

# **GALLOWAY'S**

## **BOOK ON RUNNING**

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Revised**

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**Jeff Galloway**

**Includes Jeff's New  
Run Walk Run®  
Training Program**

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# INTRODUCTION

IT WAS 1973. A beautiful September dawn was breaking over the Cascade Mountain Range as I left the city limits of Eugene Oregon, and headed east, racing through the early morning mist in an old Volvo sedan. My reliable car cruised along in fourth, but my mind shifted into neutral: it was time for reflection. What had I been doing the past seven years?

As my trusty Volvo, “Mobley” crossed the Continental Divide, I reflected how far I had come from a very overweight 13 year old who hated exercise. A school requirement forced me to run with cross country runners Andy and Jimbo Heiskell, Sam Stivers, and Bobby Waite. Even on the days when I was physically destroyed, I had a better attitude and a sense of empowerment that kept me coming back day-after-day. My grades improved, and the honest, trusting friendships are still alive over 50 years later. Running had changed my thinking, my expectations — my life.

I guess I was the running equivalent of a ski bum, working for college degrees in history and social studies during the school year, and following the racing circuit each summer. I’d had some wonderful times those summers — rich and varied experiences. I’d made lots of friends, shared the joys and agonies of racing with other competitors, traveled abroad, and seen practically every state in the Union.

One summer I’d been to Russia as a member of the U.S. National Track and Field Team. At a track meet in Minsk, a crowd of 50,000 cheered only for their countrymen; victorious Americans were met with stony silence. No Holiday Inns

awaited us in Dakar; we stayed in grass huts. Temperatures in this town on the west coast of Africa were so high that officials handed us water-filled sponges as we ran. In Morocco we ran a cross-country race on a horse track with a detour in the middle through a mud hole.

Another summer I bought a Eurail pass and traveled from one end of Europe to the other. I once ran an afternoon race in Luxembourg, then caught the midnight train to Torino, Italy, for a race the next day. Ah, the resiliency of youth!



In 1972 I’d realized my life’s dream: making the U.S. Olympic Team. I’d also set an American record in the 10-mile. I felt happy about these achievements. But that was then. Now, though, rolling across Oklahoma, I realized I had to begin thinking about the future. I’d finished graduate school and had my teaching credentials, but after one year of teaching fourth grade in Raleigh, North Carolina, I missed the excitement of traveling and running. Yet I knew I couldn’t keep driving around the country in an old car forever.

Driving through the gently rolling terrain of Kansas I thought of recent runs with my friend Steve Prefontaine, who was preparing himself to be the best 5000-meter runner in the world by the Montreal Olympics in three years. My best friend Geoff Hollister was working several jobs for this struggling company called Nike. I wondered if they would still be in business in 1976. But passing through the Ozark foothills I thought about what a great thing



# 1 THE RUNNING REVOLUTION



**RUNNING IS NOTHING NEW.** Our ancient ancestors had to walk and run to survive. The ancient Greeks had foot races at least as early as 776 B.C., the year of the first Olympics. The famous runner Phidippides, in 490 B.C., covered 300 miles in four days to solicit help from neighboring Sparta against the imminent invasion of Athens. In pre-industrial England, *footmen* were sent running ahead of horse-drawn carriages to warn their lords of danger. To this day, the Tarahumara Indians of northwestern Mexico compete in foot races and cover 150–200 miles a day — kicking a ball along the way. Running is a natural activity for humans. The sport of running has existed for centuries, from informal tests of ego and will, to high school track meets, to the Olympic games, but only recently have people from all walks of life taken to the roads *en masse*.

While runners tend to be optimistic, even the most positive running fan couldn't have predicted the wild increase in our activity. I've personally worked with over 500,000 average citizens who've discovered that the attitude boost and relaxation of a daily run makes them feel better, and enjoy life more. Those who run sensibly, about three times a week, and have the right run walk run® strategy for that day, don't quit because they feel so good!

The reasons for running are diverse: to lose weight, become fit, feel good, reduce stress, compete, or share the experience with others. It may also have something to do with the advanced state of technology. Most work formerly done by hand is now done by machines. While our distant ancestors led physically active lives, covering long distances to gather roots, nuts

and grains or to pursue game; while our grandparents or great-grandparents tilled the fields for food and handcrafted everyday necessities, we now find ourselves in a largely sedentary economy.

In increasing numbers, people are seeking to regain the health, fitness, amazing mental benefits, and leanness that was once natural to our physically active predecessors. A new spirit seems to have arisen. Perhaps when a society attains a high level of industrial and technological efficiency, those people who have long neglected their physical nature react and begin seeking ways to reestablish harmony between body, mind, and spirit.

