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Joint Efforts Pay Large Dividends


Dr. David G. Williams

As we get older (and I do mean "we"), one of the most common complaints seems to be joint pain. I was recently reminded of that fact when I used rather poor form while lifting weights a few weeks ago. The resulting inflammation in my elbow has put a damper on my exercise program for the last several weeks. With additional nutritional support, DMSO, and a more careful routine, my elbow has improved considerably, and I'm almost back to normal. The whole event, however, brought home just how difficult everyday activities can become when you have to deal with joint pain and/or inflammation.

If there were an owner's manual for your body, I'm sure that "The Care and Maintenance of Joints" would be one of the major sections. Unfortunately, most people don't know that you can take specific steps to protect your joints from damage and the arthritis that develops as a consequence. We've been led to believe that an old injury or just advancing aging will ultimately lead to arthritic joints, and that the only two options available are taking pain medication for life or replacing the joint with an artificial one through surgery. I'm sure it would surprise a lot of people to learn that they have other options that not only help prevent arthritis but, in many cases, actually restore damaged joint surfaces and reduce the pain, inflammation, and decreased range of motion.

Joints are unique structures that receive a considerable amount of "wear and tear" throughout a lifetime. And, in all honesty, if you live long enough, work hard enough, and play hard enough, you will probably have to deal with some degree of joint damage sometime in your life. However, the methods I'll tell you about here can help prevent joint problems, or at least delay them. I'll also tell you how to help deal with any existing problems.

Many of the problems with joints stem from the fact that the cartilage surfaces that make up joints have little, if any, direct blood supply. It helps if you visualize this cartilage as being similar to a sponge. It gets most of its nutrients for repair from the fluid within the joint capsule itself (synovial fluid). As the joint is moved throughout its range of motion, the "sponge" is compressed and released. This compressing action helps "squeeze" out waste material from the living cartilage cells. And, just as a sponge sucks in water, when pressure on the cartilage is released nutrients are then "pulled" into the cartilage cells. Since the survival of every cell of the cartilage surface depends on this regular exchange of waste material and nutrients, moving each joint through its full range of motion daily is one of the first steps for keeping it healthy.

The synovial fluid also provides the lubrication and shock absorption for your joints. It contains a couple of compounds called hyaluronic acid and lubricin.

Support Worth Crowing About

A great deal of research has been done on hyaluronic acid. It is found in several areas of the body, not just in the synovial fluid of joints. I don't know if you've had the opportunity (if you want to call it that), but if you ever dissected a cow's eyeball in high school biology class you might recall that hyaluronic acid made up much of the runny Jell-O–like fluid inside the eyeball. You may have also heard about using injections of hyaluronic acid to temporarily smooth out facial wrinkles. Most of the research on hyaluronic acid, however,

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You will observe with concern how long a useful truth may be known, and exist, before it is generally received and practiced on. — Benjamin Franklin

involves its use in the treatment of joint problems. It is often injected into knee joints as a temporary treatment for osteoarthritis.

Oral hyaluronic acid supplements are generally made from rooster combs, and a few have been shown to help in the treatment of arthritic joints—though they are quite expensive. These are the same compounds that can be found in bovine (cattle) and *properly processed* shark cartilage, either of which can help with the repair and protection of various joints throughout the body. Other compounds are available to help reduce inflammation and pain. Ultimately, though, the goal should be restoration and healing of the joint itself.

The "poor man's" joint supplement (and probably one of the most beneficial) is bone broth. Although obesity and a lack of exercise are obviously major contributing factors to the widespread osteoarthritis problems we see today, I feel a large part of the problem is also the fact that bone broths are no longer a part of our diet. I've investigated numerous "pure" hyaluronic acid supplements (and will continue to do so), but I have yet to find one that is superior to bone and joint broth.

