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The new hip trend

* Fitness-crazy boomers are paying a price -- replacement joints at a younger age.

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BRAD BUETTNER has always prided himself on his physical fitness. For years the 49-year-old from Huntington Beach competed in triathlons, cycling races, water skiing tournaments and horse jumping. Granted, after he got married and had children, he slowed the pace a bit, but he always made time for sports. "I have just always enjoyed being active and fit."

So the news that he needed a hip replacement hit hard.

"I didn't tell anybody for a while, because I was just so ashamed," said Buettner, who is a fit 6 foot 2 and 185 pounds. "I thought hip replacements were for older people or those who had let themselves go."

Increasingly not. Although age, obesity and arthritis are still leading reasons why people need new knees and hips, a growing number of the younger and fitter are finding they need new joints as well.

"We are seeing an increasing patient base of younger adults whose extremely active lifestyles put high demands on their joints," said Dr. Joseph C. McCarthy, a clinical professor of orthopedic surgery at New England Baptist Hospital in Boston and past president of the American Assn. of Hip and Knee Surgeons. These active baby boomers may forestall heart disease, stroke and the other plagues of the unfit, but in the process, their joints will take a pounding.

And while early joint replacement can extend an active lifestyle, it also raises the disturbing possibility that the artificial joint itself will eventually need to be replaced.

Today, surgeons perform 1 of 3 knee and hip replacements (34%) on

patients younger than 60, up from 1 in 4 (25%) in 1993. The biggest growth has occurred in patients between the ages of 50 and 59; in 1993, 11% of all joint replacements were in this age group; by 2003, it was nearly 20%, according to the American Academy of Orthopaedic Surgeons, or AAOS.

The numbers of replacements have increased in the younger-than-50 group as well, though its percentage has remained stable.

"Running and other demanding sports don't cause arthritis, but they're accelerators," says Lawrence D. Dorr, an orthopedic surgeon and medical director of the Arthritis Institute at Centinela Hospital in Inglewood who performed Buettner's surgery. "Most arthritis happens because, starting from early childhood, the joint wasn't normal."

Buettner, apparently, was one of those people whose hips developed in a way that makes them more prone to arthritis. For people like him, it's not a question of if, but when. Buettner's activity level just brought it on sooner.

"No question. If I hadn't run so much, I wouldn't be in this boat, at least not yet," he said. Like many, he now wishes he'd run in moderation, and done more lower-impact sports, such as swimming. "But you know runners, we're nuts."

The impact of exercise is one reason that the AAOS projects that the demand for joint replacements will soar in the next 25 years. Steve Kurtz, a biomedical engineer and consultant, directed the AAOS projection study, which was released earlier this year. The study predicts that the number of first-time knee replacements will increase 673% (to 3.5 million a year) between 2005 and 2030, and the number of first-time hip replacements will increase by 174% (to 572,000 a year).

Besides a more active population, other factors driving the increase, said Kurtz, include a greater acceptance of the procedure, brought on by better replacement devices and high success rates; an aging population, which has more severe arthritis; and the prevalence of obesity, which puts greater stress on knee and hip joints.

His findings indicate that 13 of every 1,000 people in the United States will ultimately have a knee replacement, and 6 of every 1,000 will get a new hip. Although ankles wear out, too, they do so rarely, and knees and hips are mechanically more prone to develop arthritis.

"Younger people tend to get angry when they get this news," says Dorr, "but they feel better when they find out how much company they have." The day Buettner had his hip replacement surgery, last April just two days after his 49th birthday, he met another Dorr patient having his hip replaced that day. He was also 49.

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Pain that persists

Typically, the first sign of trouble comes when a patient starts noticing pain in and around a joint. Unlike pain from an injury or too much exercise, which goes away in a couple of days, this pain keeps coming back. Eventually, it doesn't go away, not even at night. "This sort of recurring and constant pain are signs you should probably see your orthopedist," says Richard F. Kyle, an orthopedic surgeon based in Minneapolis, and president of the AAOS.

Buettner started noticing that his hip hurt about four years ago. "I thought I'd pulled a muscle from exercising, and figured the pain would go away." But it didn't. Friends kept asking why he was limping. "I'm not limping," he would defend. "I never put two and two together."

