

RUNNING DOC'S™ GUIDE

to HEALTHY RUNNING

FROM THE ROCK 'N' ROLL MARATHON MEDICAL DIRECTOR

LEWIS G. MAHARAM, MD

How to
FIX INJURIES,
STAY ACTIVE,
and
RUN PAIN-FREE

Foreword by **FRANK SHORTER**

Praise for Running Doc™, Lewis G. Maharam, MD

“Dr. Maharam is at the forefront of exercise-related medical issues in the U.S. and around the world. In his work as a marathon medical director, he has done much to make the sport of distance running safer and more enjoyable for hundreds of thousands of runners. He’s that rare sports medicine expert who knows how to explain the science in terms that average athletes can understand and follow.”

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—*Jenny Hadfield, running coach and columnist for Runner’s World
and Health magazines and author of Running for Mortals*

“Dr. Maharam is the premier running doctor in the world! He has carved out a specific medical specialty for taking care of runners. I was lucky to have him formulate our medical plans and lead our medical teams as well as educate our runners. This book will be an invaluable resource for all runners at all levels.”

—*Allan Steinfeld, former president and CEO of New York Road Runners
and race director of the New York City Marathon*

“If you’ve got a sports injury, Dr. Maharam is the go-to doctor, and his book is the go-to resource for patients and doctors.”

—*Steven Van Camp, MD, FACSM, former president of the American College of Sports Medicine*

“It didn’t take long to realize that Maharam was the best student I ever had. He absorbed everything we knew about the biomechanics of running and walking. He has gone on to become an expert in the physiology of running. I have enjoyed watching him become the best and [am proud] that I was able to help him accomplish that.”

—*Allan M. Levy, MD, former team physician of the New York Giants, the New Jersey Nets, and the New York Islanders*

“Dr. Maharam is innovative, dedicated, and great both behind the scenes making it happen as well as front and center speaking to a group. He stays current and informed. Dr. Maharam is sure to make you think and stimulate discussion on any topic he covers.”

—*Heidi Skolnik, MS, CDN, FACSM, contributing advisor to Men’s Health magazine and former team nutritionist of the New York Giants and the New York Mets*

“Dr. Maharam, Running Doc, has been my medical director for some 25 years. We entrust the health and safety of 400,000 participants in the Rock ‘n’ Roll Marathon Series each year to his care. He is far and away the best and most experienced doctor specializing in running and marathon medicine in the world, and I would hate to ever have to put on an event of any size without his guidance and oversight. Perhaps even more important, though, I would send anyone whom I cared about with any ailment to see him. He is the best diagnostician I have ever known. He understands the medical side of the sport like no one else. He ‘connects the dots’ like Picasso and is able to communicate all manner of medical complexities in terms that we laymen can understand. This will be the definitive book on running injuries.”

—*Tracy Sundlun, senior vice president for events of the Competitor Group, cofounder of the Rock ‘n’ Roll Marathon Series, and former Olympic track coach*

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3002 Sterling Circle
Boulder, Colorado 80301 USA
(303) 440-0601 · Fax (303) 444-6788 · E-mail velopress@competitorgroup.com

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Foreword

By Frank Shorter

Dr. Lewis Maharam quite simply loves what he does. It is obvious he has always wanted to be a sports medicine physician. You can see it in the way his eyes light up whenever he describes his ongoing efforts to safeguard the health of thousands of runners, a task he assumes regularly as the medical director for major road races all around the United States.

When on site, Dr. Maharam—Rock Doc, we call him, for his role with the Rock 'n' Roll Marathon Series—is constantly fine-tuning his protocols, adding new ideas to the way he organizes his field hospital and medical aid stations along a race route, and seeking to innovate his approaches to better care. His attention to detail and his practical methods of advising and treating runners, combined with his common sense, make him uniquely qualified to write about the medical side of running. For runners, it's all about persevering and moving on down the road. The Rock Doc has the tools and wisdom to help us all do that.

