



Although conventional medicine maintains that drugs, surgery and reduced activity are inevitable, a new generation of clinicians disagree. They've seen how by losing weight, fighting inflammation with wholesome food and supplements, exercising smart and exploring science-backed integrative therapies, patients can manage the root causes of joint pain and find relief.

"We have many tools at our disposal to halt or slow the progression of arthritis so most people never have to have surgery," says Doctor of Naturopathy Casey Seenaath, a staff physician at the Southwest College of Naturopathic Medicine Pain Relief Center, in Tempe, Arizona.

Identification Helps

The term "arthritis" can conjure images of aging cartilage worn thin by years of overuse. Yet this common type, known as osteoarthritis, is just one of many joint pain culprits. Rheumatoid arthritis, which manifests in swelling and pain in the hands, wrists, feet or toes, arises when the body's immune system attacks itself, destroying tissue around the

Forever Flexible

Keep Joints Naturally Healthy

by Lisa Marshall

Creaky knees, sore hips, shoulder pain or a stiff neck can be a thing of the past.

Thirty-seven percent of American adults 18 and older suffer from arthritis—a catch-all term for a dozen varieties of joint disease—according to the nonprofit Arthritis Foundation. One in two men and two in three women 65 or older may have it, estimates a recent Boston University study. Due to increasing obesity rates and autoimmune disorders, it's also impacting 8 million Millennials, reports the U.S. Centers for Disease Control and Prevention.

"I'm seeing higher rates, more severe cases and more of them in younger people.

It's an epidemic no one is talking about," says Dr. Susan Blum, a Rye Brook, New York, physician and author of *Healing Arthritis: Your 3-Step Guide to Conquering Arthritis Naturally*.

About 65 percent of patients try to treat joint pain with daily anti-inflammatory drugs that can damage the stomach and kidneys. Many work and exercise less due to pain, making arthritis the leading cause of disability. More than 1 million undergo expensive, risky surgeries annually, with hip and knee replacements performed twice as often now as in 2000.

joints. Spondyloarthritis inflames the spine and sometimes the eyes and gut. Infections like Lyme disease, parvovirus and hepatitis B can also ignite arthritic joint pain.

Inflammation may exacerbate them all, so an anti-inflammatory program can typically provide relief, says Blum. Serious forms might require more aggressive treatments; a visit with an integrative clinician is an important first step.

Get Weight in Check

About one-third of obese people have arthritis, and research shows that with every pound lost, joint pain diminishes—the lighter the load, the less the pressure on joints. A Wake Forest University study of knee osteoarthritis patients showed that with

each 10 pounds lost, 40 pounds of pressure is lifted from the knee.

“But it’s not simply about the load on the joints,” says Blum.

Fat cells release compounds called inflammatory cytokines, which can boost inflammation and pain. And new research from the University of Rochester, in New York, suggests that obesity may also impair the gut microbiome (beneficial bacteria lining the gastrointestinal tract), further exacerbating arthritis.

“There is no doubt that the gut bacteria are involved in the onset and perpetuation of inflammation and pain in arthritis,” says Blum.

When researchers fed mice the equivalent of a “cheeseburger and milkshake” diet for 12 weeks, doubling their body fat, they found more pro-inflammatory bacteria in their colon, more cartilage deterioration than in lean mice and more inflammation in their knees.

Healing the Gut Heals Joints

Blum explains that dysbiosis, an overgrowth of harmful bacteria in the intestinal tract, can damage its fragile lining, allowing bits of bacteria to enter the bloodstream and ignite an autoimmune response. Dysbiosis can be kick-started by antibiotics, drugs like proton pump inhibitors, bad diet or stress, says Blum, who battled autoimmune arthritis after her son had a traumatic accident.

For curbing arthritis through the gut mi-

crobiome, the science is young. A few small human studies conducted in China and Finland suggest that ingesting specific strains of *Lactobacillus* (including *casei*, *acidophilus*, *reuteri* and *rhamnosus*) and *Bifidobacterium* (*bifidum* and *infantis*) may decrease inflammation and pain associated with arthritis.

In the University of Rochester study, overweight mice fed prebiotics (indigestible fibers that good bacteria feed on) had less arthritis progression.

Blum recommends taking antimicrobial herbs like oregano oil to heal a gut overgrown with bad bacteria and a high-quality probiotic supplement to replenish good bacteria. She also suggests ditching processed food and products with refined sugar, along with known allergens like gluten, soy and dairy, which can spawn inflammation. Avoid nightshade vegetables like tomatoes, potatoes and peppers, which anecdotally have been suggested to aggravate joint pain. Overall, strive for a plant-based diet high in fiber, colorful, antioxidant-rich vegetables and “good” fats. One recent Michigan State University study found that when osteoarthritis patients switched to a plant-based diet for six weeks, they experienced less pain than those in the meat-eating control group.

