a Friday. Next Tuesday the neurologist said it was so much better she clearly would not need surgery. She recovered quickly, and the neck felt even stronger than before.

My friend Jim MacDonald, an herbalist in Southeastern Michigan, used goldenseal successfully for his own disks. Since that time he has designed a formula for bulging disks and disk repair:

7 parts true Solomon's seal
5 parts horsetail
5 parts mullein root
1 part goldenseal

Another time a woman came to visit me from over in the neighboring town. She was literally writhing in agony from the pain of a torn disk. It was painful to watch. I felt bad for her teenage daughter, who drove her over. I gave prickly ash for the pain and she had relief at every drop. Tears came to her eyes, but it wore off in about five minutes and she had to continue taking a drop after drop every few minutes. She pulled together in a few days. Then the goldenseal started to kick in and the disk started to heal. It took two months but she got her life back.

Yucca glauca. Yucca is a member of the lily family native to the West, though it can be grown in the East. It was at one time planted in the

center of the foursquare gardens of the Pennsylvania Dutch, according to my friend Rob Wood, of Spoutwood Farm. For this reason it was called "Adams and Eves," which was shortened to "Adam's Needle." The leaves are sharp and needle-like, but it possesses a huge flower stalk and flowers, a sight to behold.

Yucca was used by the Indian people as a source of fiber, food and medicine. The roots contain saponins, from which natural soap is made. There are also sugars and bitters in the plant. It is altogether somewhat cleansing, moistening, nutritive, laxative and alterative. The peeled root is the part used in herbalism.

Yucca is especially used for bursitis. Richard Lucas (1982, 117) gives five cases of bursitis, mostly in the shoulder, cured with yucca tablets. The pains of bursitis are fairly sharp and restrict motion (cf. *Asclepias tuberosa, Bryonia alba).*

Lise Potkewitz, DVM, of Saratoga, N.Y., has been using the following simple formula externally with great success in arthritic dogs:

Wild cherry bark	1 part
Yucca root	1 part

Juglans nigra. Black walnut hulls have long been used for "rheumatism." Phyllis Light recommends it for fibro-myalgia associated with chronic fatigue and thyroid deficiency. The black stain on the hands which one gets from handling the blackened hull of the walnut is due to the presence of iodine, which creates a similar stain. However, black walnut goes beyond simple iodine supplementation. It often revitalizes the thyroid and therefore removes characteristic symptoms, of which fatigue is the most important.

Depression. This tissue state affects the locomotor system in several different fashions. Through nerve weakness, poisoning or injury it is associated with neurological problems (see cold/depression of the nervous system, blood and liver). Through contusion it is associated with congealed blood inhibiting motion and causing chronic pain. Through metabolic depression it is associated with cold extremities and arthritic joint conditions. Sometimes these conditions mix together.

Characteristic indications: Arthritis, rheumatism and gout associated with cold, lack of circulation to the extremities; cold, dry skin; conditions associated with tissue death.

Hypericum perfoliatum. St. John's wort is an important remedy for inflammation of the nerves, especially from injury, with great pain, heat and redness. As the heat develops the muscles go into spasm. It has cured tetanus.

In muscular and skeletal problems St. John's wort comes in as an assistant to relieve nerve pain, tenderness and inflammation. If a nerve is pinched or damaged it is indicated, often in conjunction with other remedies, sometimes by itself. As a tonic it rebuilds the nervous system after prolonged pain and stress; it is a mild tonic to the solar plexus.

"In my experience it is often more helpful than Arnica for the cramping pain in the neck that comes on after acute whiplash. When under stress, you take a dose, it brings the shoulders that are shrugged up right down. It is also great for whiplash with all sorts of lights and flashes before the eyes. Great in bodywork as an oil on the joints. It opens up the energetic flow through blocked joints, especially when cold or injured. You can imagine, I would also group it under wind" (Julia Graves).

Acorus calamus. Calamus root (rhizome, actually) is more fully described under the nervous system. It is an important traditional remedy for arthritic pain. It thins stagnant fluids and generates new fluids. It moistens, warms and stimulates joints. Cautions apply to the internal use of calamus, but not much is needed. In Ayurvedic medicine an oil of Calamus is made, to apply on stiff, cold extremities.