Several years ago, when we were on stage together to lead a clinic at a Rock 'n' Roll Marathon expo, I finished answering a question from the audience, and the Doc turned to me. He whispered, "I am incredibly impressed by how some elite athletes like you intuitively know the right thing to do with regard to training and injuries." I was flattered, but it also made me realize that a big part of Dr. Maharam's role lies in interpreting and spreading the knowledge he gathers and in making sure that those athletes who are not able to listen to their bodies quite as well are still able to maximize their chances of success by following his guidelines.

You may be surprised by the tone of this book. This is not a dry, clinical presentation. It is not a simple glossary of medical conditions and treatments either—although, make no mistake, the aches, pains, and injuries that we runners get are fully described and explained, along with the Doc's recommended treatments. But in this book he

also draws on many personal stories from his vast experience in his medical practice in New York City and from the cases he sees in the field. He uses these stories to show how he diagnoses and treats his patients. It's like having a personal doctor who is also a good friend sit down at your side and explain what's going on and what to do. Dr. Maharam's advice on preventive measures is concise, and the way he presents it is easy to remember.

Running injuries can be complicated, but even in sports medicine, the simplest explanation and suggested treatment often produce the best result. Here is a doctor who can provide you with the questions you should ask your own provider in an effort to stay active and injury-free.

Whenever runners get together, we like to talk about our training, our recent races, and, invariably, our injuries. If your goal is to stay as active as possible for as long as you can, I can think of no better book to read and keep close by for future reference.

Frank Shorter ignited the first American running boom in the 1970s when he won the gold medal in the marathon at the 1972 Olympics. He also won the silver medal in the marathon at the 1976 Olympics. In addition to his preeminence at the marathon distance, Shorter was a four-time U.S. national 10,000-meter champion and won 24 national running titles during his career. A graduate of Yale University and the University of Florida College of Law, Shorter helped to create the U.S. Anti-Doping Agency and served as its chairman from 2000 to 2003. He was elected to the U.S. Olympic Hall of Fame in 1984.

PART IV

INJURY MANUAL 101

Injury Manual 101

FEET AND ANKLES

Black Toenails

QUICK GUIDE: BLACK TOENAILS

Symptoms: Pain, black toenails.

How it occurred: Repetitive trauma of the toe or toenail hitting end of shoe.

What the doctor may do: If painful, put a hole in the toenail to release pressure.

Likely treatment: Prevention is key. Leave one thumbnail's distance between longest toe and end of shoe. Trim toenails.

Bleeding that occurs under a toenail is from repetitive trauma where that toe hit the end of your shoe. If the toenail has leaked to relieve the pressure that can cause pain, so much the better. If it hasn't and the condition is painful, a doctor can put a hole in the nail to relieve the pressure. In any case, the black color is just the blood under the nail drying up. It will be reabsorbed. The nail may die and fall off; no worries, a new nail will grow in behind it.

To prevent black toenails, follow these guidelines:

- Make sure your running shoes fit properly. Buy them at the end of the day when your feet are most swollen. Make sure there is a thumbnail's distance between your longest toe (which may be your second toe) and the end of the shoe.
- Make sure your toenails are trimmed before you run. Sometimes an extralong nail can hit the front of the shoe and cause bleeding beneath the nail.

- Make sure your insole or orthotic is not slippery. Sometimes slippery insoles make the foot slide forward and the toe hits the front. Try putting a nonslippery covering over your insole or orthotic; something like those Dr. Scholl's foam pads (white with little holes in them) you can find in almost all drugstores will work for this purpose.

Achilles Tendinitis/Tendinosis



Figure IV.1A

Achilles tendinitis, side view



Figure IV.1B

Achilles tendinitis, rear view

QUICK GUIDE: ACHILLES TENDINITIS/TENDINOSIS

Symptoms: Pain and swelling at Achilles tendon.

How it occurred: Repetitive overuse due to biomechanical problem, either overpronating or supinating. Also can be due to overly tight calf muscles.

