

# Does your knee pain tell you when it's going to rain?

BY RENEE S. MELFI, M.D.

If this is you, you may have knee osteoarthritis. Arthritis is the most common cause of disability among adults in the United States. You may have joint pain, decreased joint range of motion, fluid, stiffness, and joint buckling. There is no known cure, therefore the goals are to control pain, maintain or improve joint mobility, and minimize disability. Are you looking for options other than years of cortisone shots? Would you rather keep your own parts instead of having a knee replacement?

What should you do if you have these problems? In the first few days, you may rest, and use ice. After the first two days, get back to activity as tolerated. If you have pain for more than several weeks, you should see a physician.

Seeing a physiatrist, a medical doctor specialist in physical medicine and rehabilitation, is a great first step. A physiatrist is not a surgeon and can guide you in the many non-operative treatment options for joint as well as spine pain. The foundation of treatment for osteoarthritis



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starts with the things you can do to help yourself feel better.

## Weight loss

Reduction of weight will help to relieve the pressure on your joints. For every pound of weight you lose, you can decrease the force going through your knee joint by a factor of two. That means if you lose 10 pounds, you will decrease the force through your knee joint by 20 pounds for every step you take in a day.

"Joint protection" techniques

Joint protection principles are

a series of techniques which can be included into all activities to reduce the stress on your joints. Remember to listen to your body and respect the pain. Modify tasks, avoid overuse, use correct posture, and consider assistive devices, such as a support sleeve, brace, wedged insoles, shock absorbing footwear, and a cane.

## Physical therapy (Pilates, yoga)

Strengthening the quadriceps and pelvic muscles help to provide support to reduce the forces and stresses on the joint. Stretching the hamstrings is necessary to avoid knee contractures. In New York, you may refer yourself to physical therapy for up to ten sessions before a prescription from a medical provider is required.

## Have an anti-inflammatory diet

Diets high in sugar and carbohydrates are pro-inflammatory and can aggravate pain.

## Tobacco cessation

Studies show nicotine increases the risk for degeneration, and impairs bone and wound healing. Smoking alters the processing of pain so that smokers perceive increased pain levels.

## Medications and supplements

While you are doing these self-care strategies, your physiatrist or other medical practitioner can add in medications or supplements. Acetaminophen and/or nonsteroidal anti-inflammatories (NSAIDs) are the initial medication therapy for osteoarthritis. Supplements offer a more natural and holistic approach, however the world of supplements can be very confusing.

Supplements are not a part of the medical school curriculum, and your physician must spend additional time studying the literature and attending courses to independently learn about supplements. Because the supplement industry is not regulated by the FDA, quality standards can vary widely by company. Studies have found great variability in the quantity and form of herbs listed on the ingredients label, as well as possibility of contaminants. Furthermore, some products bought on the internet may be counterfeit products.

If you are interested in supplements, ask your provider how they learned about supplements. Do they offer products that are produced

and distributed from NSF-registered facilities, and do the products have third party validation of Good Manufacturing Practices (GMPs)? Licensed health care professionals can offer pharmaceutical grade supplements, higher in quality than the brands offered in commercial stores.

## When it comes to injections, there are a number of choices.

Has your doctor recommended corticosteroid, often called cortisone, injections for your joint pain? Did you know you should be careful of the number of corticosteroid injections you receive in a joint? Corticosteroids, though safe when regulated by a physician, may have adverse effects if used too often. Corticosteroids can target cartilage cells, causing them to shrink and wear out if repeatedly exposed to the medication.

## Other joint injection options exist

*Hyaluronic acid viscosupplementation:* When you have knee osteoarthritis, the fluid in your knee called hyaluronic acid, thins. Your doctor can inject more hyaluronic acid into your knee to boost the supply. After an injection, hyaluronic acid helps

**KNEE • PAGE 7**

# Crouse Health offers advanced certificate in nuclear medicine technology

Partners with Massachusetts College of Pharmacy and Health Sciences School of Nuclear Medicine

Crouse Health and the Massachusetts College of Pharmacy and Health Sciences (MSCPHS) School of Nuclear Medicine have partnered to provide local health professionals an opportunity to become a Certified Nuclear Medicine

Technologist.