When the pain, which he described as low grade but constant, grew more persistent, his wife talked him into getting it checked. Two doctors gave him the same diagnosis: arthritis in the right hip brought on by a combination of genetics and overuse. The condition wouldn't heal, and would get worse.

Doctors spelled out his options: Live with it; try medication, such as cortisone injections; or have a replacement, which would be his best option in the long run. Buettner figured he would live with his bad hip as long as he could stand it, and modify his lifestyle accordingly.

He had already given up running and his beloved hunter jumper horse. Running and riding hurt his hip. "I'm not in my 20s anymore; I was ready to put some activities away." He figured if he modified his life enough, he could live with his condition. The turning point came while he was hiking with his daughters, ages 11 and 16, in March.

"About a quarter mile in, I was looking for boulders to lean against. I used to be able to go 50 miles. I was prepared to modify my lifestyle, but I wasn't willing to give up hiking with my kids."

Buettner chose Dorr to do the surgery partly because the physician is one of a growing number of surgeons in the country doing hip and knee replacements through smaller incisions: 3 to 4 inches as compared with 8 to 10 inches for the standard incision. The idea of a smaller incision and potentially less trauma and a faster recovery appealed to Buettner.

"Smaller cuts, faster recoveries, better devices and improved pain management are all making joint replacement a lot more tolerable," says Dorr, who is in his early 60s and had his hip replaced a few years ago. Once patients have recovered, they can do just about any activity they did before. "The only thing I tell my patients not to do is run," says Dorr. That could cause the joint to loosen and wear faster.

The smaller incision, and advances in anesthesia and pain management allow many patients to go home the same day of surgery. "Those who do often feel better psychologically," says Dorr, who will be next year's president of the Hip Society and is a past president of the American Assn. of Hip and Knee Surgeons.

Buettner did not have general anesthesia. He was given an epidural, which numbed him from the waist down, and an IV sedative, which put him in a light sleep. Dorr also injected morphine and cortisone into the surgical site during surgery, which offers local pain relief for up to 24 hours.

The day after his April 28 surgery, Buettner was managing pain with Vicodin pills every four to six hours. Although he had the green light to go home the day he got out of surgery, he opted to stay the night in the hospital, in part to not worry his wife.

"I would have been anxious having him home," said Lynn Buettner. "We figured if something did go wrong, the hospital was the best place to be." Still, Buettner felt relieved knowing the choice was his.

Quicker mobility after surgery has been another big advancement in the field of joint replacement. "Ninety percent of patients leave the hospital within two or three days of surgery, using a walker or crutches," said Kyle. Very soon, they graduate to a cane.

Hip patients often graduate to a cane more quickly than knee patients because recovery from a knee replacement is slower and more painful. The knee, explained Kyle, is a more complex joint than the hip, has less muscle mass around it, and needs a greater range of

motion to feel normal.

Buettner got up the day of surgery with a walker. By the next day, he was up first on crutches, then on a cane. By day three, he could walk 40 feet around his house without a cane, but then a cane was all he needed. That day he showered himself, climbed up and down the stairs and took a walk around his yard. By day five, he was walking mostly unassisted, and needed his cane only a few times.

His only rehab program is to do simple daily exercises such as toe raises, and to walk as much as he feels able. His surgery, marked by a 3-inch vertical incision on his right buttock, had shown no swelling or bruising. One week later, he returned to work; he and his brother own yacht dealerships in Southern California.

Today, five weeks after surgery, Buettner says he is pain free, and has full mobility in his hip. He walks without a limp, and is doing recreational activities -- including fishing, swimming, boating and taking simple hikes -- with his family. When the joint is fully healed, he plans to do more intensive exercise, but he won't run.

Dorr, who has been performing joint replacements since 1978, marvels at the progress of medicine. "When I first started doing joint replacements, we checked patients in two days before their surgery, didn't get them out of bed for three days after their surgery and discharged them two weeks later."

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A need to repeat surgeries

With current techniques, 90% to 95% of joint replacements should last 15 years or longer, according to the AAOS. But as people get joints younger and live longer, concern is growing about repeat joint replacement surgery.

Someone who has a joint replaced at 50 could reasonably be looking at replacing that joint two more times in his or her life.

