

Men's Journal

SPECIAL REPORT

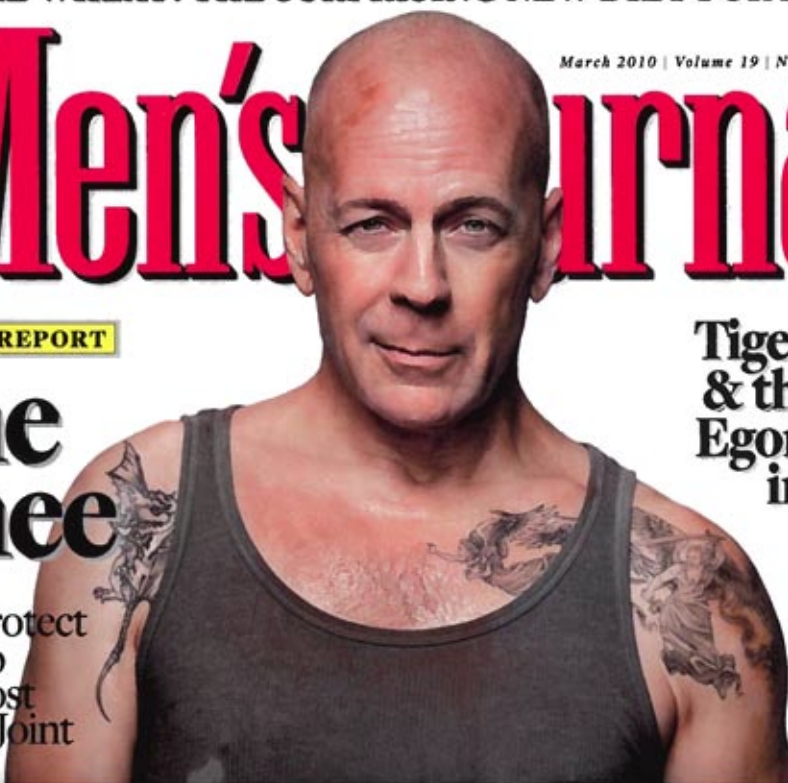
The Knee

How to Build, Protect & Rehab Your Most Critical Joint

Tiger, A-Rod & the Worst Egomaniacs in Sports

by MATT TAIBBI

EXPEDITION Climbing Borneo's Forbidden Chasm



PREVENTION

What Every Skier Needs to Know

LOOSEN UP
In a cold environment, it's even more important to warm up your legs.

THE SKIER'S STRETCH
Put right foot over left, bow at waist; hands down to 2 o'clock, left glute remains at 8 o'clock.