I was running before it caught on in America. Then in the late '60s I began to see a trickle of other runners out on the roads I once ran alone. By the early '70s, there were more and now, millions are out running regularly. It seemed to have been a natural evolution, but in retrospect I can pinpoint a few key people who helped propel running into the revolution we now see in our towns and cities: three teachers — Arthur Lydiard, Bill Bowerman, and Dr. Kenneth Cooper; and four runners — Amby Burfoot, Frank Shorter, Bill Rodgers, and Joan Benoit Samuelson. There were many others, of course, but these seven were catalysts, reflecting and magnifying the spirit of the times. They were at the right places, at the right times, with the right inspiration for the new outlook that was crucial to the birth of fitness running.



**Running in New Zealand.** In the 1940s, Arthur Lydiard, a former rugby player,

# 2 THE FIVE STAGES OF A RUNNER

THE BEGINNER

THE JOGGER

THE COMPETITOR



## THE BEGINNER

### Stage One — Making the Break

Every beginning is precarious. There you are, perched on the edge of starting something entirely new, yet there are distractions, even criticisms, that cause detours and dead ends. You want to be more healthy and fit, but you may not realize how secure you've become in an inactive world. Each time you go out for a run you encounter a new side of yourself — one that must somehow be integrated into your daily life.

There is usually a struggle within and without. The old lifestyle is there and offers security. When the energy of "beginning" wears off, it's harder to motivate yourself to go out for that daily run. You'll face a lot of obstacles at first. It's all too easy to stop when the weather turns cold, when it rains or snows, or when you feel the aches and pains of starting. You haven't had to deal with these things before and the temptation to quit is strong.

Your running may also be threatening to your less active friends. Eventually you — the beginner — and your non-running friends work it out. The transition period, however, can be unstable and uncomfortable for both. If you falter, the old world — comfortable in many ways — is waiting for you to slip back in. If you're lucky enough to make new friends who share similar fitness goals (by joining a running group, for example), you'll probably find refuge in the "fit" world while you gain your "running security."

Social reinforcement makes it easier to establish the fitness habit. One good approach is to find a group that meets

regularly. Or you can make a pact with a friend who drags you out on bad days and vice versa. Races and fun runs are great opportunities to meet people.

At times, you may not progress as fast as you expected. We Americans are traditionally hyperactive and impatient. When we plant a seed, we not only want it to grow, we want it to become a tree by next week. We want *results*. When you start, you want to see physical and psychological benefits. But if you push too hard, you can tire yourself out and end up quitting in frustration.

The seeds of exercise — if you don't crush them — will survive periods of moisture and drought. Just when they seem to be drying up, they will spring to life, rejuvenated, and propel you further down the road. Don't be discouraged, even if you've stopped. Tomorrow is another day. Many beginners stop and start again 10 or 15 times before they get the habit established.

Beginners who don't put pressure on themselves seem to have an easier time staying with it. If you simply walk/jog 30–40 minutes every other day, you'll find yourself gently swept along in a pattern of relaxation and good feeling. Your workout starts to become a special time for you.

As you make progress you find within yourself the strength and security to keep going. At first you're "just visiting" that special world when you go out for a run. But gradually you begin to change. You get used to the positive relaxed feeling. Your body starts cleaning itself up, establishing muscle tone, circulating blood and oxygen more vigorously. When you miss running on a scheduled day off, you're starting to become addicted. This is where the beginner becomes a jogger.



# 3 GETTING STARTED

WE'VE ALL HEARD HORROR STORIES about the pain and agony of the first week of running. In fact, this is probably why so many people give it up soon after they start or say they're bored, or go on about how they hate running. They never get past that painful stage. It doesn't have to be that way.

Whether you're taking your first steps, are starting again for the twentieth time or are helping others who are beginners, this chapter will help you. Newton's Law applies: a body at rest tends to stay at rest.

Starting any new activity takes courage and strength. To cross from the known to the unknown requires a leap of faith. Newton's Law can be adapted to read: a body on the couch wants to stay on the couch. But once you get that body in motion, watch out! Due to the great attitude boost from a run, those who gradually introduce the body to running become runners. Whether you are a mentor for others or yourself, your greatest challenges will be motivation on the down days, and holding back on the exuberant ones.

If you start slowly, gradually increase the exertion through a series of small steps, and rest adequately throughout, you can improve your condition steadily with almost no risk of soreness or injury.

**Set Aside 30 Minutes.** The threshold to fitness is three 30-minute periods of endurance running (and walking) each week. Make an appointment with yourself. This is the time for *you*, a sacred half-hour. To take this time away from the rest of the world may seem difficult at first, but you can do it if you really want to. Once you

habitually set this time aside, you're almost certain to gain fitness and lose weight. Effort, in a sense, is not as important as scheduling. If you get out there regularly, the results are practically guaranteed.

