



Work out,  
feel  
powerful.  
←

A  
USER'S  
MANUAL

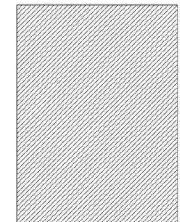
## YOUR MUSCLES

Simple moves to stay strong,  
limber and slim—now and  
in the years to come

By HALLIE LEVINE

**YES, BEING TONED CAN MEAN** the difference between a bikini and a one-piece, sleeveless and a cardigan. But it's more than that: "The amount of muscle you have impacts how much weight you gain, which influences your risk of issues like heart disease and diabetes," says Pamela Peeke, MD, professor of medicine at the University of Maryland and author of *Body for Life for Women*. Get lean and healthy with these exercises, foods and stretches.

WOMAN, MILK/GETTY IMAGES



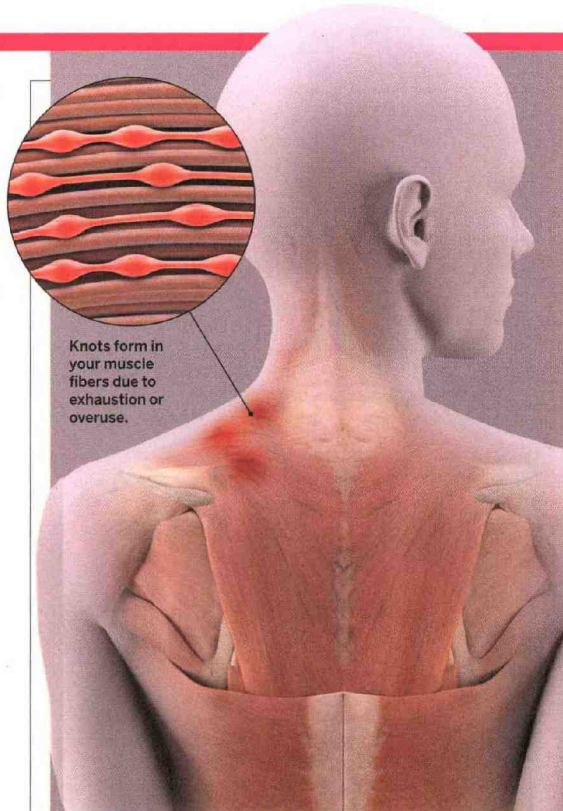
## YOUR MUSCLES: A USER'S MANUAL

### PROBLEM No. 1 TIGHTNESS

**THE LOWDOWN** We modern-day Homo sapiens are particularly prone to this problem because of extended periods of inactivity—think long days in front of a computer or sitting in a car. When your movement is restricted in this way, “your hips are bent, which shortens your hip flexors—the muscles at the front—while lengthening your back hip muscles, or glutes,” explains Rebecca Petersen, co-ordinator of the motion-analysis program at Stamford Hospital’s Orthopedic and Spine Institute in Stamford, Conn. That shortening can tighten your hip flexors (and possibly other muscles, too, like those in your back and/or calves) over time and leave you more vulnerable to tears and strains.

**WHAT IT FEELS LIKE** Your muscles are tense and contracted, and your range of motion may be limited.

**RX** The goal is to get up and get moving as much as possible, Petersen says, whether that’s taking a quick walk every hour at work or doing some periodic light stretching when you’re being a couch potato for the day. And if you’re a gym rat—which is great!—make sure that you’re working all your muscle groups equally. “A lot of women are overdeveloped in their front—biceps, quads, chest—while not doing exercises for their back, shoulders or glutes,” notes Robert Gotlin, DO, director of orthopedic and sports rehabilitation at Beth Israel Medical Center in New York City. “Those imbalances can cause the front muscles to overcompensate for the weaker ones, leading to tightness.” So in addition to your bicep curls, push-ups and squats, do tricep dips, bent-over rows and upright rows.



Knots form in your muscle fibers due to exhaustion or overuse.

