



CLINICAL CARE

## Integrative Approaches to Osteoarthritis

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The CDC estimates 63 million Americans have doctor-diagnosed arthritis as of 2020, with that number ramping up to 75 million by 2035.<sup>1</sup> In a national health survey sponsored by the CDC, 27.7 percent of adults who have arthritis are also obese, 33.7 percent also have diabetes, and 36.4 percent also have heart disease. This picture looks all too familiar in our clinics across the country.

### Improving Our Results: Address Inflammation

How can we improve our results beyond acupuncture and herbal medicine? Let's look back at the CDC statistics. About a third of adults who have arthritis are obese, or have diabetes or heart disease. What's the common denominator? Inflammation. There are several strategies we can offer our patients to combat systemic inflammation with diet, lifestyle, non-invasive therapies and supplementation; addressing up to four health conditions simultaneously.

Researchers are unsure if inflammation is the driver or the outcome of the process of joint destruction.<sup>2</sup> Osteoarthritis has shifted in the medical literature from being considered a "wear and tear disease" to an inflammatory disease.

### Inflammation Reduction: More of This, Less of That



Suggesting your patients avoid sugar like the plague, and limit gluten and processed foods, is a good start toward inflammation reduction. Recommending anti-inflammatory foods such as celery, onions, eggs, garlic, and basil will help them from feeling overly restricted, and empower them to manage their discomfort.

A subset of arthritis sufferers is reactive to nightshades (tomatoes, white-flesh potatoes, green / red / yellow peppers, and eggplant) and should remove them completely from their diet for six weeks, then reintroduce one or more. If they have a severe flare-up, then it's appropriate to eliminate nightshades as a pain-reduction strategy.

Dieting for weight loss can help folks suffering from arthritis in weight-bearing joints such as knees, hips and spine. Harvard researchers state that *"when you walk on level ground the force on your knees is the equivalent of 1 ½ times your body weight. That means a 200-pound man will put 300 pounds of pressure on his knees with each step. Add an incline, and the pressure is even greater: the force on each knee is two to three times your body weight when you go up and down stairs, and four to five times your body weight when you squat to tie a shoelace or pick up an item you dropped."*<sup>3</sup>

#### Natural Alternatives to Anti-Inflammatories

Offering options beyond NSAIDS (which lead to more than 16,000 deaths and 100,000 emergency-room visits per year)<sup>4</sup> to manage their pain will typically be met with open arms.

Fish oil decreases systemic inflammation and reduces cartilage destruction.<sup>5</sup> A 2016 study flies in the face of the current American philosophy of "more is better - and too much is just enough"; the researchers compared high vs. low doses of fish oil for knee osteoarthritis and the low doses were (surprisingly) found to be more effective at pain control.<sup>6</sup>

Turmeric's active ingredient is curcumin, known for its anti-inflammatory, antioxidant, anti-cancer and even antidepressant properties. Curcumin isn't very bioavailable, so choosing a product that contains piperine (found in black pepper) will increase its absorption by 2,000 percent.

A 2019 study demonstrated that curcumin is clinically effective in the management and treatment of osteoarthritis, with a very low side-effect profile.<sup>7</sup>

Glucosamine sulfate and chondroitin sulfate have mixed reviews in the medical literature, with some studies suggesting glucosamine sulfate improves joint function, stimulates cartilage regeneration and reduces pain,<sup>8</sup> while others suggest the two supplements compete with each other in intestinal absorption and should be taken at different times of day. Some researchers insist glucosamine and chondroitin will only improve joint pain and stiffness if combined with omega-3 fatty acids (DHA and EPA).<sup>9</sup>

I'm a big fan of hyaluronic acid, both in oral and injectable forms, and recommend both options to my patients.<sup>10-11</sup> SAMe (S-adenosylmethionine), an essential amino acid in humans, is known to be a powerful antioxidant and has demonstrated longer-lasting effects than NSAIDs in the treatment of OA, in addition to protecting the cartilage proteins and proteoglycans from degradation.<sup>12</sup>

Bone broth, containing collagen compounds, the amino acids arginine and glycine, and calcium, magnesium, zinc, phosphorus and potassium, is known to reduce inflammation and promote joint health.

Prolotherapy, platelet-rich plasma, stem cell injections, and prolozone, all of which involve the injection of various solutions into the affected joint space, show great promise, but are not FDA approved; although dextrose and lidocaine (used in some of these techniques) are cleared by the FDA, and PRP is under consideration for FDA clearance for certain medical procedures. Adverse events and side-effect profiles are very low for these interventions.

#### Other Options Outside of our Basic TCM Training

Moxibustion (warming needle, indirect, etc.), cupping, *gua sha*, and a whole host of Chinese herbal plasters and topicals are well within your reach, but won't be addressed - I'm covering those methods and techniques *outside* of basic TCM training. For instance, kinesiotape can be very helpful in joint function / support, and easing the pain of osteoarthritis of the hand and knee.<sup>13</sup> There appears to be a paucity of data on hips and shoulders, but I recommend taping them anyway.

Various types of knee braces (both with and without solid articulating structures) can also be beneficial for your patients suffering from advanced osteoarthritis.

For those who have swollen, painful hands and fingers, you may recommend paraffin baths - they can provide short-term relief and greater grip strength.<sup>14</sup>

Chiropractic manipulation and massage are two tried-and-true methods to ease the pain of swollen joints, and improve range of motion and function.

Feldenkrais (a practice of awareness through movement and functional integration) is also worth recommending to your patients with osteoarthritis, although studies are few and far between.<sup>15</sup>

Yoga, *tai chi* and *qigong* have been well-studied, and *tai chi* was even pitted against physical

therapy for knee osteoarthritis with similar physical outcomes. However, *tai chi* demonstrated additional improvements in depression and quality-of-life measures.<sup>16</sup>

### Take-Home Message

When working with patients suffering from osteoarthritis, emphasize that systemic inflammation is the enemy, and that developing a multiprong approach, including lifestyle, diet, supplementation, and non-invasive therapies, will improve their rate of recovery and return to normal activities.

### References

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