What the doctor may do: Palpate tendon, dorsiflect foot to evaluate calf tightness. Order MRI or ultrasound to evaluate tendon. Doctor should also check your running form and wear pattern on your running shoes.

Likely treatment: Calf stretches. Gait analysis. Orthotics or orthotic adjustment. PRP injection. Physical therapy. Electronic stimulation. Ultrasound. Time back to running will depend on severity of injury.

NOTE: Cortisone injection should be avoided because it will weaken the tendon.

Any sport that keeps you on your feet and uses a pushing-off motion can produce Achilles tendon trouble. Orthotics (see page 68) are usually prescribed, but stretching is always your first defense.

The Achilles tendon, which is formed from your calf muscles, can be pushed beyond its limits and become inflamed. That's the tendinitis to which most athletes ascribe pain. There can also be some swelling tendinosis, or chronic tendinitis, above the upper heel. But every time the tendon gets inflamed, and certainly every time the pain comes from more serious microtears in the overused tissue that can easily be mistaken for tendinitis, the Achilles grows just a little weaker.

What brings the condition on besides simple overuse? The Achilles is vulnerable to misuse. Designed to do its job of guiding the heel in a vertical plane, it's intolerant of the rolling of the ankle when it overpronates (rolls inward) or supinates (rolls outward).

Stretching and an orthotic can help prevent the inflammation by biomechanically allowing the tendon to pull in proper alignment.

But a calf muscle routinely loosened by conscientious stretching every day and after a workout cuts the tendon some slack, particularly in stiffer athletes, reducing the tendon's role as a shock absorber—for which it's not very well suited anyway. So on those hectic days when stretching seems too much of a bother, remind yourself that a neglected and partially torn tendon needs to rest and heal in a cast for six to eight weeks unless you like courting a rupture.

And if that tendon *does* pop? The gulf between the two ends creates a hole you can actually feel. A clock has just started ticking, during which the tendon's two ends will drift apart. As soon as possible you must decide if you want the rupture repaired by surgical reattachment of the ends—the best choice for most athletes. After the operation, you will have to wear a cast or cast boot at first and then undergo probably 9 to 12 months of therapy. The sooner the surgery's done, the easier the repair. Or you can just go into a cast for maybe 8 to 12 weeks and accept whatever healing nature is able to provide—probably a weaker result and longer recovery.

Given all this, a couple of minutes of prevention doesn't seem like such a bother after all. Do both the gastroc (upper calf muscle) stretch and the soleus (lower calf muscle) stretch whenever you're near a wall and have the time. As for the Achilles tendon stretch, once a day for a minute should do it. For both, the more, the better.

Heel lifts alone (orthotic inserts that go only under the heel; see page 69) are a big NO. They shorten the muscle tendon complex. Yes, you "feel" better wearing them, but next time out running, when you stride a little farther or speed up, that shortened complex will now tear. That, you don't want or need! So, please stay away from those heel lifts.

So what do you do if stretching alone doesn't work? The longer you take before you seek help, the longer the problem will take to fix. All structures in the body constantly remodel (at different rates). The Achilles tendon gets its strength by its fibers lining up in parallel. If its originating calf muscles are inflexible, living in an environment of overpronation and inflammation (tendinitis), remodeling proceeds

is more poetically referred to as “the disease of the aging athlete” because it’s virtually unheard of in people under 40.

For years, even many sports medicine physicians dismissed plantaris rupture as a myth because no cases had ever been surgically proven. But a few years ago, researchers at the University of Miami published a paper confirming that the detailed investigation made possible by MRI had finally found two confirmed cases of plantaris tendon rupture. Too late for all those athletes who had been treated for more serious conditions. Not too late for you.

The good news is, the two ends of the rupture will shrivel up and go away—in a couple of weeks with a little physical therapy, a little longer without—and you’ll never know the difference. The bad news? One more leg to go.

Shin Splints, Tibial Stress Syndrome, Exertional Compartment Syndrome

QUICK GUIDE: SHIN SPLINTS

Symptoms: Pain in shin.