I've written articles in the past describing how preparing broths from the carcasses and joints of cattle, chickens, and fish can have a tremendous beneficial effect on your overall health. Much of the reason stems from the increased intake of hyaluronic acid—along with various minerals, proteins, and other compounds necessary for proper joint health. You can add vegetables or meat back into the broth for hearty soups or stews, and substitute the broth for chicken or beef stock in many recipes. [*Editor's note: See Vol. 10, No. 23 for more about bone broth.*]

Several years ago, the ABC program *20/20* aired a program segment that featured the residents of Yuzurihara, a small village about two hours out of Tokyo, Japan. It seems that more than 10 percent of the population in this village was 85 years of age or older. Even more astounding was the fact that the elderly residents were very healthy. They rarely saw a doctor, and diseases such as cancer, diabetes, and Alzheimer's were practically unknown. Additionally, the people were very physically fit. Many worked in their gardens four or five hours a day without any sign or symptom of joint problems, and their skin seemed to defy aging. They had hardly any wrinkles and there were never any reports of skin cancer.

Their longevity and lack of health problems were attributed to their increased levels of hyaluronic acid. Unlike the other areas in Japan, this region was not suitable for growing rice—so the residents hadn't made it the staple it is in the rest of Japan. Instead, more root vegetables were grown and eaten. The vegetables (satsumaimo, satoimo, konyaku, and imoji) are not well-known in this country, but they are apparently high in magnesium—which is related to increased levels of hyaluronic acid.

(As a side note, since the *20/20* report first aired, a more Western-style diet has been adopted by the younger people in this area—and they are beginning to see the same health problems experienced here in the US. In fact, many of the elderly on the "old" diet have now outlived their children who chose not to continue eating the traditional foods.)

Another source of hyaluronic acid is eggs. The parts that you eat—the white and the yolk—are well-known sources of high-quality protein. But the membrane that separates the white from the shell is also composed mostly of protein, plus hyaluronic acid, glucosamine, and chondroitin. In fact, preliminary open-label studies suggest that the membrane itself could help alleviate joint pain. (At this point, it seems they've figured out how to use every part of the chicken but the cluck.)

When you make your joint-boosting broths, you can throw in any left-over egg shells from breakfast. Just strain them out with the bones after the broth has cooked. If you're not big on eating eggs (though I highly recommend that you do so), or making soup puts too much heat in your kitchen during the summertime, you can look for supplements with eggshell membrane. The unpublished research I mentioned above showed that a small group of individuals who took supplements containing 500 mg of eggshell membrane had a reduction in their joint and muscle pain after just seven days, and that relief continued through the end of the study at 30 days.

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This is the kind of research I love to read. I'm sure we'll see more studies of this sort, using more patients and for longer periods of time. I don't see any downside to taking egg membrane now rather than wait years for it to get the blessing of some major journal. These supplements aren't widely available yet, though. The only one I've found that contains just the membrane is a product called NEM, from Membrell. The company will provide a discount of $5 to readers of *Alternatives*, with free shipping if you order using their Web site (an additonal savings of $6). You can contact them at at *www.Membrell.com* or 800-749-1291. Mention code ALT09 when you order.

Moving Beyond the Joints

Increasing your hyaluronic acid levels through broths and/or a comprehensive joint supplement can have broader implications than just improving joint problems. Proper levels of hyaluronic acid are essential for the maintenance and repair of connective tissue throughout the body. If you suffer from any of the problems listed below, increased levels of hyaluronic acid could be a lifesaver. (Also, keep in mind that most of these conditions are associated with lower levels of magnesium—which is a mineral necessary to produce hyaluronic acid.)

- Mitral valve prolapse
- Temporomandibular joint (TMJ) problems
- Detached retinas
- Fibromyalgia
- Glaucoma
- Poor scar formation
- Muscle contractures
- Hernias
- Poor wound healing

Gliding Into Comfort

As I mentioned earlier, the compound lubricin is also found in synovial fluid. You won't find much research on lubricin, but I suspect that will change over the next few years. Lubricin is to joints like oil was to the Tin Man in *The Wizard of Oz*. It provides the "gliding" action where joint surfaces meet. Together, lubricin and hyaluronic acid provide a "cushioning" effect by storing and dissipating the energy created during an impact. There are a couple of important things we now know about lubricin.