**Running Turns On Brain Circuits.** By regularly exercising 30–40 minutes several times a week for about six months, runners (or walkers) seem to develop an addiction to the way they feel during the second half of the run and afterward. Studies show that running turns on key circuits of the brain that result in 1) a better attitude, 2) more energy and 3) empowerment to confront challenges — better than any activity studied. The body and mind begin to anticipate this after-exercise effect and miss it when you don't exercise. The withdrawal symptoms vary: crankiness, tiredness, irritability, depression, etc. This natural reward will sustain you if you can just stick with your program for 3–6 months. It may not even take that long, but if it does, even a half-year isn't a big investment for improved health and fitness the rest of your life.

**Don't Worry About Pulse Rate.** Over the past 30 years the research on heart disease and long-term health continues to show that the prime indicator for lifestyle disease reduction and life extension is the number of calories burned per week. Whether you go fast or slow, whether you walk or run, you benefit more, health-wise, by covering more miles per week. So it's actually better to cover more ground by slowing down, and walking more, than by speeding up, tiring early, and having to stop.

# 4

## PHYSIOLOGY

### WHAT HAPPENS INSIDE WHEN YOU RUN

THE BEST WAY to understand the training process is to look at the vital processes of the body — at least those that relate directly to running. If you understand some of your body's inner workings and are sensitive to its needs and states of tiredness, it can perform magnificently for you. Without such sensitivity, you can too easily push yourself into pain or injury. It's often a series of small errors in training that leads to substantial injuries. With a little fine-tuning, however, most of us can make our training safer and more productive.

**Unity of Body and Mind.** First, let's try to shed two or three thousand years of Western thinking — the idea that mind and body are separate entities, even adversaries. Westerners tend to think of the body as a slave, a chariot that can be driven and pushed at will. We often let our minds drive us toward goals, pushing to exhaustion or injury. Then we limp around in the aftermath, trying to re-establish connections.

In contrast, Eastern philosophy stresses unity of mind and body. Instead of a dichotomy, body and mind are a team communicating and working toward the same goal. Dr. E.C. Frederick, physiologist and author of *The Running Body*, illustrates the different approaches with a story about the first two people to climb Mt. Everest,

Sir Edmund Hillary and his Sherpa guide, Tensing Norgay.

When reporters asked how they made the difficult climb, Hillary replied that they had "...conquered the mountain" — it was an obstacle they had attacked and overcome. The Sherpa, who had lived on and in the shadow of the mountain all his life, said that he and the mountain had worked together to attain the peak.

Mountains can be climbed, miles run and goals attained when the mind and body work together. When the mind coaxes adaptations out of the body, steady progress can result. But the "macho" mind that forces its intentions upon a slave-like body will only reduce it to an injured slave.

**The Most Important Training Principle.** Most of us know that if we want to improve, we must stress ourselves in some of our training sessions. Exercise stresses the muscles, stimulating them to grow stronger and work more efficiently. Without enough rest after the stress, however, the muscles are driven to exhaustion or injury. Stress must be balanced by rest in sufficient quantity and quality for adequate growth.

Hard or long runs must always be followed by several easy days in which the pace or distance is reduced. In addition, you must build rest *weeks* into your

# 6

## YOUR RUNNING LOG

IN RUNNING AS IN LIFE, those who have a plan tend to do better than those who don't. Your log or journal is a continual cognitive experience that activates your human brain. This not only allows you to organize your training — you can gain control over your running progress and enjoyment — and become the captain of your running ship. This is a powerful way to avoid the negative hormones of the emotional subconscious brain under stress. See the *Mind Power* chapter for more details.

Many runners will run for months, or years, without keeping a log. It seems like too much trouble, too fussy, or unnecessary. Yet eventually, perhaps through an injury, perhaps through the examples of friends, they'll start keeping a log, and then wonder how they ever ran without it.

The log is a motivator and an enforcer. The simple act of writing down your mileage is motivating. After several weeks you'll find yourself looking back through it to find reasons for "bad" days. You may say that you're only increasing mileage by 10% more per week, but your log will keep you honest. Only with the details written down can you go back and see what led you up to the present. Eventually you'll develop your own important items which, when totaled, will give you confidence or concern.

Finally, your log can be your daily and weekly "running planner." After scheduling your key races or challenges, you can fill in the long runs, group runs, speed sessions, or fun days that will keep you headed to your goal with fun built-in.

**Plan for Your Goal and Activate Your Conscious Brain.** This will help you control the actions of the subconscious "monkey" brain and the ego. You need a plan to make maximum progress toward a goal. Since a common goal is to run "injury-free," you must plot your activity to keep from overdoing it. Time goals especially require a plan. A plan is a tool, a guide for inspiration. A beginner can lay out an easier path, avoid injury, and become addicted to running. A veteran can plan for variety, challenge, and improvement.

An effective plan will stage a series of small successes starting from your present training program. Each step feeds on the confidence developed from the last. Every plan must have the right combination of stress and rest for *you*.