Rosmarinus officinalis. Rosemary is warming, spicy stimulant with slightly bitter flavor. In the fourteenth century, Elizabeth, the seventy-two year old Queen of Hungry, used it with great success in curing herself of rheumatism, gout and paralysis, leading to the fame of her recipe, "the water of the Queen of Hungry," in European medicine. It is particularly recommended for the elderly, neurasthenics, anemic, dry, withered persons with arthritic problems. The original recipe was flowering tops of rosemary in wine. It can be used internally or externally. A similar recipe was used by Father Sebastian Kneipp for cardiac edema.

Eva Graf (1978, 25) recommends rosemary for tension in the occipital region. She applied a cotton pad saturated with the tincture to the occiput and the sacral/lumbar joint. Lay down and relax for twenty minutes before taking off the pads.

Panax ginseng. Chinese red ginseng stimulates endocrine function and is warming and somewhat nourishing. It is has been used for stiffness in the neck, shoulders, spine, arms and legs, arthritis and gout, aches and pains with fatigue, weakness and emaciation (case histories, Richard Lucus, 1982, 57).

Gaultheria procumbens. Wintergreen is an aromatic evergreen native to North America, long used by Indian, pioneer and commercial medicine as a liniment. Diluted wintergreen oil is particularly popular for achy arms, hips or knees, neuralgia and neuritis. Birch bark oil can be used inside of wintergreen – it also contains wintergreen oil.

Eupatorium purpureum. Gravel root or Joe Pye weed, as well as its Old World cousin hemp agrimony *(Eupatorium cannabinum)* has been used for arthritis. It is more fully discussed under the kidneys.

Gravel root balances mineral deposition, building up calcium if there is a deficiency and dissolving it if there is an excess. Thus, it is used by Richard Schultz as a bone mending remedy very much in the style of it's cousin boneset. However, it is better known for its opposite action,

removing calcifications. It will remove arthritic deposites, reducing pain, swelling and sometimes curing the entire condition. A woman came to me for "pain in the elbow." Her chiropractor said, based on an x-ray, that there was deterioration in the joint. She did not believe it but I pointed out the obvious difference in size between the sick elbow and the healthy one. There was clearly some kind of calcium deposition. I asked if she had ever injured the elbow? "Well, no," she replied, but after several minutes she remembered that she fell and broke the other elbow. "I probably reached out to catch myself with the other one." The pain started a year later. I gave *Eupatorium purpureum* and *Verbena hastata* (blue vervain) to be given externally. The latter is a remedy for hyperextensions. Both reduced the pain and eventually also the enlargement.

A friend and student, Lucy Jackson, has been using gravel root in oil to free up joints that are frozen from calcification. Her first success was with a musician whose index finger was frozen and slightly curled up. Next she helped an elderly lady whose arm was frozen and curled up against her torso after a debilitating stroke. Massage and gravel root oil unkinked the arm. I mentioned these sorts of cures at an herb walk in central Pennsylvania. One of the participants chimed in, "I had frozen joints in my foot and was drawn to the gravel root. It loosened up the joint promptly." Recently I used gravel root tincture, rubbed in over the kidneys, for an old cat that was stiff from arthritis and walked across the room with a terribly stiff, slow, frozen gait. Relief was prompt and noticeable, though one cannot completely reverse the hand of Father Time. "Remember that remedy when you and I are as old as that cat," I said to the owner.

Gravel root is indeed a remedy for lower back pain. This is perhaps not surprising, since it is a remedy for arthritis in the extremities, but also for problems with the kidneys and uterus, both of which can associated with lower back pain. Richard Lucas (1982, 178) collected four cases of back pain, lame back or lumbago cured by gravel root tea.

Carthamus tinctoria. Safflower is a traditional remedy in the Orient for stagnant blood from injuries. It is also a traditional medicine – East and West – for bringing a rash to the surface and releasing fever (as in small pox and chicken pox). I find that it is best for contusions with stagnant blood where there is a toxic or septic tendency and the need for a stimulant. However, the most remarkable property I have discovered in safflower is the ability to cure some cases of Raynaud's disease – cold, white fingers with numbness.

Larrea divaricata. Chaparral is primarily a deep acting blood purifier and stimulant with an affinity to the liver and lymph, where it is more fully described. One of its most important folk medical uses, however, is as a remedy for arthritis. It has long been used for cases where there is terrific calcification, with stiffness, immobility and pain. Richard Lucas (1981, 35-41) gives many case histories, including his own.

