Bum Knee

This is one joint that isn't always jumpin'. Here's how to fix it.

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When you live on one of Florida's golden Gulf beaches, you tend to get a little obsessed with how you look in a bathing suit. After all, you're in one every chance you get.

Beth Lambiris admits that was part of the reason why, 10 years ago, she took "hard-core aerobics classes" three times a week. "I did it to be in shape. Many people were doing it back then," says Lambiris, who now, at 44, has knee osteoarthritis (OA), a degeneration of the cartilage that covers and cushions the bones in the joint. She adds ruefully, "I'm a product of 'no pain, no gain.'"

Beth Lambiris joins a growing number of people, especially women, who are quickly learning that OA isn't just a painful harbinger of aging. In fact, knee OA is more common than ever for 30- and 40-year-olds. In part, it's the booby prize for a youth spent in the quest of athletic achievement, fitness, and single-digit dress sizes.

That's certainly the case for 23-year-old Jaycie Phelps, from Colorado Springs, CO, who also has knee OA. It was athletic achievement that did her in. A member of "The Magnificent Seven," the US women's gymnastic team that won gold at the 1996 Olympics in Atlanta, Phelps suffered a torn meniscus in her left knee.

"All the flipping and twisting took its toll," she says. The meniscus is a wedgelike rubbery cushion located where the major bones of your leg connect. It acts as a shock absorber, plus it keeps your thighbone (femur) and shinbone (tibia) from grinding against each other.

Being overweight is also a risk factor. Your weight bearing knees are strong, but they can only handle so much before you've effectively knee-capped yourself.

Weak-Kneed Women

Women get knee OA twice as often as men. The reason? It's complicated. For starters, you can point the finger at the President's Council on Physical Fitness and Sports, Title IX, and Jane Fonda for promoting women's sports and physical fitness. "As women are more active as teens and injure their knees, they're more prone to developing knee OA because the joint is less stable," says John Klippel, MD, medical director of the Arthritis Foundation.

Men's knees can go too. Former New York Jets quarterback Joe Namath has been walking on artificial knees since 1992. But women don't have to spend every Sunday being abused by 300-lb behemoths to have knee problems that severe. We have three significant strikes against us.

Arthroscopic procedures, in which doctors examine and operate through a tiny incision, are better at repairing damage than treating OA, says Halpern. "It's a good procedure for someone who has OA and a meniscal tear or torn cartilage that is problematic. In that case, the meniscus is more the source of pain than the OA."

Artificial cartilage is one of the newest medical breakthroughs to help OA sufferers in the under-50 crowd. "We can replace the cushion the cartilage normally provides in the knee joint and lining," says Frank Noyes, MD, director of the Cincinnati Sportsmedicine and Orthopaedic Center. "This results in more ease of movement and less pain." He performed both a cartilage restoration and a meniscus transplant on Olympic gymnast Jaycie Phelps in 1997.

Headed for a Breakdown

In the past decade, there's been an astounding 90 percent increase in the number of knee replacements in people under 55. That's partly because of new artificial joint technology, but it's also because it's pretty easy to wear out a real knee.

Unfortunately, cartilage doesn't have a blood supply or nerves, so it can't heal on its own. As cartilage damage increases because of wear, bone ends become exposed and stressed. Cysts or spurs then develop, causing bone to rub on bone, resulting in pain. Tissues of the joint then become inflamed and damaged.

All that pain keeps you from being active, which then weakens your muscles and leaves your knee joints without the support they need to avoid injury, misalignment, and even more wear. This in turn creates more damage and more pain. "Eventually, it can result in a total joint failure," says Klippel.

Joint Venture

Knee replacement may be the closest thing to a cure for OA because it relieves pain and improves mobility. New artificial joint technology has created knees with a 15- to 20-year lifespan (meaning a 40-year-old won't have to be replacing his knees every few years). But it's not a decision to be made lightly.

"There are two reasons for a knee replacement after you've exhausted conservative management," explains Halpern. "Either you can't control the pain from OA, or you're functionally disabled: You can't go up and down stairs or play a round of golf."

Knee replacement used to mean just that: replacing the major portion of the knee. Today, you may only need a partial replacement and less invasive surgery to get you back on your feet. The caveat? OA must be confined to only one part of the joint.

First, we're more prone to knee injuries because we have wider hips. That's an essential for giving birth, but the angle at which it pitches our legs (it makes us a little knock-kneed) puts uneven pressure on the knees, resulting in a higher likelihood of wear.

Then there's muscle mass. Men start out with more, meaning their knee joints have more support. We start out with less, then lose more as we age.

Estrogen may be involved too. We know it plays a role in cartilage metabolism, and a study at the University of Michigan found that women were more susceptible to knee injuries at ovulation, when estrogen levels are high.

Gender aside, you may also develop OA if it runs in your family and you have biomechanical problems leading to uneven wear on the joint (you're bowlegged or knock-kneed, for example), or if you have either of those risk factors and you're overweight.

Doc, About My Knee ...

If you've tried getting relief on your own but are still in pain with limited mobility, it's time to talk to your family practitioner or internist about other OA options.

Your doctor may recommend prescription drugs such as COX-2 inhibitors and refer you to a physical therapist who will check out your range of motion, strength, and function, then work up an exercise program for you.

You can locate a certified physical therapist or a physiatrist (a medical doctor who specializes in physical medicine and rehabilitation) online.

Braces can also help your quality of life by improving the way you move and making you more "biomechanically correct." They are an option "if you have unstable knees and want to remain active, or if you have damaged knees and want to try another option besides surgery," says Klippel. "They're a support, not a solution." Braces range from over-the-counter wraps to expensive custom-made models.