That possibility not only creates physical problems for people who want to keep moving, it also raises costs, specifically to taxpayers. Currently, Medicare pays for two-thirds of all joint replacements, says Kurtz.

"Given the costs and trends, we're going to need more orthopedic surgeons, longer-lasting implants and fewer surgeries," he says.

The medical community is working on all the above.

Joint manufacturers are devising better metals and longer-lasting bearing surfaces, which Kyle says promise to last upward of 20 years. "We won't know for many years, but the progress in this area is promising," he said.

One way to reduce the number of repeat joint replacements, called revision surgeries, is to make the native joint last as long as possible, says Bert Mandelbaum, a Santa Monica-based orthopedic surgeon who specializes in helping patients slow the downward curve of degenerative joint disease. The resulting arthritis is basically the wearing away of cartilage, the slick smooth bone lining, of the joint.

"The chondropenia curve [or the rate at which joints degenerate from arthritis] trends downward over a lifetime," says Mandelbaum, who is also the team physician for the U.S. men's national team for World Cup soccer. "The only destination is the bottom, a worn out joint. But we can help delay or accelerate that curve."

Sports injuries and excess weight accelerate the progression. Proper nutrition and exercise, as well as newer medical interventions, including medications and injections, can slow it. "If you maintain your body weight, exercise moderately, pick good genes and avoid injury, you have a better chance of avoiding a joint replacement," he said.

For people at risk of arthritis, including people who have an overly athletic lifestyle, he recommends taking the popular joint supplement combo: glucosamine (1,500 milligrams) and chondroitin sulfate (1,200 milligrams) every day.

The studies on the supplements, however, have been mixed. Some show they help, others have shown they don't.

"Most doctors I talk to tell their patients to try the supplements for a few weeks," Mandelbaum said. "If they notice their joints feel better, keep taking them. If not, stop."

Regular exercise keeps joints healthy by building and maintaining muscle that protects joints and by keeping bones strong. But exercise can be a double-edged sword: Too much can hasten arthritis, as can too little. For athletes older than 40, or those with a family history of arthritis, Mandelbaum recommends cutting back on the

running.

"If you've been running 50 miles a week, run 18 and cross train," he says. Cross train using lower-impact equipment, such as bicycles, StairMasters or elliptical trainers, he says. "But definitely exercise. It's our only fountain of youth."

Once arthritis begins to develop in the joint, doctors can help patients relieve stiffness and soreness, and improve athletic performance with anti-inflammatory medications, such as ibuprofen or Tylenol, or Cox-2 inhibitors. More recent breakthroughs have come in the form of injectables, or knee lubricants, called visco-supplementation.

Doctors inject the lubricant, called hyaluronan, which healthy cartilage naturally secretes, into arthritic joints. Patients usually have a series of injections, and relief can last six to eight months.

The injections don't help everyone, but they buy a little time, between three and 18 months, for some patients, says Kyle.

Some people may be candidates for cartilage restoring methods. These include transplanting cartilage from low-weight-bearing parts of the body, such as parts of the knee that don't take much load, or using cadaver cartilage in worn out joints. "If we can push the age for first joint replacements out to 69 or 70, we may avoid the need for revision," said Mandelbaum,

Researchers are also developing a substance that could help regenerate a person's own cartilage, he says. That product, however, is still in clinical trials.

Once a person hits the bottom of the curve and has exhausted all other remedies, he or she shouldn't put off replacement. "The longer you go, the more atrophy occurs in the muscle and bone, and you don't get as good a result as you would if you had stronger bone and muscle," says Dorr.

When people slow down to accommodate sore joints, they lose muscle mass and fitness, and their overall health can deteriorate.

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Better techniques

Buettner knows that his new hip won't last the rest of his life,

but he's banking on a new resurfacing technique that will extend the life of his joint and eliminate the need for another total replacement.

"There's a good chance Brad's implant will be permanent," says Dorr. Thanks to the improved materials and techniques, the part of the replacement that fuses with the bone will likely stay put. What wears out and needs replacing is the implant's bearing surface, or lining. Just replacing the bearing surface, or the synthetic liner, in the knee or hip is a much simpler procedure. The approach could keep down the revision burden.

