“Twenty or 30 years ago, osteoarthritis was considered a nuisance disease,” says arthritis expert Roland Moskowitz. “You have some aches and pains that go along with growing old that you just have to live with.”

No more. “We now recognize the impact that osteoarthritis has on daily living and the ability of people to work,” says Moskowitz. Here’s what we’re learning about one of the most common causes of disability in America.

**Weight**

“The heavier you are, the more likely you are to get osteoarthritis,” explains David Felson, professor of medicine and epidemiology at the Boston University School of Medicine.

Osteoarthritis is caused by the breakdown of cartilage, which can lead to pain and stiffness in the knees, hips, and other joints. (It is a different disease than rheumatoid arthritis, an autoimmune condition in which the body attacks the lining of the joints.)

When researchers in Norway tracked more than 1,600 people with healthy knees for 10 years, those who were overweight or obese were two to three times more likely to be diagnosed with osteoarthritis of the knee than those who were normal weight.1

Among the ways that weight can damage your joints:

- **Load.** “Every extra pound increases the stress across the knee joint three to five times,” says Roland Moskowitz. “So you’re increasing your risk of osteoarthritis many times by being overweight.” Moskowitz is clinical professor of medicine at University Hospitals Case Medical Center in Cleveland.

- **Injury.** “In addition to the extra stress on the joints, being overweight may increase the risk of injuring the joints, which can lead to osteoarthritis,” notes Carrie Karvonen-Gutierrez, an assistant research professor at the University of Michigan School of Public Health.

In one study, 500 people who were having surgery to repair a torn meniscus were about three times more likely to be overweight than to be normal weight.2 (The meniscus is the cartilage that helps your knees absorb and distribute weight across the joint. See “Rolling Joints.”)

“People with small meniscal tears tend to be at very high risk for getting osteoarthritis later,” notes Felson.

- **Inflammation.** “We now know that fat cells release inflammatory chemicals that can break down cartilage,” says Karvonen-Gutierrez. Increased inflammation throughout the body might explain why some people get arthritis in the hands, which aren’t weight bearing.

“Obesity is the number-one risk factor for osteoarthritis, one that’s preventable and modifiable,” says Karvonen-Gutierrez. “So weight loss is really important.”

Shedding pounds is also important if you have arthritis. In four trials involving a total of more than 450 overweight or obese adults with osteoarthritis of the knee, those who lost at least 5 percent of their body weight reported less physical disability.3

In the largest of the four studies, 76 overweight or obese adults aged 60 and older who lost an average of 11 pounds over 18 months reported 24 percent better knee function than 78 similar people who were told that a healthy lifestyle is important, but who didn’t lose any weight.4 (Better function means, among other things, greater range of motion, better ability to bear weight, and an easier time climbing stairs.) The weight-losers also reported feeling 30 percent less pain.

**Beyond Weight**

Weight aside, your risk of osteoarthritis depends on some things you can control and some you can’t.

- **Strength.** “The weaker you are, the more likely you are to develop osteoarthritis,” explains Felson. Weak thigh, calf, and hip muscles can lead to joint injuries like a torn ACL or meniscus. That increases the risk of cartilage loss. If you continue to stress the injured joint, “it could bring on osteoarthritis symptoms and maybe structural damage even earlier,” says Felson.

- **Strenuous use.** Overuse from occupations that repetitively stress the joints—landscaping, climbing ladders, or scrubbing floors on your knees, for example—can increase the risk of osteoarthritis.

- **Age & genes.** The longer you’ve been using your joints, the more likely they are to wear out. Whether your parents had arthritis matters, too. About half the risk for arthritis of the hip or hand...
may be determined by your genes.4

**Being female.** Women are more likely to get arthritis than men after middle age. One possible reason, according to the Arthritis Foundation: women’s wider hips put more long-term stress on their knees.

**Help for Joints**

“If you have osteoarthritis, exercise is one of the most effective treatments we know,” says David Felson.

It’s not that exercise can cure or slow the progression of osteoarthritis. “Its benefit is to alleviate pain and increase range of motion, not necessarily to make the structure of the joint better,” notes Felson.

How can exercise curb pain? “It can lower overall inflammation,” says Allison Bailey, a physician specializing in physical medicine in Cambridge, Massachusetts.

Inactivity leads to more trouble. “If you don’t keep using an arthritic knee or hip, you can lose flexibility,” says Felson. “Doing weight-bearing exercises keeps muscles strong and flexible, which reduces further injury to the joints.”

On the other hand, adds Felson, “doing aggressive physical activity when you’ve injured a joint may not be wise,” because you risk damaging the joint even further.

Here’s what Bailey and other experts recommend:

**STRENGTH TRAINING.** Strong muscles absorb weight, provide stability, and help the joints move the way they’re designed to. Among 95 older adults with mild to moderate arthritis of the knee, those who were told to do strengthening exercises for 12 weeks reported less knee pain and climbed stairs faster than those who weren’t told to exercise.6

Bailey has her patients start with gentle stretching. “Then they do two sets of each exercise, with 10 to 12 repetitions each.”

“You can also strengthen the muscles without doing weight-bearing activities,” notes Moskowitz. For example, if lifting weights hurts, try Bailey’s leg extension exercise without ankle weights.

If an exercise hurts, don’t do it, says Felson. “Ask your doctor about exercises that don’t cause you pain.”