How it occurred: Overpronation (or, less likely, supination) and twisting of tibia.

What the doctor may do: Palpate area. Gait analysis. X-ray. MRI. Compartment pressure test in some cases.

Likely treatment: Calf stretches. Orthotic or orthotic adjustment. Physical therapy. Soft tissue deep massage of lower leg. Surgery if compartment syndrome is not resolved with physical therapy.

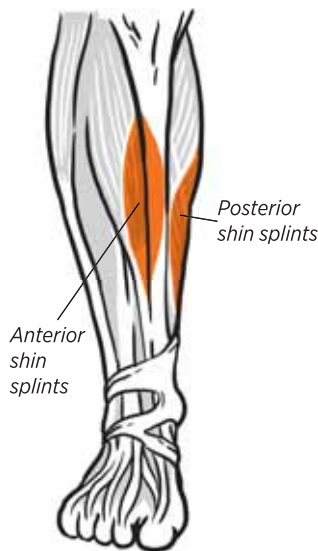


Figure IV.20

Shin splints

Shin splints encompass a number of disorders that include tibial stress syndrome, stress fractures, and exertional compartment syndrome. It is a condition in which some of your calf muscles wrap forward around your lower leg bone, usually at the inside flat part just about a third of the way up from the ankle, and it favors beginners, athletes coming back from a long layoff, and athletes upping their mileage as the weather gets better outside. Toe runners are constantly told they’re perfect candidates for the condition, but they’re not. It’s brought on by a combination of overly tight calf muscles and not what the foot does when it lands, but *after* it lands.

Picture a pronating runner with flat feet—the classic shin splint candidate. Airborne, his or her foot acquires a subtle curve where the rest of us have higher arches. Then the foot lands, flattens out, and as the ankle rolls inward (pronates), the shin bone or tibia is forced to twist slightly in the opposite or outward direction. Over and over and over. So anything attached to it—like the calf muscle—is going to be yanked over and over and over, too. That spells shin splints.

If this is the pain you feel, you're lucky because it can be treated with ice, over-the-counter anti-inflammatories, and a proper orthotic. Ignore these early signs at your own peril. The shin bone is covered with a membrane called the periosteum, which can in turn become inflamed from the muscle's tugging. And eventually, of course, a twisting tibia is headed for a stress fracture.

The single most effective step is to stop the foot rolling, and only a proper orthotic can do that. The orthotic must be soft and flexible, and it must control the forefoot on takeoff.

Loosening the calf muscles also cuts your shins some slack. Try the stretches recommended here. More is better. You cannot do these too much.

If you have done the exercises conscientiously and still have no relief, you may need some physical therapist's hands to do soft tissue work to loosen your calf muscles.

Still not better? Ask your sports physician the following questions:

- Is shin splints the correct diagnosis? Do I have a stress fracture or compartment syndrome that is not resolving with the current treatment?
- Are my orthotics controlling my forefoot when I am on the ball of my feet (80 percent of the time when you run)?

Shin splints should resolve with two weeks if you have the correct orthotics and your stretching is compulsively done.

Of course, as a Running Doc I always think of horses, not zebras, first when I hear hoofbeats (in medicine, a *zebra* is an unexpected diagnosis and comes from a lesson by Dr. Theodore Woodward, who said to his medical students in Baltimore, "When you hear hoofbeats behind you, don't expect to see a zebra"). So when I am looking for the horse first,



Figure IV.34

Greater trochanteric hip bursitis



Figure IV.35

Osteitis pubis

if there is a quarter-inch difference, a correction should be made of one-eighth inch); otherwise, the correction will be too great and further discomfort will result.

Greater Trochanteric Hip Bursitis

QUICK GUIDE: GREATER TROCHANTERIC HIP BURSITIS

Symptoms: Pain at outside of hip.

How it occurred: Repetitive motion causing friction on bursa.