Designed for students located in the Upstate New York region who hold an associate's degree in medical imaging or a bachelor's degree in any field, this 12 to 14-month program builds on previous college

studies, preparing participants to become a Board Certified Nuclear Medicine Technologist licensed in New York State for the practice of Nuclear Medicine Technology.

Designed for students located in specific regions

of New England and the Northeast who hold an associate's degree in medical imaging or a bachelor's degree in any field, this 12 to 14-month program builds on previous college studies, teaching participants how to safely and compassionately administer radioactive drugs, or radiopharmaceuticals, to patients.

Course work will be completed on-line through MSCPHS, with clinical training to be provided at Crouse Hospital, one of three New York State hospitals to participate in the program.

Students will learn how

to obtain rapid-succession images of where radiopharmaceuticals concentrate in the body, giving the medical team insight essential to diagnosing patients. Students will also discover the functions of the many organs and tissues found in the human anatomy and learn how to treat a variety of medical conditions using targeted radiation.

"We're excited to partner with MSCPHS on this innovative educational and clinical opportunity," says Brad Hellwig, Director of Medical Imaging at Crouse Health. Students will follow a synchronous

distance/online class schedule, offering the flexibility of online education coupled with the community-building experience associated with classroom learning. "Program participants will work alongside industry experts and gain firsthand knowledge of what it's like to be a Nuclear Medicine Technologist," adds Hellwig.

For more information and to apply visit [mcphs.edu/academic/school-of-medical-imaging-and-therapeutics/nuclear-medicine-technology/nuclear-medicine-technology-advanced-certificate](http://mcphs.edu/academic/school-of-medical-imaging-and-therapeutics/nuclear-medicine-technology/nuclear-medicine-technology-advanced-certificate).

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# Separate fact from canned food fiction

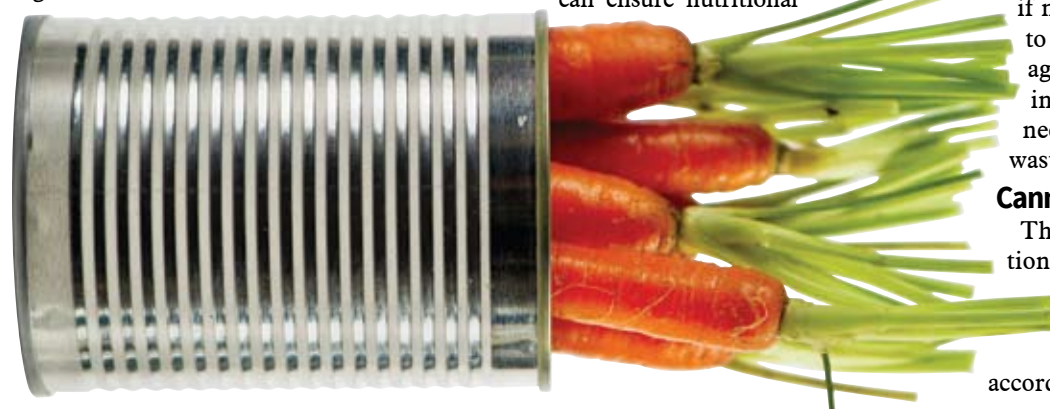
Shoppers can find just about any of their favorite foods in canned varieties. Convenience is a driving force behind the popularity of canned food, as such items often are affordable, chopped and/or prepared and easily stored for long durations without the need for refrigeration. When a certain ingredient is needed, all one has to do is go to the pantry and select the right item for the meal.

Despite the benefits of canned foods, shoppers may not have all the facts concerning their nutrition and benefits. To set the re-

cord straight, here's the truth about popular canned items.

## Canned foods are nutritionally sound

Canning preserves most nutrients. Healthline reports that protein, carbohydrates and fats are unaffected by the canning process. Most minerals and fat-soluble vitamins like vitamins A, D, E and K also are retained. However, certain water-soluble vitamins may be affected, such as vitamins C and B. Mixing canned foods with other foods rich in water-soluble vitamins can ensure nutritional



needs are met.