First, lubricin is created by the thin layer of tissue that lines the joints. If this liner becomes inflamed, then lubricin production breaks down, and can even stop. For example, the inflammation associated with rheumatoid arthritis destroys lubricin. (Several of the researchers I spoke with were also of the opinion that various drugs appeared to decrease lubricin levels. They weren't willing to be more specific until further research had been performed. Unfortunately, I doubt we'll see any of that research in the near future.)

Secondly, motion of the joint increases the production of lubricin. That's why activity—specifically, exercise for joint mobility—is so crucial to maintaining joint health.

Appropriate Actions for Mobility

One of the more common areas for joint problems is the shoulder. As one becomes more sedentary (couch potato might be a better term), very often he or she no longer performs motions that require raising the hands and arms above the head. This lack of movement results in areas of the "sponge" that don't get the opportunity to dispose of waste material or receive needed nutrients. In turn, hyaluronic acid and lubricin levels decline. In these areas, the cartilage begins to deteriorate. It can eventually roughen and thin to a point that the person experiences a grinding sensation as well as stiffness and pain.

(Although joint surfaces may not have a blood supply, the joints themselves have a very rich nerve supply. The vast number of nerves allows the body to precisely determine exactly the position of each joint in the body, which is essential for standing, walking, picking up objects, et cetera. Unfortunately, this also makes us acutely aware of any inflammation, swelling, or damage to our joints.)

The first order of business for maintaining healthy joints is to move each one through its complete range of motion (ROM) several times *every day*. The ideal time is in the morning. This will help preserve your joints as well as help get rid of the stiffness most of us experience.

Stiffness is actually a normal phenomenon. At all the nerve endings in joints, muscles, and tendons there are sensors called proprioceptors that constantly provide information about joint angle and muscle length and tension so that your brain knows the body's position. If you stay in one position for an extended length of time (sitting, sleeping, et cetera), your nervous system doesn't get any new information—so it begins to tighten your muscles as a protective measure. Moving your joints through their ROM first thing in the morning wakes up these proprioceptors and resets your nervous system for the day's activities—which is why mobility exercises can have such profound effects on your overall wellness, particularly when it comes to joint health.

With inactivity, not only do the joint surfaces begin to suffer, but the ligaments and connective tissues that support joints will also begin to shorten and adapt to this inactivity. It used to be common for doctors to prescribe complete immobilization of an area for months after a

fracture. After the cast was removed, it often took several months of additional therapy just to be able to straighten the area on the body where the broken bone was located. During the inactivity, the supporting connective tissue shortens to support the new joint's position. The same thing happens when you continually fail to move the joint through the ROM.

Strangely, there hasn't been a lot of published material that focuses on mobility exercises, or ways to take your joints through their full ROM. Volumes have been written on stretching, which actually has to do more with muscle flexibility than it does with joint mobility. With the mobility exercises I'm going to describe, you may not even feel much stretching. Keep in mind that this is perfectly okay. Again, what we want to do is put each joint through its *normal* range of motion. It's not necessary to become a circus contortionist.

(If you have past injuries to a joint, it may require some gentle stretching and persuasion to regain your full range of motion. Scar tissue from old injuries or surgery will create adhesions and shrinkage of connective tissue. Some people have used Rolfing or some other form of deep-tissue massage to get rid of adhesions.)

Dr. Amosov's 1,000 Movements

One of the best routines for restoring or maintaining joint mobility was developed by the Russian heart surgeon Dr. Nikolay Amosov. It was first told to me by Pavel Tsatsouline when I took his instructor certification course for Russian Kettlebells.