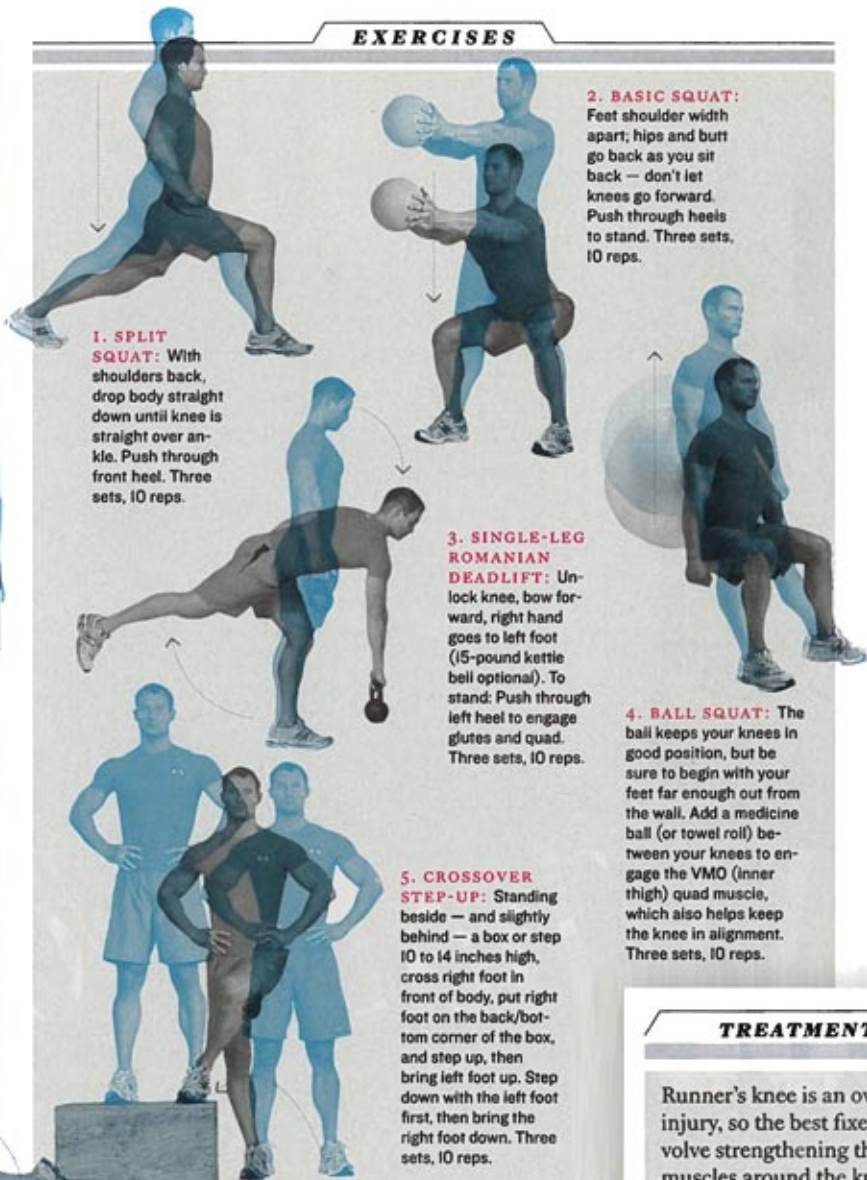


STRETCH QUADRICEPS
Court sports are all about quick deceleration, which stresses your quadriceps. This is why a quad stretch (below) is key. Hold for 20 seconds; repeat with the other leg. If you can't complete while standing, lie on the ground, but standing improves balance.



WORKOUT PROVIDED BY ATHLETIC TRAINER AND PERFORMANCE SPECIALIST GENE SCHAFER OF ARC ATHLETICS IN NEW YORK

EXERCISES



1. SPLIT SQUAT: With shoulders back, drop body straight down until knee is straight over ankle. Push through front heel. Three sets, 10 reps.

2. BASIC SQUAT: Feet shoulder width apart; hips and butt go back as you sit back — don't let knees go forward. Push through heels to stand. Three sets, 10 reps.

3. SINGLE-LEG ROMANIAN DEADLIFT: Unlock knee, bow forward, right hand goes to left foot (15-pound kettle bell optional). To stand: Push through left heel to engage glutes and quad. Three sets, 10 reps.

4. BALL SQUAT: The ball keeps your knees in good position, but be sure to begin with your feet far enough out from the wall. Add a medicine ball (or towel roll) between your knees to engage the VMO (inner thigh) quad muscle, which also helps keep the knee in alignment. Three sets, 10 reps.

5. CROSSOVER STEP-UP: Standing beside — and slightly behind — a box or step 10 to 14 inches high, cross right foot in front of body, put right foot on the back/bottom corner of the box, and step up, then bring left foot up. Step down with the left foot first, then bring the right foot down. Three sets, 10 reps.

TREATMENT

Runner's knee is an overuse injury, so the best fixes involve strengthening the muscles around the knee (see workout on page 63), switching your running surface from concrete to something softer, like a track or trails, and honing your technique, says trainer and performance specialist Gene Schafer. Also, lessening use often lessens injury. When you do run, consciously keep your knees slightly bent from the time your shoe contacts the ground through toe-off.

PREVENTION

What Every Cyclist Needs to Know

ADJUST YOUR SEAT
It's all about the bike seat: If the seat is too high, the knee overextends, causing pain at the back of the knee or along the outside edge, where the iliotibial band is being overstretched. If it's set too low, the pain usually occurs at the front of the knee — the cyclist's version of runner's knee. When the *Journal of Strength & Conditioning Research* compared several different seat heights for cycling economy and injury prevention, they found that setting your seat so that your knee is bent at a 35-degree angle at its fullest extension (see image below) is ideal for both power production and minimizing knee problems.

CHANGE POSITIONS
Shift your body periodically, suggests trainer Gene Schafer. Remaining locked in the same position for hours can contribute to repetitive-stress and overuse injuries of the knee. Stand up on the pedals for a few strokes every 15 minutes or so.

STRETCH YOUR HAMSTRINGS
Undo the muscle and tendon tightness associated with riding by "stretching in an opposite position" from your riding stance, Schafer suggests. The hamstring stretch is perfect for this (see page 58). Put your right heel up on a bench, with your left foot on the ground, and bend forward.

STRETCH
Stretch immediately after running (see below), then massage around the knee using a foam roller, suggests Gene Schafer, an athletic trainer and owner of Arc Athletics in New York City. This loosens your iliotibial band, a long tissue that crosses the knee joint and that can become painfully tight. Lie sideways on the roller so the area just above the side of your knee is centered on foam. Roll back and forth several times.

HAM-STRING STRETCH:
Back straight, hinge yourself forward. Hold for 30 seconds, then switch legs.