**AEROBIC EXERCISE.** Exercises like walking briskly, jogging, biking, and swimming increase blood flow to cartilage, which gives it the nutrients it needs to stay healthy.

What’s more, “cardiovascular exercises help reduce the body’s sensitivity to pain signals,” explains Bailey. For instance, people who cycled for 25 minutes felt less pain when researchers applied uncomfortable pressure to one of their fingers after they exercised than before they exercised.7

“Ideally, cardio should be done daily, or at least six days a week,” says Bailey.

In 2012, a group of Canadian arthritis experts concluded that walking for 30 to 50 minutes at least three days a week relieved osteoarthritis knee pain. The longest trial they reviewed lasted only three months, though.8

Some people with arthritis prefer swimming because it puts less pressure on the joints. “If you’re afraid to start moving,” says Bailey, “you may want to consider using aquatic therapies as a bridge to land-based activities.”

While water exercise relieved pain from knee and hip osteoarthritis in four trials, it didn’t improve walking ability or stiffness.9

**TAI CHI.** The classic Chinese martial art involves a series of slow and gentle movements that combine balance with weight-shifting poses.

“I recommend tai chi to a lot of my patients, especially because you can do it indoors in the winter months,” says Bailey.

In a recent meta-analysis of seven small trials, people with arthritis of the knee or hip who practiced tai chi for 40 to 60 minutes a day for at least 12 weeks reported less pain and stiffness and improved function in their joints than similar people who engaged in a non-physical activity like playing bingo.10 By only two of the studies included...
**PILLS FOR PAIN?**

**BY DAVID SCHARDT**

Got osteoarthritis? Odds are, you take ibuprofen, aspirin, or another non-steroidal anti-inflammatory drug (NSAID) to deal with the pain and stiffness. You may also take—or have been tempted to try—one of the dozens of arthritis supplements sold at your local drugstore or supermarket. Do they do a better job at relieving arthritis pain? Can they build cartilage? Don’t count on it.

Take Osteo Bi-Flex, which advertises that its exclusive ingredient, 5-Loxin, provides relief in as little as seven days. Yet in two company-funded studies, people with arthritis of the knee who took Osteo Bi-Flex for seven days reported no less pain on three of four pain scales than similar people who took a placebo.1

Here’s the evidence behind some popular ingredients in arthritis supplements.

**Glucosamine & Chondroitin**

In the GAIT trial, taking glucosamine hydrochloride plus chondroitin every day for six months didn’t relieve pain or improve joint function any more than a placebo for 317 people with osteoarthritis of the knee.2 At first, researchers thought that the combination may have helped just the 57 participants who started the trial with moderate-to-severe pain. But when they monitored participants for two more years, they saw no benefit.3

**MSM**

Companies often replace some of the chondroitin in their supplements with MSM (methylsulfonylmethane), which is less than a tenth the cost. In three trials that used much more MSM than most supplements contain, researchers saw either no benefit or such slight improvements in pain or function that they questioned whether MSM would make much of a difference for arthritis sufferers.4

**Avocado & Soybean Unsaponifiables (ASU)**

The extract of avocado and soybean oils slows inflammation of cells in test tubes. But in the only good study in people published during the last 11 years, 166 men and women with arthritis of the hip who took 300 milligrams of ASU every day for three years reported no less pain or stiffness and no better joint function than 179 similar men and women who took a placebo.5

Joint space width, an X-ray measure of the severity of the disease, worsened in 50 percent of the placebo takers and 40 percent of the ASU takers. Does that small difference matter? “The clinical relevance of this requires further assessment,” said the researchers.

**Fish Oil & Krill Oil**

No good studies have looked at whether fish oil helps relieve osteoarthritis pain. Krill oil, which is manufactured from zooplankton that are harvested in the Antarctic Ocean, also contains the omega-3 fats DHA and EPA.

In one company-funded trial on 69 people with either osteoarthritis or rheumatoid arthritis, those who took 300 mg a day of krill oil reported less pain after 14 days and less stiffness after seven days than those who took a placebo.6

Since rheumatoid arthritis is a different disease than osteoarthritis, and since rheumatoid arthritis may be helped by omega-3s, it’s not clear that krill oil did anything for the people with osteoarthritis.

**Vitamin D**

When researchers gave 2,000 IU of vitamin D every day for two years to 73 men and women with osteoarthritis of the knee, “it had no impact on their level of knee pain,” says Timothy McAlindon of the Tufts Medical Center in Boston, who led the NIH-funded study.10

In other words, vitamin D provided no more relief than a placebo. It didn’t slow down cartilage loss any better, either.

**SAM-e**

In a half-dozen trials, people with osteoarthritis who took 1,200 mg of SAM-e (S-adenosylmethionine) every day for one to four months reported as much pain relief as those who took non-steroidal anti-inflammatory drugs like Celebrex or ibuprofen.11

“There does seem to be a small pain relieving effect, similar to NSAIDs,” says David Hunter, professor of rheumatology at the University of Sydney Medical School in Australia. “But in general, the trials are small, and the optimum dose and treatment period remains unclear.” Then there’s SAM-e’s price. A month’s supply of 1,200 mg a day can cost $80 to $110. That may be why supplement companies often recommend taking less than that, though there’s no good evidence that less helps relieve arthritis pain.

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