In the mid-1950s, Dr. Amosov developed the physical training system he called his "1,000 movements." He wanted to combat the spinal degeneration and accompanying radiating nerve problems he was having that were caused by years of doing daily, drawn-out surgical procedures. At the time, his program involved 10 exercises—each of which were repeated 100 times. (The program was later refined to 12 exercises, but the number of repetitions remained at 1000 per day.)

- Squat (As you squat, either bring your arms straight out in front of you or stabilize yourself with a chair to help keep your balance.)—100 repetitions
- Side bends—100 repetitions
- Pushups on the floor—50 repetitions
- Forward bends (Remember to bend your knees each time before returning to the upright position.)—100 repetitions
- Straight arm lateral raises—100 repetitions
- Torso turns—50 repetitions
- Roman chair sit-ups (Since the original publication of these exercises, this has been found to be not one of the best forms of sit-ups. If done incorrectly, it can put your lower back at risk. I would recommend doing crunches on an exercise ball instead. Not only is it a good abdominal exercise, it produces the mobility we're trying to achieve. Exercise balls can be purchased rather inexpensively nowadays—some for as little as $15. If you can't find one locally, try Fitness Wholesale at 800-537-5512 or online at *www.FWOnline.com*.)—100 repetitions
- One-legged jumps in place—50 repetitions per leg
- Bringing the elbows back—100 repetitions
- The "birch tree"* (See detailed description below)—hold for the count of 100
- Leg and hip raises. Lie on your back and bring your feet behind your head while keeping your leg reasonably straight—100 repetitions
- Sucking in the stomach—50 repetitions

* The "birch tree" is a Russian name for the yoga *sarvangasana* pose or the shoulder stand. In this exercise, you will point your legs toward the ceiling. Lie on your back with your arms at your sides. Lift your legs and place your hands in the small of your back. Prop your body on your forearms and point your legs and toes straight up. Your weight should be on your shoulders and upper back, rather than your neck. (You may want to use a friend as a spotter the first few times you try this. Women should avoid it altogether during menstruation or pregnancy.)

Obviously, the exercises and repetitions you can perform will depend largely on your current age and ability. If you're not in the best shape, then start with 10 repetitions of each exercise a day and begin to add another 5 to 10 each week until you reach 1,000 total movements.

As you increase the number of repetitions, make sure the movements are done at a fairly steady and rapid pace so that you're getting a little cardiovascular benefit as well. However, don't sacrifice form for speed. Again, the primary purpose is to achieve full range of motion for each joint. You should be able to complete the entire 1,000 movements in about 25 to 45 minutes.

[*Editor's note: To get the most benefit out of these exercises, you should do them using proper form. Full descriptions of each exercise can be found in the Subscriber-Only section of Dr. Williams' Web site,* www.DrDavidWilliams.com. *The information will be posted from October 10 through October 22. Use your registered e-mail address and the password found at the bottom of page 8 for access.*]

Please don't let the exercise suggestions I've discussed here become intimidating. I fully realize that for some people even beginning such a program could be difficult at first. If you are in this category, simply make up your own exercises and progress at your own pace. Any efforts to improve joint mobility will be well worth it.

You might start by doing a series of side-to-side turns followed by forward and backward neck movements while sitting. Then continue progressing to opening and closing the jaw (the jaw is a joint that should be included) and then move on to shoulder rotations where you move each arm in a circle as though your arm was a hand on a large clock. Improvise as you work down each joint of the arm, hand, and fingers. Continue with the back, torso, hips, knees, ankles, feet, and toes. Whatever you do, start moving and keep moving. And even if you're active with other forms of exercise, don't overlook this routine. I usually start my joint mobility exercises each morning in the shower. Remember to move each and every joint through its total range of motion each and every day.

(If you would like more advanced exercise techniques on increasing mobility and flexible strength, I recommend the book *Super Joints* by my friend Pavel Tsatsouline. It's available from Dragon Door Publications at 800-899-5111. The book also includes a very useful guide to assessing your joint mobility.)