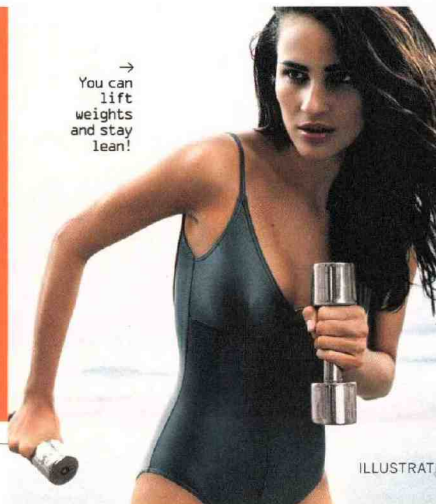
### AN EASY DIY MASSAGE

➡ Ouch! We’ve all gotten knots in our backs, technically known as muscle adhesions—tight, sensitive areas that form when muscle fibers become stuck together. This can happen if you’re fatigued as a result of repetitive motion or dehydrated. To score relief ASAP: Place a tennis ball right beneath the knot and lie directly on it, using your body weight as pressure, suggests Brandon Lannan, a massage therapist at L’Auberge de Sedona in Sedona, Ariz. Breathe slowly for 30 to 60 seconds, allowing the muscle tension to release.

### MUSCLE BEATS FAT!

Worried that building up your biceps and triceps will make you bigger? Don’t be—all that muscle can actually help you slim down, even while you’re sitting on the sofa. A pound of muscle at rest burns about 6 calories a day, while a pound of fat burns only 2. (Hey, every little bit counts, right?) Plus, the post-lifting afterburn, in which your body uses oxygen to refuel your tired muscles, offers a metabolic boost you don’t get after simply doing cardio. Not to mention that muscle is more compact than fat, giving you a leaner appearance the more you have. That’s a win-win-win for weights.

→ You can lift weights and stay lean!



# SIX

That’s how many years people were able to reverse the aging process of their muscles after doing 12 exercises on a weight machine—such as lunges, squats, bicycle crunches and bench presses—just twice a week for 10 weeks, per a study at Quincy College in Massachusetts.

WOMAN, TRUNK-ARCHIVE

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### BEST FOODS FOR HEALTHY MUSCLES

While protein is crucial for beefing up a strong you, a gal can't live on steak and eggs alone. Try these:



#### PINTO BEANS

Not only are they filled with protein (15 grams a cup!), they also provide about 16 percent of your daily dose of cramp-preventing potassium.



#### DARK-MEAT CHICKEN

"It's less fatty than beef but packed with iron—a building block of hemoglobin, which your body uses to ferry oxygen to muscles," says sports nutritionist Karen Ansel, RDN. (Skip the skin.)



#### SUNFLOWER SEEDS

The vitamin E they contain helps boost antioxidant capacity, so your muscles can combat the free radicals you produce during exercise.



#### BAKED POTATOES

"When you work out, your muscles burn through glycogen, or muscle fuel," Ansel says. This can be replaced only with complex carbohydrates.



#### WHOLE-GRAIN CEREAL AND SKIM MILK

"Milk has whey protein, which is full of an amino acid called leucine that helps build muscle and burn fat," Ansel says. "The whole grains are a good source of complex carbs."



#### HALIBUT

Very few foods are rich in vitamin D, an essential hormone for muscle strength, but one serving of halibut offers about a quarter of your daily dose.

### IMAGINE YOURSELF BUFF

No time for the gym? Picture yourself working out instead. People in a Cleveland Clinic study who visualized themselves exercising their little finger or elbows for 15 minutes a day for 12 weeks increased strength—by 53 percent in the pinkie and 3.5 percent in the elbows.



## PROBLEM No. 2 SORENESS

**THE LOWDOWN** Stressing your muscles—say, by lifting weights or doing squats—creates microscopic tears, says Alexis Colvin, MD, an orthopedic surgeon at the Icahn School of Medicine at Mount Sinai in New York City. The tears make you sore, yes, but the process of breaking and rebuilding muscle could ultimately increase its mass, so you grow leaner and stronger.

**WHAT IT FEELS LIKE** Mild to moderate tenderness or pain that peaks a day or so after a workout—a phenomenon known as delayed-onset muscle soreness. You may notice some mild swelling, stiffness in nearby joints and weakness in the affected muscles.