The key is for patients to have their replacements checked regularly and make the repair before the damage goes into the synthetic joint. Dorr likens the wear to car brakes: Wait too long to change the brake pads, and you have to replace the rotors, too, which costs a lot more.

"All those of us in orthopedics want to do is increase the mobility and quality of life for patients," says Kyle. "And because of better joint materials, longer-lasting bearing surfaces and better techniques, we can help patients achieve those goals sooner, better and for longer."

Looking back, Buettner says by far the worst part of the surgery was the anticipation, which literally made him sick. He threw up the morning of surgery before he had any anesthesia, which often makes people nauseated.

"I can't blame the anesthesia; I'm afraid my nausea was self-induced. I was just so nervous. I was thinking of them sawing off my femoral head and implanting a titanium femur, and I just lost it."

One week out, he was surprised at how smoothly the whole surgery went. "The best part," his wife said, "will be seeing him get his life back, and walk without a limp."

He expects full recovery after six months. "I'll be able to do most anything that common sense dictates." He won't subject his new hip to anything that will wear it out faster, such as running a marathon. But he does plan to walk, swim, cycle and surf, and maybe even water ski. There are new activities to try as well. Recently his 11-year-old daughter asked if he would become a certified diver with her.

"Of course," he told her. "Why not?"

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Where to find out more

For additional information on joint replacement, contact:

* National Institute of Arthritis and Musculoskeletal and Skin Diseases at www.niams.nih.gov. Go to "Health Information" for basic information about joint replacement and sources of additional information. (877) 22-NIAMS (226-4267).

* American Academy of Orthopaedic Surgeons at www.orthoinfo.org. Browse the patient education library and get help finding an orthopedist. (800) 346-AAOS (346-2267).

* Joint Replacement Institute at Orthopaedic Hospital in Los Angeles at www.jri-oh.com. Go to "Resource Library" for interactive resources and videos.

* Arthritis Foundation at www.arthritis.org. Go to "Conditions and Treatments," then "Joint Surgery Center" for explanations of what happens before, during and after surgery. (800) 283-7800.

* American Assn. of Hip and Knee Surgeons at www.aahks.org. Go to "Information for Patients," then "Patient links" for a list of Web-based resources for patients and families.

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The rise in replacements

The biggest growth in joint replacement surgeries is occurring in patients between the ages of 50 and 59. Today, 1 of 3 knee and hip replacements are performed on patients in this age group, up from 1 in 4 in 1993:

HIP REPLACEMENTS

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YR.	UNDER 50	% OF TOTAL	50-59	% OF TOTAL	TOTAL	AVG. AGE
1993	17,000	13.8	14,000	11.1	124,000	67
2003	30,000	13.9	43,000	19.8	217,000	65

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KNEE REPLACEMENTS

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YR.	UNDER 50	% OF TOTAL	50-59	% OF TOTAL	TOTAL	AVG. AGE
1993	8,000	4.4	19,000	11.1	172,000	69
2003	20,000	4.9	76,000	19.0	402,000	67

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Source: American Academy of Orthopaedic Surgeons

PHOTO: (no caption)
ID NUMBER:20060605izy3kcnc
PHOTOGRAPHER: Kirk McKoy Los Angeles Times
PHOTO: ACTIVE RECOVERY: One week after hip replacement surgery, Brad Buettner was back to work in the yacht business. In six months, he says, "I'll be able to do most anything that common sense dictates."
ID NUMBER:20060605j03unnnc
PHOTOGRAPHER: Glenn Koenig Los Angeles Times
PHOTO: LIKE NEW AGAIN: Brad Buettner, 49, holds an X-ray of his artificial hip, implanted April 28. He says he hopes that a new technique that replaces the implant's lining will extend the life of the joint so he won't need another total replacement.
ID NUMBER:20060605j054sqnc
PHOTOGRAPHER: Glenn Koenig Los Angeles Times
PHOTO: IN MOTION: Dr. Lawrence D. Dorr, an orthopedic surgeon who performs the procedure, had his hip replaced a few years ago.
ID NUMBER:20060605j05jcmnc
PHOTOGRAPHER: Annie Wells Los Angeles Times

Descriptors: JOINT REPLACEMENT SURGERY
BABY BOOMERS
HEALTH
AGING