I'm fully aware that at this point in life most of us already have "a few miles" on us, so you may already have some damaged or arthritic joints. Thus, in addition to the exercises I've mentioned, there are nutrition suggestions that can help preserve the joint mobility that is still intact while also helping in the restoration of damaged joints.

Rebuilding Your Way to Full Capacity

You've probably heard statements to the effect that every cell in your body is replaced every seven years. Unfortunately, for our joints that's not really the case.

There's currently a great deal of research being undertaken in an effort to determine the exact turnover rate of cells in different tissues. We've long known, for example, that red blood cells live only 120 days and then are replaced with new ones. The cells lining your intestinal tract are replaced every five days, and the epidermal cells protecting your skin surface are totally restored every two weeks. Bone is replaced about every 10 years, whereas muscle and gut tissue take about 15 to 16 years. As a general rule, then, I guess you could say most of your body is still too young to drive.

Certain areas, such as parts of the brain, are as old as you are—which stands to reason, since you would want to retain the knowledge you've acquired since birth. It appears that cartilage also has a very slow turnover rate. The exact rate hasn't yet been determined, but I'm sure the slow rate stems in part from the lack of blood supply. If you abuse your cartilage, you can't return it for new or take it in for warranty work. For that reason, it's imperative that you invest the effort to take care of your joints.

I have no doubt that many of the dramatic changes in our diet and lifestyle during the last century are only contributing to our joint mobility problems.

I've stressed the importance of adequate amounts of pure water more times than I care to remember. To stay fully functional, cartilage has to be fully hydrated. As children, our cartilage was made up of almost 85 percent water, but as we get older that drops to 75 percent in most cases—and even lower if we remain in a state of dehydration. Lots of water translates into more resilient joints. And, regardless of what the advertisements claim, sodas and sports drinks aren't good substitutes.

I've discussed before how the phosphoric acid in soda leaches minerals from bones and leads to osteoporosis. This acid also suppresses your ability to absorb the trace mineral manganese. Chiropractors have known for decades that patients with low levels of manganese never seem to be able to "hold" their adjustments. While full-blown deficiencies are somewhat rare, even a low level of the mineral significantly weakens the stabilizing ligaments that surround and support your joints. As a result, the joints become unstable and subject to an increased risk of subluxation, dislocation, and injury. Patients who increase their intake of manganese or manganese-containing foods will very often notice they need far fewer adjustments.

With the right diet, you can get adequate amounts of manganese if its absorption isn't blocked or suppressed by such things as sodas. Chronic liver or gallbladder disorders or excessive sweating can also contribute to low levels. Some of the most manganese-rich foods (pineapple, spinach, mustard and collard greens, long grain brown rice, and various kinds of beans and legumes) are not the dietary staples they were in years past.

I would recommend checking your multi-vitamin/mineral supplement to make sure it has at least 5 mg of this mineral. Avoid sodas like the plague, and start to include more green leafy vegetables and beans in your diet to help save your joints.

More Help From the Cow Contingent

Butter is another food item that has fallen out of favor during the last few decades. Everyone seems to have fallen for the marketing propaganda that butter is fattening and not "heart healthy." In addition to being a great food, butter contains two components you rarely hear about anymore: Activator X and the Wulzen anti-stiffness factor.

Activator X was identified by Dr. Weston Price as a fat-soluble catalyst found in butter oil and meat from animals that are fed a high-quality grass diet. It's also

NEWS TO USE FROM AROUND THE WORLD

Picking On My Brother-in-Law Again

TAIPEI, TAIWAN—We've seen it before, but new research confirms that grilling meat at high temperatures creates a number of harmful compounds.

This new study performed at the Fu Jen University in Taipei, however, didn't just redefine the problem. It also uncovered an easy way to reduce the levels of some of these compounds.