Exercise Smart

When joint pain begins to flare up, a carefully chosen workout may be exactly what’s needed for relief. A.J. Gregg, a

chiropractor in Flagstaff, Arizona, says, “There is an element of ‘use-it-or-lose it.’” The proper exercise depends partly on which joints are affected. He notes that properly executed strength training exercises like lifting weights can stabilize muscles around joints, easing strain and preventing arthritis from accelerating. Low-impact aerobic exercises like cycling or swimming can fuel the production and flushing of fluids through the joints without overloading them. Tai chi can improve range of motion. Even running, long falsely maligned as a precursor to arthritis, can help prompt cartilage cells to divide and replenish faster, research suggests.

A study of 75,000 runners by researchers at Lawrence Berkeley National Laboratory, in California, found that they were less likely to develop osteoarthritis of the knee than less active people. A subsequent paper by University of Illinois researchers found that while each running step levels more force on joints than a walking step, the foot hits the ground less often, so when it comes to wear and tear, it approximates the effect of walking. “Running doesn’t set people up for earlier development of osteoarthritis, and can in fact be protective,” says Gregg, stressing that proper form, a soft running surface and moderation are all important.

Regenerative Injections

For more advanced cases of osteoarthritis, Seenauth recommends regenerative injec-

tions such as prolotherapy and platelet-rich plasma (PRP) therapy. For PRP, doctors draw some of the patient's blood and spin it down with a centrifuge to isolate platelets loaded with growth-promoting compounds. Then, they inject the platelets into the joint. A study of 78 patients with knee osteoarthritis published in the *American Journal of Sports Medicine* found that those receiving one or two PRP injections had significantly less pain and better function six months later, while the placebo group worsened. In prolotherapy, doctors inject natural substances like dextrose and saline into the joint two to three times for six to eight weeks to promote production of collagen and other tissue-regenerating compounds.

“Rather than inject a steroid, which provides a short-term fix by suppressing the immune response, we inject a concentrated solution that ignites the body's natural healing response,” says Seenauth.

A Mind-Body Approach

Natural joint pain remedies also encompass acupuncture and meditation. In the UK, a University of York meta-review of 114 studies exploring 22 integrative or complementary therapies for arthritis, including strength and aerobic exercise training, found acupuncture to have the most studies completed and the most promising results. “Acupuncture can be considered as one of the more effective physical treatments for alleviating osteoarthritis knee pain in the short term,” concluded the authors.

University of Auckland researchers, in New Zealand, recruited 42 rheumatoid arthritis patients and assigned half to a program of mindfulness-based stress reduction, described by researchers as “the cultivation of nonjudgmental attention to unwanted thoughts, feelings and bodily experiences via meditation.”

While the meditation group saw no change in levels of inflammatory markers in the blood or the number of swollen joints, they did report significantly less morning stiffness, tenderness and pain. The patients, in essence, trained themselves to experience their symptoms differently.

“Pain is not just about nerves detecting a noxious stimulant and sending the signal to your brain. The brain has a whole system

for processing these signals, and is also informed by your experiences, emotions and cognition,” says Seenauth, who recommends mindfulness meditation to all of his patients.

“With the right nutrition, therapies and

state of mind,” he says, “you can significantly reduce the impact joint pain has on your life.”

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Supplementing Suppleness

by Lisa Marshall

Curcumin: Derived from turmeric (*Curcuma longa*), this bright yellow culinary spice has been used as an anti-inflammatory agent in Asia for centuries. Today, it's used as an alternative to non-steroidal anti-inflammatory drugs (NSAID), which can wreak havoc on the stomach and kidneys if taken long term, according to Naturopath Casey Seenauth. One industry-sponsored review concluded that 1,000 milligrams (mg) per day of curcumin can rival a NSAID like Advil for relief of pain and inflammation.

Collagen or gelatin: Integrative medicine practitioners have long prescribed gelatin powder made from animal connective tissue to provide the nutrients required for joint regeneration. Supplement makers have developed arthritis-specific collagen supplements in which the gelatin is broken down for better absorption. A Chinese study of 500 rheumatoid arthritis patients found that collagen derived from chicken cartilage improved symptoms of pain, stiffness and swelling in joints. Plant-based options are available.

Glucosamine: This classic tissue-building block has been shown in multiple studies to slow cartilage loss associated with osteoarthritis. Taken long enough, it can also ease pain, says Seenauth. “People often take it, don't feel anything right away and quit. Give it time.” He recommends 2,000 mg per day for at least six to eight weeks.

Fish oil: Omega-3 fatty acids like eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) are established anti-inflammatories. A Korean University review of 10 trials involving nearly 400 rheumatoid arthritis patients found that those taking more than three grams per day of omega-3 fatty acid supplements reduced their reliance on NSAIDs and had less pain.

Probiotics: While their impact on pain reduction isn't clearly known, many studies show that certain strains of *Lactobacillus* and *Bifidobacterium* can boost immune function, repair damaged gut lining and reduce system-aggravating inflammation, says Dr. Susan Blum. She recommends products containing a mixed blend of 20 billion to 30 billion colony-forming units (CFU) per capsule.