A plan must also be flexible. Things change daily. At every step you should re-evaluate progress and adjust the log to reflect your current condition, ability, and other factors in your life. Successful plans are often changed en route to the goal.

**7**

# **DAILY AND WEEKLY MILEAGE PROGRAMS**

**THE IMPORTANCE OF REST**





**KENNY MOORE FINISHED FOURTH** in the 1972 Olympic Marathon. He says he wouldn't have come nearly this far if he hadn't discovered the importance of rest. In his high school track days, Kenny didn't win a single race. After a year and a half of training, on the University of Oregon track team, he began to improve. He started to "beat" some of the better Oregon runners — at least in practice.

Excited by the prospect of becoming a winner, Kenny decided to train harder for a coming indoor track meet against Stanford and sneaked in some extra workouts to get ready. Confident at the starting line, he knew that none of his competitors had worked as hard as he had coming into this two-mile race. At the crack of the starting gun, he went with the leaders, but at the halfway point ran out of gas. He finished in one of his slowest times in years, 9:48.

While sitting in misery in the locker room he saw his coach, Bill Bowerman, heading toward him. "Good," he thought, "Bill's going to cheer me up with an inspiring talk." The internationally respected mentor, however, put a hand on Kenny's shoulder and read him the riot act. Bowerman had noticed Moore's extra workouts. He made his point quickly: Moore would run no more than three easy miles per day for two weeks or be kicked off the team. Kenny was insulted. He had worked harder than anyone else and was now being criticized for it. He knew he'd lose fitness — and races — under such a program. Determined to show that his coach was wrong, he followed the instructions to the letter. When he lined up against Washington State two weeks later, he

was confident he'd do poorly from lack of training and show up the "old man." This time he laid back at first, waiting for the out-of-shape "bear" to jump on his back. Instead, he found himself taking the lead at the mile and going on to win the race. His time for the two miles: 8:48!

Although exalted by his fastest-ever time, he was humble as he thanked his coach. Bowerman knew Moore had pushed too hard without rest and that he'd come around if he took it easy. The sage of Eugene's Hayward Field track also knew that Kenny Moore was like most of us, and wouldn't rest unless confronted by the Wrath of God.

### **THE SECRET TO IMPROVEMENT**

You cannot improve if you cannot run. *The single greatest cause of improvement is remaining injury-free.* If you're like most runners, you push it to the limit, and then Mother Nature steps in and forces you to rest. This slows your progress, for you must rebuild after each "down" period. But if you *build rest into your training program* you can avoid injuries and interruptions in your progress.

A common, overused running adage tells you to "listen to your body and you won't get injured." That would be great if it worked, but often either the signals are not strong enough or we're not listening attentively. A coveted goal will often cause us to push too far, go into denial about the fatigue or pain in feet or legs and suffer afterwards. *Pay attention to the warning signals!*

# 8 THE GALLOWAY RUN WALK RUN® METHOD

## ELIMINATE INJURY ... RUN STRONG TO THE END ... RUN FASTER

- Gives *you* cognitive control over each workout
- Reduces injury risk to almost zero
- No down time — maintain family/career functions — even after long or hard runs
- Reduces the adversity, inviting beginners to start
- Brings back former nonstop runners who had given up due to injury or burnout
- Faster times in races
- All of the running enhancements without exhaustion or pain

Running turns on brain circuits for improved attitude, more vitality, and personal empowerment better than other activities studied. Millions start and restart their running careers because they know they will feel better, think better, and enjoy life better if they run regularly. But those who don't use run walk run® tend to break down in pain or exhaustion.

My run walk run® method (RWR) can take away the pain and bring the joy of running to almost everyone. Veteran runners are running faster and avoiding injuries. Millions of new runners are discovering that strategic walk breaks leave them feeling good during and after a run,

able to enjoy family, career and social activities with the mindset of an athlete.

When talking to groups of new runners who discovered my method, most tell me that they didn't even consider trying to run until they heard about run walk run®. Many of them tried to run non-stop for short distances and had to stop within a city block or less due to pain, excess breathing or failure of the running muscles. As soon as they used the right RWR strategy, a whole new world opened up.

People want to have control over their destinies. RWR allows each of us to be the captain of our running ship, adjusting the running, the walking, the pace, so that we can get the workout desired — without the negatives of over-exertion.

Because each runner can control the amount of running and the amount of walking, each can be successful every day. Without the pressure of having to run for any specific distance, every running moment can be enjoyed, as friends can talk and laugh during a workout.

Surprisingly, veterans are running faster with the right placement of walk breaks. Not only are energy reserves and muscle resources conserved, but adaptations are made and fatigue erased during the race so that run/walk/runners are strong to the

# 9 GETTING FASTER



**YOU CAN RUN FASTER!** I've seen thousands of runners improve by making simple strategic changes such as:

- Carefully choosing a realistic goal
- Setting up a plan and following the plan
- Balancing training increases with the right recovery
- Backing off before "weak links" become injured

## SETTING RACE GOALS

The most common reason runners don't achieve their goals is that they are not realistic.