The researchers were originally looking to calibrate a new method of measuring these byproducts, called cholesterol oxidation products (COPs). In the process, they discovered that a marinade of plain soy sauce cut the production of COPs by more than 60 percent. (*J Agric Food Chem 06;51(13):4873–4879*)

High heat from the open flame creates COPs, which are highly carcinogenic. (Lower temperatures, even sautéing and broiling, don't seem to have the same effect.) These COPs are similar to the oxidized cholesterol found in your bloodstream.

Along with the COPs, high heat creates other groups of harmful compounds. One type is heterocyclic amines (HCAs), which I've written about before. Research shows that adding tart cherries, red grapes, or plums (all good sources of pigmented antioxidants) to hamburger meat can cut HCA formation by 94 percent. Somehow, the idea of fruit-flavored meat didn't sound all that appealing, but I've tried using the cherries and it's pretty tasty.

Another group is polycyclic aromatic hydrocarbons (PAHs). These compounds are formed by the incomplete combustion of organic material—including the fat from grilled meat. (Interestingly, PAHs are also found in highly processed vegetable oils. The worst source is margarine—yet another reason to stay away from the stuff.) The compounds are found both in the meat itself and in the air in and around the cooking space. In one Chinese study, street vendors who sold meat products, including fish balls and rice sausages, had 22 times the exposure to PAHs compared to vendors of non-meat items such as roasted corn on the cob. (*Food Addit Contam 91;8(4):517–530*) (*J Expo Anal Environ Epidemiol 05 Dec 14; [Epub ahead of print]*)

It's easy enough to mix a handful of crushed cherries or grapes into a pound of hamburger or ground turkey, but there's no practical way of using the fruit on a solid piece of meat such as a steak, chop, or poultry part. So, for the best protection, I'd stick with the marinating method.

For your end-of-summer barbeque, you can prepare a marinade with a cup of soy sauce, a couple tablespoons of honey, a teaspoon or so of powdered ginger, and a couple crushed cloves of garlic. (You can make this a day ahead and store it in the refrigerator.) Marinate the meat in the refrigerator for three or four hours before you're ready to cook.

The benefits of the marinade appear to come from the soy and the sugars. Traditional recipes of the Taiwan street vendors use marinades that contain about 10 percent soy sauce and one percent sugar (which lower the COPs by 60 percent). This ratio will give you some basis for creating your own marinade.

Barbequing and grilling meat is a long, time-honored tradition down here in Texas. After learning how to weld in high school shop class, building a barbeque pit is usually the first project for a lot of Texas kids—and, for some reason, it's just the start of a lifelong quest to invent the best one ever made. Swapping tips and hints about the best wood to use and the best brisket rubs is a favorite pastime in these parts.

These Texas traditions are why I hate to report this kind of research—I feel like a traitor, especially to my brother-in-law, Troy. Give him a brisket, a couple of chunks of oak firewood, and a half a case of beer (maybe not in that order), and he'll come back in 15 hours or so with barbeque that will convert a hardcore vegetarian.

I don't mind mixing berries with my hamburger on occasion, and I'll marinate my chicken legs before grilling. But for now, I'll let Troy use whatever rub he wants on the brisket and just take my chances.

One positive, or should I say upbeat, and practical aspect of this study was the finding that COPs are only harmful when consumed in very large quantities. The researchers discovered that in addition to using marinades, the reduction could also be achieved by not eating the charred bits of fat on the barbequed meat.

found in some fish eggs. Dr. Price's research indicated that Activator X is an excellent source of fat-soluble vitamins, and that it improves one's ability to absorb minerals. It also plays a key role in the repair and rebuilding of bone, the development of the nervous system, and the production of hormones. In his studies of indigenous populations around the world, Dr. Price felt it was one of the key factors in the prevention of many health problems—such as joint immobility.

The Wulzen anti-stiffness factor found in butter oil was discovered by Rosalind Wulzen. The compound helps protect against degenerative arthritis and other conditions—such as atherosclerosis, cataracts, and other conditions involving calcification of normal tissue.