What the doctor may do: Palpate area. X-ray, MRI not necessary.

Likely treatment: Cortisone injection. PRP injection if cortisone only brings partial relief. ITB stretches can sometimes relieve and/or prevent condition.

Sometimes iliotibial band syndrome pain (see page 155) that is felt only at the hip may not be ITB syndrome after all. There is a small bursa at the hip that can get irritated, and the resulting condition, greater trochanteric hip bursitis, can be diagnosed only by an experienced physician who knows what to feel for. The good news is a simple cortisone shot or a PRP injection (see page 124) is all that is needed for you to be pain-free within a week.

I am always asked how these injuries occur. The annoying answer is, no one knows. We think a tight ITB can rub this bursa, so stretching the ITB (as recommended on pages 156 and 157) if you are tight is a good idea. That said, I have also seen this in patients with very loose ITBs, so go figure! Just know that if you have it and it is properly diagnosed, the condition is a needle stick away from being gone.

Osteitis Pubis

It's tempting to assume that every pain in the pubic area is just another run-of-the-mill groin pull like you had last time and that stretching the area before every workout will take care of it. Fortunately or unfortunately, the hip area is a little more complicated than that. And one of the common but frequently undiagnosed ways it can object to hard training is a condition called osteitis pubis,

QUICK GUIDE: OSTEITIS PUBIS

Symptoms: Pain on or around pubic bone.

How it occurred: Inflammation of the bones where two halves of the pelvis meet, often caused by running shoes with insufficient cushion, or a biomechanical flaw at the feet translated upward.

What the doctor may do: Physical exam. Gait analysis. Leg-length measurements. X-ray. MRI.

Likely treatment: Cushioned shoes. Orthotic or orthotic adjustment. NSAIDs. Ice. Stretching exercises and rest. For advanced cases, corticosteroids (2 weeks). Cortisone injection. PRP injection. Physical therapy. Severe (very rare) cases may require surgery to fuse pubic bones.

an irritation of the pubic bone that can imitate a number of other things, like a hernia.

Osteitis pubis is an inflammation of the bones where the two halves of the pelvis meet in the front. By moving up and down and rotating a little, that pelvis joint does its job mechanically by helping you to be more flexible. But nature supplied the pubic symphysis, as the joint is called, with a stingy blood supply and consequently a great ability to become inflamed, rather than healed, after irritation. So while the joint is absorbing the shocks it was meant to take from the rest of the body, it's not really able to deal with them after it gets them.

The classic osteitis pubis victim I see is a runner, male or female, who's been pounding out the miles on hard surfaces in worn shoes that no longer cushion or possibly had too little cushioning to begin with. Men who've had prostate surgery are more vulnerable. In the early stages of this condition, a mild stretching program to loosen all the muscles that attach to and therefore pull on the groin area might have been enough, plus some rest or at least an exercise switch to water running, swimming, or even cycling on smooth roads. But by the time I see most athletes, their futile "groin pull" therapy piled on top of a full training schedule has produced severe pain, with particular tenderness right on the pubic bone. Now it hurts even worse when they stretch, and the softening of the pubic bone from all the irritation is obvious enough to be seen on a common X-ray.

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About the Author

Lewis G. Maharam, MD, FACSM (Fellow, American College of Sports Medicine), is a primary care sports medicine specialist in private practice at 24 West 57th Street in New York City. One of the most extensively credentialed and well-known experts in the country in the fields of health, fitness, injury prevention, and treatment of athletes and other active people, Dr. Maharam is past president of the Greater New York Regional Chapter of the American College of Sports Medicine and past chair of sports medicine at the former Downtown Athletic Club (“the Home of the Heisman Trophy”). He has served as the medical director of New York Road Runners and the ING New York City Marathon, and is currently the medical director for the Rock ‘n’ Roll Marathon series. He also serves as chairman of the Board of Governors of the International Marathon Medical Directors Association as well as national medical director for the Leukemia & Lymphoma Society’s Team in Training program. Dr. Maharam was appointed USA team physician in track and field for the 1999 World Indoor Championships in Japan. He previously served as USA team physician for the USA Jr. Track and Field team that won the IAAF Championships in Sydney in 1996.