Before you set up your training program to improve speed, you must choose the race distance and a goal time that is doable for you. For example: a 59-minute 10K runner cannot realistically project a 49-minute 10K by the end of the racing season. Even 54 minutes is too ambitious for that limited length of time.

Rule #1 is to set goals you have a reasonable chance of achieving. We all have to deal with failure from time to time, but why push yourself into it? Set up a series of incremental goals, each leading to the other. Experiencing one small success after another builds confidence. Then if you surprise yourself and do better than anticipated, it's an unexpected thrill.

## How Much Do Runners Tend to Improve During a Training Season?

- 3% is normal maximum.
- 5% is unusual but can happen if the stars line up.

## The "Magic Mile" (MM) Will Set Up a Realistic Goal

Most of the runners I've worked with who don't use a "reality check" when choosing a goal, are not ready to run at that level. They allow the ego, embedded in the "monkey brain," to choose. Like so many activities in life, when pursuing a goal that is too ambitious, failure and disappointment are the result. Those who use the MM, avoid this setback.

Over the past two decades I have developed a cognitive tool called the "Magic Mile" (MM), which statistically and accurately predicts current potential based upon tens of thousands of reports. By running a series of one-mile time trials during your training and "doing the math," you can know what is realistic on race day, and set up a safe, slow long run pace with an effective run walk run® strategy. It's simple: take your MM time and use the "performance predictor" function at [www.JeffGalloway.com](http://www.JeffGalloway.com).

After using a number of goal evaluation tools in my 50+ years of running, I've not found any that has been more convenient nor as accurate. The MM will provide guidance when a goal change might be productive. It can set a long run pace that can lower the chance of injury and exhaustion to almost zero. It will also help you set up an effective run walk run® strategy based upon pace.

## HOW TO DO THE MAGIC MILE (MM)

- These one-mile time trials are listed on the schedules in this book. They are usually run about every 2–3 weeks. Only one MM is done each day it is assigned.



# 10

# THE ART OF RACING

## 5K, 10K, HALF-MARATHON

*Most of the information in this chapter refers to 5K–10K races.*

*Much of it can also be applied to half-marathons and races 30K (18.6 miles) or less.*

JUST ABOUT ALL OF US have a competitive streak. Races can be an outlet for this tendency and give a special edge to running — whether you want to win, or just finish. On those days when motivation is low, the thought of an upcoming race can often get you out on the roads. You look forward to the excitement of a race — it's like deadline for a reporter, or a punctuation mark at the end of a sentence.

Races can actually be rewards for hard training. There's a positive atmosphere and contagious energy. Marking a race date on your calendar will give you a goal for structuring a running program.

Beware, however, for the excitement and stimulation of races can cause you to push your body too far and provoke injury. Races are intense. You may survive the race, but fail to rest afterward — and become injured. The thrill of participation and achievement often lures runners into the “twilight zone” that is part injury and part success. If all goes well and luck is with you, you may run your best time ever. But unfortunately, things are often not in balance, and by pushing too hard in a race, some parts of the body will be overstressed.

Race euphoria can give you illusions of strength and invincibility. The mind recovers quickly from a hard race, but it takes

the body longer. The race is really the ego icing on the cake. Your time “under the lights” may give more meaning to your daily run, but it's second in importance to your overall fitness. Remember, the true benefits of running come from the peace and physical and psychological strength found in the daily run, not from a 20-second improvement in your race time.

I've come to believe that race times and age group awards are great for the ego. But you shouldn't let your ego determine your ultimate satisfaction from running. I've seen too many runners burn out because they start with a few races, then start measuring their progress only by time improvement. Finally they judge the quality of a run, or the status of another runner solely by the minutes and seconds in the race results, or PR (personal record). Inevitably the times will slow down and the PRs become a memory, and ego gratification runners often quit running.

### Peaking

“Peaking” refers to a careful scheduling of key workouts at the end of the speed phase that can raise your performance potential to its highest level. Speedwork and long runs are scheduled to build the racing muscles to top efficiency.

# 12

# THE ADVANCED COMPETITIVE RUNNER

## WORKOUTS FOR THE ADVANCED COMPETITIVE RUNNER

RUNNERS WITH AT LEAST four years of speedwork have often found the need for an extra “push” for top performance. These experienced runners usually have muscles and tendons that can handle more abuse, and their years of experience should (but don’t always) keep them from overtraining. The principles here are the same; the workouts differ in degree, not kind.

If you try these workouts, follow all the guidelines in Chapter 7, pp. 50–67, especially the easy-week concept. An easy week is especially important after these workouts, since you’ll be pushing your body harder than other runners.