(Both Activator X and the Wulzen anti-stiffness factor can be destroyed with the excessive heating and pasteurization procedures dairy products are now subjected to. The best source is raw milk and dairy products from

The Test of Time: *Benefits of B3*

Early studies have documented that everyone past the age of 20 has some degree of change taking place in the cartilage lining their joints. The difference is simply the result of wear and tear on the joints. And it stands to reason that individuals who have subjected their joints to more trauma will exhibit more changes.

By the age of 40, 90 percent of the population have definite signs of osteoarthritis that can be demonstrated by X-ray. Even at this point, the majority of these people will still not experience any of the characteristic symptoms, such as joint pain, stiffness, or immobility. (*JAMA 55;157:487*)

Fortunately, Dr. William Kaufman has shown that niacinamide (a form of vitamin B3) can go a long way in both preventing and minimizing cartilage changes in joints.

Over several decades of practice, Dr. Kaufman documented hundreds of cases of patients who became more mobile and self-sufficient after long-term niacinamide therapy. His case histories, supplemented with photos, show people who were unable to raise their arms above shoulder level before treatment. After several months on niacinamide, they could easily raise them above their head.

What makes these cases even more remarkable is that these patients also reported a decrease in joint pain and inflammation. Niacinamide is not considered an anti-inflammatory compound or analgesic. Apparently, it is niacinamide's ability to trigger actual repair of the joint surfaces that leads to the dramatic reduction in pain and inflammation.

I want to mention, though, that niacinamide is not a cure-all or something that will work in every single case. Obviously, some joints have been damaged so severely that nothing will help. There are a few other circumstances I can think of that can interfere with niacinamide's effectiveness in treating arthritis and other conditions.

- Adequate protein is necessary for joint repair. Cartilage is high in protein, and without an adequate intake of protein, repair can't take place. That is why I suggest you take a whey protein powder supplement if you suffer from arthritis.
- All the B vitamins work in conjunction with each other. Therefore, you can expect better results if you take niacinamide along with a good multivitamin containing a broad balance of B vitamins.
- Don't expect a joint to heal properly if it is continually being traumatized by repetitive use or abuse. Arthritis in the knee joint won't heal, for example, if one continues to jog or bang on a carpet stretcher (if that happens to be your line of work). Additionally, obesity creates constant trauma to the weight-bearing joints. One way to minimize routine joint pressure is by wearing shoes with thick, shock-absorbing soles.

In cases of moderate arthritis, 1,000 mg to 1,500 mg daily have produced outstanding results. (*Am J Clinical Nut. 85;14:356*) In more severe cases, as much as 3,000 mg to 4,000 mg have been recommended. In all instances, the dosage should be divided into five or six doses and taken throughout the day rather than all at once—and with the knowledge and supervision of your nutritionally oriented doctor, of course.

Tip from Vol. 7, November 1997

grass-fed cattle. If you don't have access to raw milk products, both of these compounds are present in a product called X-Factor Gold, made by Green Pastures, 50932 872nd Rd, Page, NE 68766. They can also be reached at 402-338-5551 or on the Web at *www.GreenPasture.org*. They offer a 10 percent discount on combination orders of one jar of butter oil and one jar of cod liver oil. Note that they are a small company, so please be patient if you call and can't get through right away.)

Be Mobile With B Vitamins

One other important nutritional component for joints is niacinamide (a form of niacin or vitamin B3). Dr. William Kaufman performed extensive studies that demonstrated the amazing therapeutic effects of niacinamide in the treatment of osteoarthritis and impaired joint mobility. [*Editor's note: Please see "The Test of Time" above for a summary of niacinamide, or refer to Vol. 7, No. 5, November 1997, for a more complete discussion.]*

I predicted several years ago that various vitamin B deficiencies would become a major underlying factor in the increases we were seeing of many diseases. It has turned out to be an accurate prediction—though, for everyone's sake, I would prefer to have been wrong.