In most of the cases cited there was great difficulty and pain on movement, due to the calcification.

Since Lucas wrote chaparral has been implicated as a hepatotoxin. This is a very powerful remedy which has long been overused by enthusiasts with little regard to dosage levels or sensible application. The usual dose is one 15 grain tablet, twice a day. It is now somewhat difficult to obtain chaparral in commerce but many herbalists will have it on hand.

Commiphora molmol. Myrrh gum is an ancient remedy which was imported into Europe and the American colonies as a medicinal agent and is still used throughout the world. Samuel Thomson claimed that it was undervalued in his day. He combined myrrh power with cayenne powder and turpentine to make and external rub for rheumatism. It also prevents putrefaction in wounds. "This was the origin of my rheumatic drops, a preparation which has proved more generally useful than any one compound I make use of" (Thomson, 1825, 64).

Curcuma longa. Turmeric is warming but also nourishing. William LeSassier has long used it in about every conceivable fashion. He says that it is good for dry, atrophic tissue. It will make tendons and connective tissue more elastic. It also warms them up and promotes cellular life. It is indicated when adjustments don't hold (cf. Solomon's seal) or in areas that are chronically bound up. He points out that the yellow/orange vegetables and spices are high in magnesium, which re-establishes flexibility.

Cinnamomum camphora. Camphor, a tree native to China, has long been used, and is still widely used in alternative and conventional medicine, as a liniment for stiff muscles, sore backs, necks, spines, arthritic joints, etc. It is generally palliative, rather than curative, and in homeopathy it is considered to have a peculiar ability to antidote remedies. There are so many curative agents, that camphor should be replaced if it is only palliative – suppressing symptoms.

Allium sativa. As a warming stimulant, garlic is applied internally or externally for arthritis and rheumatic pain. Garlic cooked in milk is a traditional Ayurvedic remedy for sciatica. Richard Lucas (1982, 99, 200) gives several case histories of arthritis and sciatica cured with garlic.

Here is a nice case history sent by my friend Julia Graves. "Mould under the toe nails is very common here in India. Most people have crumbling toe nails, or lose them. Jinpa worn his moldy socks in his boots during the monsoon and one of his toenails started to crumble. I learned in med school that this is as good as untreatable because the fungus is so well hidden under the nail or in the nail, and the compliance for daily applications is so low." She tried tea tree oil without success. "He rubbed some of the garlic oil on the skin, not the nail, after his showers and guess what – the nail immediately regrew as new. And Jinpa keeps loving his garlic oil because he says it makes his always cold feet warm." Other remedies for mold under the toe nail are horsetail and blue vervain.

Piper nigrum. A Dr. George P. Wood learned from a Japanese doctor, S. Asada, that pepper poultices placed on the nerve plexus where the problem arose were an almost sure cure. The directions are to wet one side of a piece of cotton cloth with the white of an egg. Sprinkle on cracked pepper until the egg is almost black. Bind over the sight of the pain (Lucas, 1982, 202).

Artemisia absinthium. Wormwood figures in a certain number of external remedies for muscular and skeletal problems. It probably has an effect similar to mugwort *(Artemisia vulgaris)*, used in Chinese moxabustion to warm the limbs to remove stiffness, pain and cold. Internal doses cause deadening and paralysis of the nervous system, but external doses may be used to treat the same – to enliven the neuromuscular structures. Hildegard von Bingen describes how to make wormwood in oil and apply it to a person sitting next to the fire who is suffering from "gicht" so severe it feels as if the limbs would break from the pain (*Physica,* I:CIX). Coming closer to our own time, Dr. Christopher included wormwood in his bone, flesh and cartilage cream, a general muscular and skeletal trouble-shooter.

Ruta graveolens. Rue was an important remedy in the Old World and is the most important herbal remedy in Latin America. However, it was Hahnemann, the founder of homeopathy was discovered (and claimed credit) for its valuable use in muscular and skeletal problems. These have often been verified by homeopaths.

Ruta is a specific for ganglions or neuromas, when there is a swelling on the nerve, sometimes with great pain. It is also a specific for swellings on the periosteum of the bone, usually resulting from a blow. It will also break up old adhesions of blood, with swelling and pain, especially when associated with a blow to a tendon. I have seen it cause blue streaks from dead blood to move up the arm or leg and out of the body. I have many times seen it cure ganglions.