Don’t be a slave to weekly mileage. The workouts that lead to your goal are the long runs, the speed days, and form work. Weekly mileage during the speed phase is unimportant. It’s better to slack off rather than to overtrain and suffer the consequences. Taking extra days off each week can reduce your injury risk significantly (*i.e.*, it is better to cover 25 miles in a 3- or 4-day running week, than to run 5–6 days a week).

**Note:** Runners must often make sacrifices in order to excel. Performance work demands extra time, which may be taken away from work, family or friends. It can also make you high-strung or difficult to be around. I don’t have a solution to this problem — it’s really a matter of priorities. If you’re an advanced competitor, being aware of the trade-off can make you think about balancing your running with other important elements in your life. Or if you have a friend who is training hard, perhaps this chapter will help you understand the demands of competitive running. (*See Five Stages of the Runner, pp. 12–19.*)

**Greater Injury Risk.** Advanced runners often feel invincible, immune to normal running problems. In fact, in spite of their greater experience and stronger running muscles, they are injured more often than the average runner for one simple reason: they run harder and longer. *Speed training is the leading cause of injury among those who do speedwork.*

# 13 FORM

HOW TO RUN STRONGER AND BETTER



More than ten years later, however, my “lazy” form was getting me into trouble. In my earlier days, I had instinctively sprung off the forefoot — using the flick of each ankle for propulsion. Later I found I could rest the lower leg muscles by “cruising” — leaning slightly back and shuffling along. This more relaxed pattern allowed me to run slightly slower with less effort. As I slipped into this “cruise” mode for most of my workouts and races, I was losing power — and races. Since I wasn’t using the springing and driving muscles, they were not strong and ready. The “cruise” muscles are not designed for power and acceleration — and they often were pulled or strained when I used them for that purpose. My running form was drifting.

Then I met Arthur Lydiard. The coach of New Zealand Olympic champions believed that form work helped good runners become great. I tried his suggestions and later developed some form principles of my own that have helped runners of all abilities run better and faster with the same effort.



One problem with learning form from a book (as opposed to a coach) is that you can read all the particulars, but then when you’re out running it’s impossible to remember everything. What I’ll do here is list the general principles of good form. Some of them will ring a bell with you; you’ll also recognize things in your own running style that need improvement.

Over the past three decades, I’ve videotaped thousands of runners at my Lake Tahoe running camp, giving improvement suggestions to almost everyone.

Fitness runners usually need to eliminate extraneous motion and shuffle more. Competitive folks focus on using their mechanical efficiency and strength. All benefit from making little adaptations to run smoother and stronger.

But don’t go out and practice all these tips at once. It’ll only confuse you. The *Points on Form* section that follows is an overall review of good form and something which you can refer back to whenever you want to fine-tune things. The section after that, *Three Tips on Form*, lists three basic principles that are fairly easy to remember and that you can work on right away.

## POINTS ON FORM

There is no single prescription for efficient running, for we are all put together differently. But there are several biomechanical principles that can help you run faster, without pain, and recover fast. Be sensitive to your own structure and abilities and never force a particular running style on yourself that doesn’t feel right.

**One other thing:** Good form is something all runners — regardless of ability or experience — can work on. Racers are naturally interested in improving form, for it will help them run faster. But beginners and non-competitive runners will also benefit from understanding some of these principles, for good form will make anyone’s running smoother and more enjoyable.

**Erect Posture.** Your running will be most efficient if your posture is erect, perpendicular to the ground (and the force of gravity). Check your form as you run by storefronts in a shopping center. If your body parts are



# 14

# STRETCHING, STRENGTHENING, AND CROSS TRAINING

## RELAXING AND BALANCING

YOU'LL SEE A LOT ON THE INTERNET about the benefits of stretching, strengthening, and cross training. Over the years I've asked several dozen elite world class distance runners how often they performed any of these three. Only three runners had used one or more of these regularly. None of the 30+ elite Africans I interviewed had stretched regularly and none spent any time in the weight room — nor did any of my Munich distance teammates.

When I suffered a bad injury, as I prepared for the 1976 Olympic trials (age 30) and consulted with a respected physical therapist — he asked me what stretches I had been using. When I told him that I didn't stretch, he said that was the cause of my injury, a claim that I discovered later wasn't true. He went on to say that if I didn't follow his daily stretch routine, I probably wouldn't be able to run at all by the time I turned 40.

I stretched religiously for a month and the injury got worse. In frustration, I stopped stretching and it healed within the next month.

**No Guilt for Not Stretching:** I haven't stretched in over 40 years and have not suffered a single running injury during that period. A research review doesn't find any study showing that stretching benefits distance running in any way. There are a growing number of studies, however, showing that stretching is a cause of, often prolongs the healing, and can result in career-ending injuries.