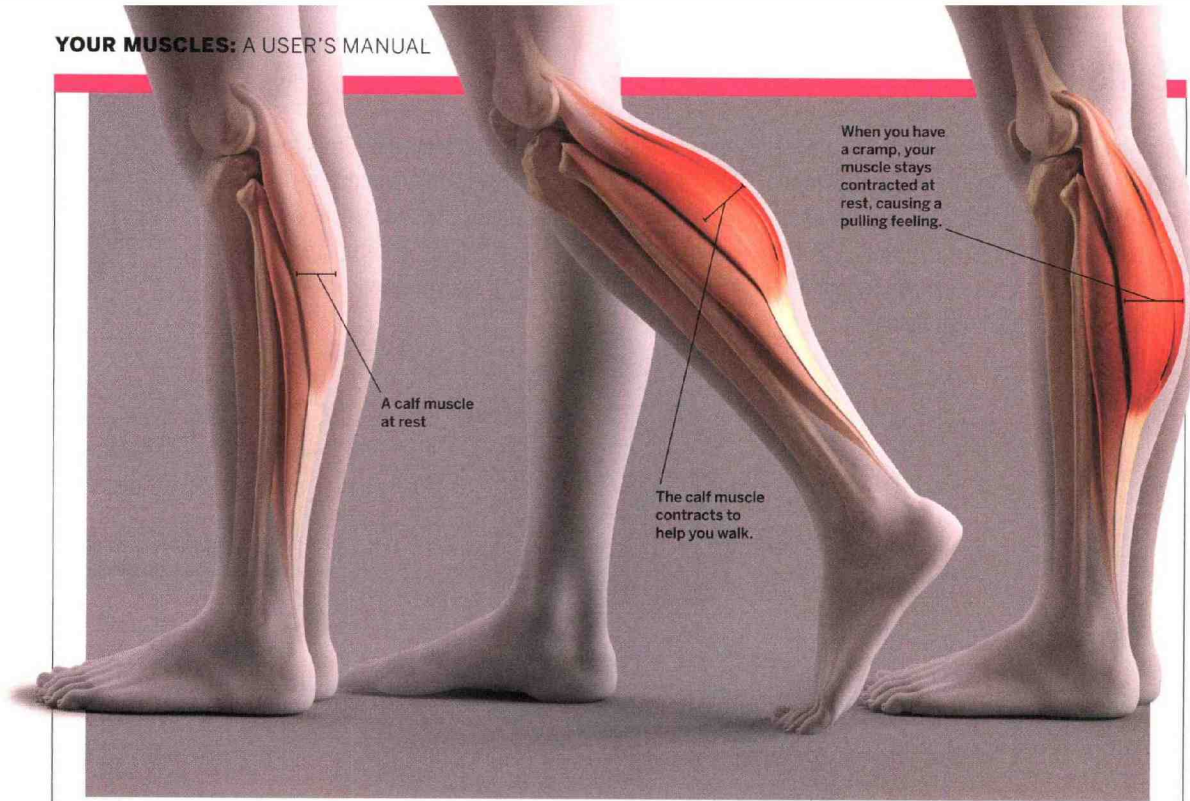
**RX** Your impulse may be to laze around, but don't: "You want to perform some activity, even if it's just walking, to encourage oxygen consumption and blood flow—that stimulates the muscle to repair itself faster," Gotlin says. Ice the sore area every couple of hours for 10 to 15 minutes and/or take an over-the-counter NSAID, such as ibuprofen, to help relieve pain and swelling. And get some sleep, Gotlin urges: While you do, your body works to heal muscle.



← Ice packs are great for achy glutes.

WOMAN: DAVID BURTON/TRUNK ARCHIVE; PINTO BEANS: RICHARD CHURCH/STOCKFODD; CHICKEN: YINYANG/GETTY IMAGES; SEEDS: IMAGESOURCE/GETTY IMAGES; POTATO: DORLING KINDERSLEY/GETTY IMAGES; CEREAL: KAREN BEARD/BLEND IMAGES; CORBIS: FISH; DORLING KINDERSLEY/GETTY IMAGES

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### PROBLEM No. 3 CRAMPS

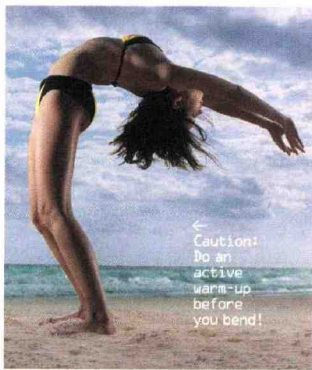
**THE LOWDOWN** You're blissfully asleep...until you wake up to mind-numbing pain in your calf. Yep, you've got a muscle cramp—or what some people call a charley horse. “These are caused by spasms, or involuntary contractions, and are usually due to being dehydrated,” since our muscles need fluid to contract and relax

normally, Gotlin says. (This explains why you're particularly prone to getting them during the summer or after a long flight.) They tend to be more common as we age: As we lose muscle mass, what remains may become overstressed more easily, potentially causing cramps. You may also get them during pregnancy as your muscles stretch out.

**WHAT THEY FEEL LIKE** A sudden, sharp pulling sensation. Cramps most

commonly occur in the calf or thigh—areas vulnerable to overuse or injury—but they can happen in any muscle, Gotlin says.