If you have pain and swelling, cortisone shots and viscosupplementation (joint fluid therapy) can stave off surgery. For some, cortisone shots give almost immediate relief from knee joint swelling and pain that can last from a few days to months. "It's an anti-inflammatory for an acute arthritic flare-up, say if you've been too active and your knee swells," says Halpern. Limit cortisone treatments to no more than two or three times a year.

"Just as you'd apply WD-40 to a rusty joint, viscosupplementation gives the knee a jump start with artificial joint fluid much like the knee's own lubricant, hyaluronic acid," explains Halpern. Some people see dramatic improvements.

According to Noyes, only 1 in 20 of his patients qualifies as a candidate for unicompartmental knee replacement (partial knee joint replacement). In this minimally invasive surgery, he says, "We put a cap or crown on, say, the thighbone, just like a dentist does, which conforms to its surface. Then, on the tibia surface, we put a mating cup or receptacle. The benefit is that the patient has only a small incision, and they can leave the hospital the next day."

Having a total knee replacement, on the other hand, means a cap or crown on the thighbone, tibia, and kneecap. But here's the good news: Most of the time, modern total knees last 15 to 20 years, making knee replacement more of an option for younger people.

Getting a Leg Up on Knee Pain

Ideally, if you maintain a healthy weight, stay active, and avoid injuries to the knee joint, you'll be able to avoid OA altogether. But even if you have knee OA, there's plenty you can still do to ease the pain and improve your mobility.

Drop 10. Losing just 10 lb can slash your risk of knee OA by half and reduce pain too. "Your knee thinks you've lost 40 lb because of the way the weight is distributed," says William J. Arnold, MD, rheumatologist at the Illinois Bone and Joint Institute in Des Plaines.

Move your knees and your butt. Doing the right kind of exercise regularly can strengthen the muscles that support your knees and increase joint flexibility. The right kind of exercise includes walking or aquatics, or a low-impact gym staple, the elliptical trainer, which is a cross between a stairclimber and a stationary bike.

Strengthening the quadriceps muscles in the front of the thighs, the hamstrings, and the lower extremity muscles helps stabilize the knee. "Riding a bike is a simple way to do this, and it won't put stress across your knee like running, jumping, or tennis will," says Arnold. "It also lubricates the knee." That's because the motion within the knee joint allows nutrients in the synovial fluid (the fluid that lines your knees) to move around.

For information about exercise and arthritis, visit the Arthritis Foundation Web site or contact them at (800) 283-7800 (US only).

Wear sensible shoes. Cute though they are, high heels put a lot of pressure on your knees. Shoes with heels no higher than 3/4 inch are best. "Good shoes are critical," says Arnold. "Aim for arch support, flex of the sole, and a firm heel counter, the back part of the shoe. You'll have a much more solid relationship with the shoe and the ground." A running shoe, he says, is ideal. "They're made for maximum impact and are good for everyday use."

Take a pill. Over-the-counter medicines can help you manage your pain so that you can exercise. A 2003 study showed that pain relief was greater for those arthritis sufferers who took a nonsteroidal anti-inflammatory drug (NSAID), which relieves pain and reduces inflammation, than for those who took medication for pain relief only. Prescription drugs such as the COX-2 inhibitors (Celebrex and Bextra) block cyclooxygenase-2, an enzyme that plays an important role in causing arthritis pain and inflammation.

Mind your mind and body. Beth Lambiris got pain relief and increased range of motion by practicing yoga. "Within a month, I felt better," says Lambiris, now a yoga teacher. Yoga can also help you relax.

Like yoga, meditation and acupuncture can help you manage pain. "Meditation puts you in touch with your body and helps you practice mindfulness, a moment-to-moment nonjudgmental awareness, as you move through your everyday life," says Jon Kabat-Zinn, PhD, professor emeritus of medicine at the University of Massachusetts Medical School.

Lambiris also tried acupuncture. "It was the first time I had no pain," she says. In fact, a study showed that acupuncture treatments reduce pain, which may help improve daily functioning. To find a licensed acupuncturist near you, visit the American Association of Oriental Medicine Web site or call toll-free (888) 500-7999.

Feed your knees. Whether you're a weekend warrior or already suffer from OA, it's a good idea to take glucosamine and chondroitin. That's because glucosamine, a natural substance found mostly in the cartilage, not only relieves pain but "may also prevent cartilage damage and cushion joints," says Klippel. Chondroitin enhances this effect. Expect to take it for at least 2 months before seeing results.

Why Your Knees Check Out

The largest joint in the body, the knee is a marvel of mechanics. Three key elements play a role in allowing your leg to swing like a well-oiled hinge in the middle: the femur, tibia, and patella. There's also a cast of supporting players, including ligaments, cartilage, and muscles.

Here's how your knee works: When you take a step, the lower end of the femur rotates on the upper end of the tibia. The patella, or kneecap, which is enclosed in ligaments that control motion by connecting bones, slides in a groove on the end of the femur and provides a shield to protect the joint. A cushion of cartilage helps absorb the pounding your knees take on a daily basis. Muscles--quadriceps in the front of your thighs and hamstrings in the back of your thighs--also provide key knee support.

Your knees work harder than any other joint in your body, hoisting your weight up and down, back and forth, countless times a day. And because your knee joints are almost always in use, "they're also the most commonly injured," says Brian Halpern, MD, assistant attending physician at the Hospital for Special Surgery in New York City and author of *The Knee Crisis* (Rodale Inc., 2003).

In fact, by the time you're 50, your knees have carried you more than 75,000 miles. That's equivalent to walking around the equator three times. And boy, are your joints tired!