**But If You Have Had Success with Stretching:** The best time to stretch is after the body is warmed up, relaxed, and when the blood is moving. Since many runners *do* stretch incorrectly, it's best to wait and stretch after warming up. Don't stretch to warm the muscles up; it won't work. Stretch in the evening, for example, or throughout the day as you have time. But don't feel guilty if you don't stretch.

**Tight During a Run?** Some runners will, when they become tight during a run, take extra walk breaks, or go to a "shuffle." Shuffling is running with minimum effort, as you keep your feet low to the ground with a

# 15 **MOTIVATION**

**HOW TO RUN FASTER WITHOUT TRAINING**



IT WAS A BRIGHT SUNNY AFTERNOON in the Munich Olympic Stadium when the world's best 800-meter runners toed the line. At the gun they sprinted for position and strategic advantage, but my friend Dave Wottle strained to stay up with the slowest runners. As the runners rounded the final turn, we could see that Dave was boxed in at the rear of the pack. Though our own sportscasters were describing his effort as an unfortunate strategy that would keep him from a medal, I knew he was lucky to be close to the next-to-last runner.

In the 1972 U.S. Olympic trials, Dave had beaten the best of the American 800-meter crop, including a Kansan named Jim Ryun. As we traveled to Norway to prepare for the games, however, Dave complained of a knee problem that wouldn't go away. After several frustrating speed sessions, which had to be quickly terminated, Dave took 2–3 weeks off to let it heal.

One day as my roommate, Doug Brown, and I were starting an easy run in the forest, we saw Wottle, full of optimism and ready to resume hard training, starting on his first run after the layoff. But when we returned from our short run, Dave was limping along, in tears. The rest had done nothing for his knee. He was certain his career was over, just as he was reaching his peak.

Trainers and coaches wanted to replace him with a healthy runner, but Wottle refused to let anyone take away his lifetime goal of running in the Olympics. He trained when the knee would let him. By the time we arrived in Munich for the first trial heats, Dave — though weakened by the prolonged layoff — was able to run enough to enter his race.

In the first qualification round he struggled to stay at the end of the pack. As he came off the final turn in last place we were ready to rush out and congratulate him for his courage in staying up with athletes who were now in much better condition. But somehow he threaded his way through the mass of bodies and finished third, qualifying for the next round. He ran two more qualifying rounds the same way, struggling to stay up, then fighting his way into the last qualifying position. We were amazed: Wottle had qualified for the 800-meter finals!

In the finals, Dave was in last place by a significant margin when he passed the half-way mark, with only one lap to go. While sportscasters in 24 languages focused on the top runners in the race, Wottle's target was the next-to-last runner, which he didn't catch until they started the final turn of the track.

Then something happened. At the toughest time of the race, when all of the other runners were slowing down due to an overly ambitious starting pace, Dave was determined not to give up even though his under-trained muscles were overfilled with the waste products of extreme exertion. His body had reached its limits, but his mind kept him going. He squeezed between two runners, stepped quickly to the outside, then the inside, and drove forward in hopes of getting out of last place. In the last few yards before the finish, a small hole opened up in the line of runners ahead — Dave slipped through, lunged at the very last moment, and broke the tape!

Dave Wottle became an Olympic medalist because he had mentally trained himself to reach his potential, whatever it

# 18

## THE WALKING WOUNDED

**Note:** I'm not a physician and not qualified to dispense medical advice. But having run continuously for over 6 decades, I've had just about every injury possible: strained and torn Achilles tendons, pulled muscles, shin splints, swollen knees, etc. In the process of trying to recover and get on with my addiction, I've learned some helpful things I'd like to pass along. After working with over 500,000 runners I've seen some patterns of prevention, cause, and healing. What follows in this chapter and the next is offered as advice from one runner to another and not meant to be expert medical advice. *If you are ever in doubt about any injury, see your physician.* For a lot more information on prevention and care of injuries, see *Running Injuries: Treatment and Prevention*, written by myself and Dr. David Hannaford. It's available, autographed, from [www.JeffGalloway.com](http://www.JeffGalloway.com).

**No running injuries for over 40 years!** Since I started using my run walk run® method on each run, I have not had a single running injury in over 4 decades! This method gives you control over the stress you put on your orthopedic units. By adjusting before you break something, most runners can keep running while damage is being repaired.

**Be attentive to irritation of your “weak links.”** Each of us has a few body parts that get irritated more often when we run. If we back off training and treat these areas it is usually possible to heal the area while continuing to run — especially by adjusting the run walk run® strategy.

**LET'S FACE IT.** Running is an addiction. Once you get that daily fix of aerobic exercise, improved circulation, and capillary stimulation, you feel too good to ever stop. *But* when an injury crops up and you become one of the “walking wounded,” you are faced with a problem: How do you rest long enough to let it heal?

I used to tell runners, “Sooner or later every runner is injured.” But after coaching hundreds of thousands of runners to be injury-free, I offer you a program to join

us. In this chapter you'll also find treatment strategies in case you got a bit too exuberant.