One primary factor triggering vitamin B deficiencies is the increased use of over-the-counter and prescription drugs. The proper absorption of the B vitamins requires high levels of active bacterial flora in the bowels. Antibiotics, diuretics, oral contraceptives, acid blockers, all forms of anti-cholesterol medications, and practically all forms of pain killers either interfere with vitamin B absorption and/or destroy beneficial bacteria flora in the bowels. Nowadays, it's difficult to find someone over the age of 50 who isn't taking one of the above drugs on a regular basis. (*INTERACTIONS The IBIS Guide to Drug-Herb, Drug-Nutrient Interactions, Integrative Medical Arts, 1999-2001*) (*Drug Induced Nutritional Deficiencies, AVI Publishing Co., 1976*)

A Depressing Approach to Joint Health

The chapter on the "Care and Maintenance of Joints" wouldn't be complete without mentioning cortisone. For someone with joint pain and limited mobility, cortisone injections are often presented as the solution. They are *not* the solution.

Cortisone works by suppressing and blocking the normal response of your immune system. A cortisone injection will often instantly relieve the pain and enable the return of almost normal joint mobility. Unfortunately, the relief will be only short-lived—and when the body's warning system (pain, discomfort, limited motion, et cetera) is shut down, it's easy to cause additional damage to the area without knowing it. After a few series of injections, the subsequent buildup of adhesions, scar tissue, and damage often leaves surgery and/or joint replacement as the only options. Most people aren't told this when they start cortisone treatment. They also aren't told it could very well be the trigger that ends your life.

Cortisone depresses the immune system. That's how it works. It doesn't matter if you use it topically, orally, or by injection. It stops pain, inflammation, swelling, itching, and a long list of other symptoms simply by blocking the normal response of your immune system.

It's well known that cancer cells are formed in everyone throughout our lives. Luckily, our immune system is able to recognize most of these abnormalities and destroy them before they become major problems. We also know that before a cancer is discovered it has often been present in the body for years, if not decades, in a suppressed or somewhat dormant state. In large part, we also have our immune system to thank for keeping it dormant.

What do you think happens when you suppress an immune system that has been keeping a form of cancer, viral infection, or other pathogen in check for years? It doesn't take a rocket scientist to figure that out. It's like opening Pandora's box. If you want to see what's been lurking inside your body all these years, just knock your immune system out or weaken it with drugs like cortisone. Then sit back and see what happens. It might not spring up overnight. In fact, you might not see the effects for a year or two (or even longer). But suppressing your immune system is serious business, and not an action you should take lightly. It is particularly dangerous if you've ever had cancer and are currently in remission. It's proven that dormant tumors can quickly re-awaken during times of increased physical or emotional stress, both of which weaken the response of your immune system. Cortisone is *not* the answer for joint problems.

There will be a day when repairing and renewing joint surfaces will be a safe and very easy procedure. In the not-too-distant future, I truly believe that we'll be able to inject stem cells into a joint and miraculously watch the formation of a new layer of cartilage (if not in the US, then in other countries). I don't have any idea how far away that day will be, nor the cost. For now we have joint replacement surgery, which has undoubtedly come a long way and improved the lives of thousands. Personally, however, I'd prefer to avoid both of these procedures if possible. Hopefully, by following the steps and suggestions I've outlined above, we can do so together.

Take Care,

If you have questions or comments for Dr. Williams, please send them to the mail or e-mail addresses listed to the right. Of course, practical and ethical constraints prevent him from answering personal medical questions by mail or e-mail, but he'll answer as many as he can in the Mailbox section of *Alternatives*. For our part, we'll do our best to direct you to his issues, reports, and products related to the subject of your interest.

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- If you are a licensed health professional and would like to learn how to begin reselling MHN supplements to your patients, please e-mail practitionerinquiries@davidwilliamsmail.com.
- For back issues or reports, call **800-718-8293.**
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