## Canned foods are tasty

"Have a Plant, the Plant-Forward Eating Guide" says canned foods offer comparable taste to fresh and frozen alternatives. Recipes will not suffer if canned ingredients are used in lieu of others.

## Canned cuts down on wasted food

The high-heat canning process locks in freshness and flavor so canned items are shelf-stable for many months. While fresh foods are beneficial, they may spoil if not used in a timely fashion, leading to waste. Often canned foods are packaged in manageable portions, meaning a home cook can grab only what's needed for a recipe, resulting in less waste as well.

## Canned foods are affordable

The charitable organization Canstruction says that canned foods help families stretch their budgets. Fresh green beans are nearly 500 percent more costly than canned green beans, according to an analysis from researchers

at Michigan State University. Many other canned foods are less expensive than their fresh or frozen counterparts. Canned items also are put on sale frequently, helping people save even more money.

## Canned foods provide variety

Canned options are limitless, meaning families can prepare many different recipes even when access to fresh ingredients is limited, such as when produce is out of season.

## Canned: Not necessarily high sodium

Yes, certain canned items will be sealed in a saltwater solution, but this isn't always the case. In addition, many reduced sodium varieties are available for those watching their salt intake. A 2012 study from the Centers for Disease Control and Prevention identified bread, cold cuts, cured meats, and pizza as food categories that add the most sodium to Americans' diets. Canned produce did not make the list. Plus, by draining and rinsing canned foods with fresh water, one can reduce the sodium of salt-containing products.

## Knee.

FROM PAGE 2

cushion and lubricate the moving parts inside your knee.

**Radiofrequency ablation:** This is an injection performed by an interventional physiatrist, to first block, then deaden the nerve supply to the knee joint.

**Orthobiologic (aka regenerative) injections:** Your own blood growth factors and stem cells can be injected into your knee joint to amplify the body's healing response or reduce inflammation and pain. In Platelet Rich Plasma (PRP) a sample of your own blood is drawn and concentrated. These platelets are then injected into the injured area to promote healing by your body's own growth factors. Studies show PRP is superior to steroid injections for knee arthritis.

**Bone Marrow cell injection:** A "stem cell" is a type of cell within your body that is able to transform into another type of cell. Stem cells can be thought of as the conductor of your body's innate healing potential; bringing together all the cells needed for your body to stimulate healing of damaged tissue. The most common source for a stem cell for knee injections is your own bone marrow, drawn up with a needle from bone in the back of your pelvis.

There are some types of procedures that

may be mislabeled stem cell injections, but are not. commercial human cell and tissue products (HCT/P) are an example. For knee and other orthopedic-type injections, scientific study has proven that these products contain NO live or functional stem cells. Make sure you ask your doctor where the cells come from before you agree to this type of injection. Be aware that if they are not from your own body, they are not stem cells.

If you are having a joint injection, I recommend imaging guidance. This means live x-ray or ultrasound is used to help your doctor guide the needle into the joint. Without live imaging guidance, it is possible that the medicine can miss the joint. For example, there is a study that "blind" injections (without imaging guidance) have an accuracy rate of only 71 to 75% for getting the medication into the knee joint.

When all else fails, knee replacement is an option. It can be considered when there is severe osteoarthritis, joint deformity, and progressive limitations in function that has failed to respond to medical therapy.

*Renée S. Melfi, M.D. is board certified in Physical Medicine and Rehabilitation, Pain Medicine, and Integrative Holistic Medicine. She is a founding partner of Regenerative Spine & Musculoskeletal Medicine in Syracuse.*



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## Renée S. Melfi, M.D.

FAAPMR, DABPM, ABIHM

Dr. Renée S. Melfi is quadruple certified:

- Physical Medicine and Rehabilitation (ABPM&R)
- Pain Medicine (ABPM&R)
- Integrative Medicine (ABIHM)
- Medical Acupuncture (New York State)



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