Ruta is somewhat toxic for some people. It can cause irritation of the mucosa and skin. It is, in other words, an irritating stimulant. Like its cousin prickly ash, it is a northern representation of the citrus family, which breaks up and moves "stagnant chi." If *Ruta* does not work, sometimes *Xanthoxylum* will and vice versa.

Juniperus virginiana. Dr. William Cook (1869, 494) gives some interesting indications for the red cedar which are little known. "Its principal use is in external applications, such as liniments for sprains, bruises, rheumatism, painful joints, and synovial swellings, etc."

Tsuga canadensis. Canadian hemlock grows in the coldest spots along a creek or in the mountains and forests. For this reason, the tree itself is quite warming. Dr. Beal P. Downing records an old Indian practice. If one is caught in the wilderness without adequate coverings for sleep pile up a bed of hemlock and sleep on it to keep warm. Hemlock oil

was used in the nineteenth and early twentieth century as a liniment. It is not only warming but astringent, which makes it an excellent as an application to a tired, sore lower back, so often associated with overwork and fluid loss. A plaster of hemlock was used here. Samuel Thomson wanted to use hemlock in his "composition powder," a general warming and heating, spicey preparation, but found it too astringent for general use.

Xanthoxylum americanum. Prickly ash is also described more fully under the nervous system. It is a superlative remedy for severe nervous pain, torture, writhing in agony; also for numbness, tingling and loss of sensation. These injuries are usually associated with nerve injury.

Prickly ash is also indicated in arthritis of the joints; especially in thin, spare persons with low "nerve power." I once gave it to a thin, spare, sixty-year old woman suffering from Raynaud's disease. It did not help the Raynaud's, but it decreased the arthritis in her hands and fingers.

Recently a woman came to me who had been diagnosed with "polymyositis," or muscular inflammation in various places. She had fallen down, folding her knee back and injuring it severely. After the swelling and bruising went down she had routine orthoscopic surgery on the knee. The next day she felt pain all over her body. For the next two years she suffered in agony. To fight the pain she was on predinose and other pharmaceutical anodynes. These weakened her immune system, causing an ulcerating skin eruption which made her feel grotesque and unclean. "I used to love my life; now it is hell." I asked her for the actual symptoms of the so-called "polymyositis," since I thought we would never cure the skin problem until she was off the drugs. The first three symptoms she listed off were muscular weakness, tingling in different places around the body and paralysis. It was especially hard to get up out of a chair or bathtube, or climb stairs, due to weakness in the knees. A more perfect description of symptoms calling for prickly ash could hardly be offered. These immediately reduced the pain – she was able to walk up a flight of stairs right then and there to prove it. As prickly ash continued to remove the pain I could not help but think that the diagnosis was wrong. Something like "neuritis" would have been more appropriate. We are still working on the skin problem.

A traditional American formula for arthritis is equal parts *Phytolacca, Cimicifuga* and *Xanthoxylum.* Poke moves stagnant fluids, blood and nerve force. Black cohosh moves stagnant cerebrospinal fluids and lessens muscular tension. Prickly ash stimulates nerve force and circulation to the extremities. This formula has its own inherent logic. Another formula for arthritis is *Xanthoxylum, Menyanthes* (bog bean) and *Caulophyllum* (Lingard, 1958, 9).

Asarum canadensis. J. M. Thurston (1900), who introduced the six tissue state model, ranked wild ginger, or Canada snake root, at the top of the list of remedies for constriction, next to *Lobelia.* The root is fiercely acrid and pungent, making it a stimulating relaxant. It is not much used at the present time, but my herbalist friend Lise Wolff told me about

Asarum. She explained that it is a muscle relaxant appropriate in old injuries which need warming up. One time when my back was out she helped me with a formula containing *Asarum,* so I am a witness to its virtue. When the back went out about a year later I started using the remedy again – it was angelic. I have since incorporated this valuable medicine plant into my armentatarium. It is invaluable in cases where muscle spasms are better from warmth. It is better than *Arnica,* which is so often used traditionally as a liniment to warm the muscles – when there is spasm. *Arnica* is better when there is more bruising and burst blood vessels.

Zingiberis officinalis. Culinary ginger, unrelated to the preceeding, is an excellent liniment which warms muscles that are in spasm to relieve severe cramping. Usually the oil is used.