Dr. Maharam writes the “Ask Running Doc” column on Competitor.com (<http://runningdoc.competitor.com>). He is the author of *A Healthy Back* (Owl Books, 1998), *Backs in Motion* (Henry Holt, 1996), *The Exercise High* (Fawcett Columbine/Ballantine Books, 1994), and *Maharam’s Curve: The Exercise High—How to Get It, How to Keep It* (Norton, 1992). Dr. Maharam is an enthusiastic advocate of exercise as not just something we “ought” to do for our health, but something we owe ourselves—something we must do to fully enjoy our day-to-day lives. His award-winning running medicine research has been presented in continuing education seminars for doctors and at numerous speaking engagements aimed at educating the public. His groundbreaking program for preventing and relieving back pain has made Dr. Maharam a sought-after speaker at community group gatherings, and his positive, clear, and witty conversational style has

resulted in many TV and radio interviews. He was a frequent guest on *America's Talking Network: Alive and Wellness Show*, and he has appeared nationally on *World News Tonight*, *Today*, *Good Morning America*, *Inside Edition*, CNN, and Fox News as well as CBS talk radio and WFAN. He has traveled the country appearing on local TV newscasts and radio, appearing with sports reporters as well as health and fitness correspondents talking about current issues.

Dr. Maharam graduated Magna Cum Laude from Lafayette College and earned his medical degree at Emory University prior to surgical and medical internships at, respectively, Columbia-Presbyterian Medical Center and Danbury Hospital, an affiliate of the Yale University School of Medicine. After his residency in internal medicine, Dr. Maharam was awarded one of the few fellowships in the new specialty of primary care sports medicine at Pascack Valley Hospital, Department of Sports Medicine.

An expert on staying free of injuries that can afflict athletes and nonathletes alike, Dr. Maharam writes for *Competitor* magazine, competitor.com, newspapers, newsletters, and many magazines. He is frequently sought as a source of medical advice by writers for *Sports Illustrated*, *Runner's World*, *Fitness*, *Self*, *Shape*, *Redbook*, *Time*, *Newsweek*, the *New York Times*, *USA Today*, the *New York Daily News*, *Newsday*, *Condé Nast Sports for Women*, *Glamour*, *Cosmopolitan*, *Jane*, *American Health for Women*, *Men's Journal*, *Walking*, *Woman's Day*, *McCall's*, *Reader's Digest*, the *New York Post*, *Allure*, *U.S. News and World Report*, *Cooking Light*, *Women's Sports and Fitness*, and other publications both here and abroad.

With boundless enthusiasm for debunking health myths while sharing the latest discoveries that can help his audiences enjoy longer, more robust lives, Dr. Maharam speaks on topics such as the following:

Marathon Medical Tips. How do you prepare for marathon day? Training tips, injury prevention, dealing with injury, nutritional tips, carbo-loading. Know what to do to finish the 26.2 miles strong and healthy!

Illegal Substances in Sports. It's gone well beyond professional wrestlers and their steroids. From the junior high school student up, competition is tough and the drive to win medals—or just look better—is strong. Dr. Maharam's information and nonconfrontational style have been a success with students, athletes (professional, college, high school, recreational, and weekend), parents, and coaches. He discusses who's using what and why and what everyone should be on the lookout for.

Back Pain? Don't Just Sit There. A program that takes aim at this ubiquitous ailment not by telling people to be quiet and be careful but by telling them to be active and *move!*

Sex and Back Pain. Everyone who has back pain is afraid to ask the question “Can I do it?” Dr. Maharam talks about how one can, male or female, depending on who is having the pain and why!

Making Exercise a Part of Your Life. Why do so many people start an exercise program and quit? Because it's like bad-tasting medicine: good for you but too tough to swallow. They don't know how to get into the exercise feel-good zone that makes people lifetime converts. But it's not hard. Many people after just one lecture have gotten onto the path of lifetime exercise!

