

Joint Care for Runners 101

Ways to minimize wear and tear

By Mark Winitz

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Joints, like other body parts, wear out. In runners, joint problems are most frequent in the hips, knees, spine, ankles, and big toes. Even if you're the rare biomechanically perfect runner, you're not immune, as osteoarthritis (degenerative joint disease) has a large hereditary component.

Studies conducted at Stanford University suggest that distance running doesn't increase the risk of osteoarthritis of the knees and hips in healthy long-distance runners; in fact, running may have a protective effect against joint degeneration. But researchers admit that more studies, on larger populations, are required to confirm this, and sports injuries can contribute to developing and aggravating osteoarthritis in many athletes. Meanwhile, over 600,000 total hip and total knee replacement surgeries are conducted in the U. S. each year, and that number is steadily rising. Three experts gave us advice on how you can minimize this wear and tear:

1) Train appropriately and maintain proper weight.

"The key word is appropriate," says Dr. Walter Bortz, an expert on aging and longevity at Stanford University School of Medicine. "When the compressive forces are right in amount and direction, then the molecules across a joint are stimulated. That's a healthy joint. But when they're torqued or overburdened with obesity, then the molecules start fraying and that leads to arthritis."

"The two important characteristics of runners who improve are genetics and training," says Dr. David Martin, a renowned exercise physiologist at Georgia State University. "Some people aren't given perfect biomechanical systems so they don't have as much room for error in training."

2) Avoid hard, cambered surfaces.

As much as possible, get off the roads. Ideally, train on dirt trails. Find a track, but run clockwise in the outside lane on your warm-up and cool-down so you're not continually making left turns. On asphalt, choose lightly cambered roads. Avoid running on cement surfaces like the plague.

3) Wear the right shoes.

Martin says that two-time Olympic 1500m gold medalist Sebastian Coe wore heavy, cushioned shoes in training which, he says, provide a softer landing and develop very strong legs. Like Coe, reserve your lightweight flats for races and then "run with the wind," Martin advises.

Dr. Amol Saxena, a podiatrist in the Sports Medicine Department of the Palo Alto Medical Foundation in California, cautions that if you have a family history of medial (inside) knee arthritis, or if you're bow-legged, avoid motion-control shoes and devices, as they contribute to wearing out the medial knee joint. Orthotics prescribed by a podiatrist after careful medical evaluation, however, can help many runners decrease pain and increase stability in unstable joints.

"I also encourage people who don't have foot problems to walk around the house, or even do some exercise, in bare feet," says Saxena. "This provides a stronger platform so your muscles can absorb shock and support your joints better. In cultures where people go barefoot, in general there is less osteoarthritis."

4) Maintain proper running form and cadence.

In particular, avoid overstriding, which contributes to impact-related injuries. To prevent overstriding, strive for at least 160 foot strikes per minute (80 for each foot). Most elite runners have a stride rate of 180 or over.

5) Cross-train.

Give yourself regular breaks from running's weight-bearing forces by swimming, deep water running with a flotation belt, bicycling, or cycling. If you have access to an Alter G treadmill, use it: A growing number of elites are incorporating this tool into their training.

6) Incorporate weight and strength training.

When done properly, weight and strength training can help preserve bone density. Plus, it can improve muscle mass, strength, and balance, which may take pressure off of your joints.

7) Stretch diligently.

Long, supple muscles may also alleviate pressure and wear on your joints. Stretching is even more important as we age, when muscles and joints stiffen. Yoga and tai chi can be excellent for flexibility and balance, but be careful, as certain yoga positions can irritate joints.

8) Know the signs of over-taxed joints.

Obvious signs are joint pain accompanied by swelling. If you experience locking or catching of a joint, you should probably avoid impact activities.

9) Pay attention to all injuries.

Seek appropriate medical intervention. Don't minimize physical therapy following injuries. Many types of injuries can cause long-term structural or biomechanical imbalances and lead to joint degeneration that doesn't become apparent until years later.

10) Eat right.

Some natural foods have anti-inflammatory properties that are beneficial for joints: berries and berry juices, soy products, some fruits and vegetables, canola and olive oils, green tea, and foods rich in omega-3 fatty acids (wild salmon and other cold water fish, walnuts, flax seed, etc.).