**RX** Massage and stretch the area. If possible, apply moist heat. To prevent cramps: When exercising outdoors, sip a sports drink to replenish electrolytes (including potassium, magnesium and calcium, which can help prevent cramping) and/or snack on potassium-rich bananas or raisins.



## TO STRETCH OR NOT TO STRETCH?

Most of us grew up doing a round at the beginning of gym class. But a recent Centers for Disease Control and Prevention review found that while static stretches—those held without moving—may improve flexibility, they don't prevent injuries when performed prior to a workout. In fact, stretching before your muscles have gotten moving can actually lead to strains. Instead, do a five-minute active warm-up pre-exercise (like walking or jumping jacks) to raise blood flow. Then do these stretches after your workout.

**TRICEP STRETCH**  
With arms overhead, hold right elbow with left hand. Gently pull elbow behind head. Repeat with left elbow.

**UPPER-BODY STRETCH**  
While standing or sitting, interlace fingers behind back. With palms facing outward, slowly push arms back and up.

**SHOULDER STRETCH**  
Gently pull right elbow across chest toward left shoulder. Repeat with left elbow.

**HAMSTRING STRETCH**  
Sit on floor and straighten left leg. Bend right leg so sole of foot is next to left inner thigh. Sit up tall and lean forward from hips, reaching toward left foot. Repeat with right leg.

**QUAD STRETCH**  
While standing, hold left foot with right hand and pull heel toward center of buttocks. Repeat with right foot.

WOMAN: THIEMO SANDER/THELICENSINGPROJECT.COM

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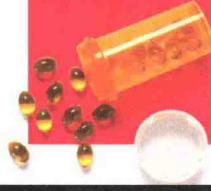
### PROBLEM No. 4 AGING

**THE LOWDOWN** At their peak, muscles make up about 40 percent of your body weight. But their mass starts to decline after age 30. "The number and size of muscle fibers decrease," explains Susan Joy, MD, director of the Cleveland Clinic Community Health Sports Network. This decrease accelerates around perimenopause, when testosterone levels,

which are essential to maintaining muscle mass, begin falling. The water content of your tendons lessens, too, causing stiffness. **WHAT IT FEELS LIKE** You may gain weight, notice a drop in strength or find that you tire more quickly during exercise. **RX** Pump it up! Research shows that lifting weights twice a week for 20 minutes will stave off these changes.

# 3%

→ RATE AT WHICH METABOLISM DROPS EACH DECADE. BOOST IT BY PUMPING IRON AND TAKING 1,000 IU OF VITAMIN D A DAY.



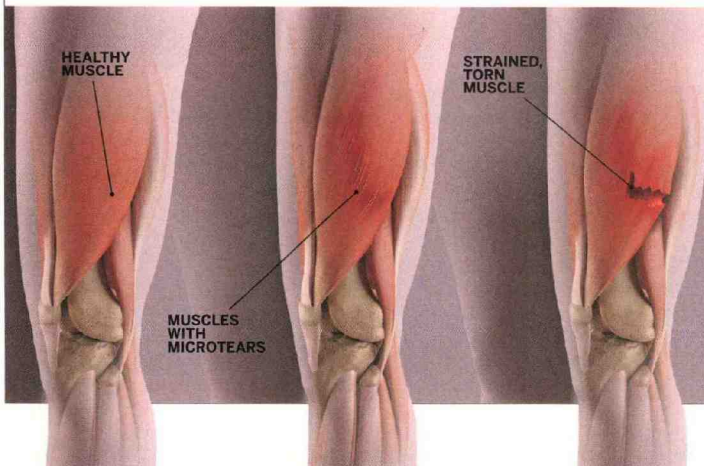
### PROBLEM No. 5 STRAINS

**THE LOWDOWN** While getting microtears after a workout is common, larger tears—which may occur when a muscle is strained by stretching beyond its natural limit or suffering a blow—aren't. Strains can happen in any muscle but often strike your thighs while you're doing high-speed activities like sprinting or soccer.

**WHAT THEY FEEL LIKE** Sudden, severe pain accompanied by popping or snapping. "Unlike soreness, this

happens *during* the workout," Gotlin says. You may also see swelling and bruising.

**RX** Try a couple of days of RICE (rest, ice, compression and elevation) and take over-the-counter anti-inflammatories. But if the pain doesn't seem to be getting better after 72 hours, see your doctor. You'll need to limit your movement until the strain is healed; you may need crutches and physical therapy. ■



PILLS: JUDITH COLLINS/ALAMY