Don't Fall into the Mouse Trap. Sitting at a computer doesn't need to cause wrist and back pain. Dr. Maharam's program gives corporate employees a plan for pain-free computer work.

Healthy People. The CPC and ACSM's latest findings on how much exercise you really need for good health and lower cardiac risk. Plus, how easy it can be to eat right without being a scientist or mathematician.

Sports Shouldn't Hurt. Problems like tennis elbow or runner's knee derail more fitness programs than boredom or lack of time ever could. But they don't have to. The secret is being prepared, whether it's for summer biking, tennis, or golf or wintertime skiing. What people need is a season-by-season program that fine-tunes the body for the sports to come.

Exercise: The Best Stress Reducer. People think they need meditation, drugs, or long vacations to deal with the daily tensions

of life. There's plenty of medical evidence suggesting what they really need is regular exercise.

Dance Fever. Dance is a sport. Prepare your body for that night out or your everyday workout.

Food as Fuel. Most nutrition-conscious people try to eat right simply so that they can stay healthy. What about eating to get strong, have more energy, and feel better? Sports medicine knows how you can, and it knows that you never have to count a calorie.

The Superman Syndrome. Adolescent athletes think they can go out on the field, play hard at any game they want, and not get hurt. They think they're unbreakable. Not so. But if they prepare, just like adults should, they'll be headed for an active lifetime of good health. Prepare or beware: the most important exercises, stretches, and other conditioning practices "supermen" and "superwomen" should know so that they stay as durable as they feel.

Women in Sports: Yes, They're Different from Men. Female athletes have more to think about than winning. For example, on a typical high school cross-country women's team, 2 out of 10 runners will show evidence of an eating disorder. We're finally beginning to learn some fascinating things about issues like anorexia and bulimia, exercise and menopause, osteoporosis, and hormonal balances. Who's at risk, and what can they do about it?

What Makes the Older Athlete Different? In most sports they're called *masters*. They're ordinary people over 35, and as a group they could beat most 20-year-olds of a couple of generations ago. Why? The body doesn't age the way we once thought it did. We just have to keep it tuned up a little differently as the years go by.

Are You Fit or Just an Athlete? Most of us confuse prowess on the playing field with fitness and health. You can be a top jock and be in awful shape. And vice versa. If you want to stay healthy, stay fit. Then work on the athletics.



LEWIS G. MAHARAM, MD, is one of the world's most extensively credentialed and well-known running health experts. He is the medical director of the Rock 'n' Roll Marathon Series and former medical director of the New York Road Runners club and the New York City Marathon. A frequent guest on *World News Tonight*, *Today*, *Good Morning America*, *Inside Edition*, *CNN*, and *Fox News*, he writes the popular *Running Doc* column for *Competitor* magazine.

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THE MOST TRUSTED DOCTOR IN RUNNING EXPLAINS WHAT'S WRONG AND HOW TO FIX IT.

Got a running injury? You're not alone. Every year, nearly half of America's 44 million runners suffer injuries severe enough to bring them to a halt.

But you don't have to sit on the sidelines. *Running Doc*[™]—better known as Lewis G. Maharam, MD—will get you up and running again. From head to toe-nails, *Running Doc's Guide to Healthy Running* is a comprehensive manual for running injuries and preventive care. The lively text not only covers treatment for what ails you but also delivers expert advice on the best way to prepare for running events of all types and distances.

If you're already injured, *Running Doc* will help you diagnose, treat, and recover to run pain-free. If you're looking for better ways to train and prepare for a race, this profusely illustrated guide will help you every step of the way.

Stay healthy. Run smart. And when aches and pains crop up, trust *Running Doc* to get you back on your feet.

"When runners get hurt, they fly to Dr. Maharam!"

—MEB KEFLEZIGHI, 2009 NYC MARATHON CHAMPION

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