**When Is It an Injury?** Some runners have little aches and pains every day. Most of these are temporary. These everyday aches and pains indicate the breakdown of weaker tissues and gradual buildup of stronger ones. Through experience, you'll learn to pay attention to weak link areas and tell the difference between a passing ache and an injury. Here are some helpful



# 19

## INJURY ANALYSIS AND TREATMENT

CONTRARY TO WHAT YOU MAY HEAR from non-runners, long-term running does not weaken or destroy your joints. Several studies have shown that runners have better joint health after 40–50 years, than non-runners. But runners often enjoy their endorphins and attitude boost so much that they ignore the early warning signs of injury until one erupts. They also come back to running too soon, aggravating the injury. Fortunately, running injuries are not degenerative in nature. The sooner you back off the stress, and treat the injury, the sooner the healing process starts.

When an injury occurs, there's no substitute for expert advice. If you get a good diagnosis in the beginning, you can avoid complications and get on the healing path. Generally your best bet is finding a doctor who: 1) has successfully treated a great number of runners with the same injury, and 2) really wants to get you back to injury-free running as soon as possible. The running underground will help you find such a person. (It's even better if the doctor is a runner, but this is certainly not a requirement.)

With a leg or foot injury, there are two types of doctors to consider: a podiatrist or an orthopedist.

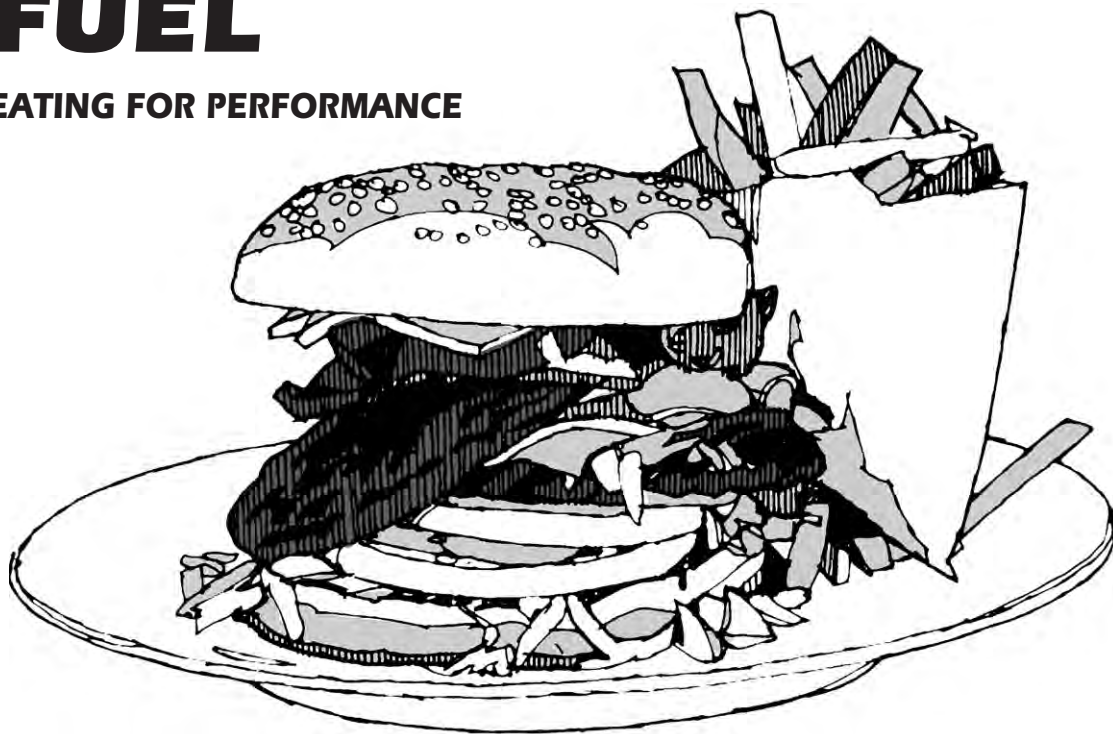
**Podiatrists** are trained as physicians and surgeons of the foot. Leg or knee injuries are also treated by podiatrists when they relate to the foot. For example, knee problems are often caused by improper alignment of the feet and can be remedied by corrective foot devices, which a podiatrist will prescribe. Most podiatrists are fully aware of the mechanics of the entire lower extremity.

**Orthopedists** are M.D.'s who have taken surgical training and specialize in the bones and muscles of the body. Most are primarily surgeons and not much interested in biomechanics. However, if you can find an orthopedist who is known for treating runners and is interested in the mechanics of injuries, you'll be in good hands.

If the problem is only in the foot or has its cause there, you can see either specialist. If the problem is in the leg or foot and the *cause* is probably not in the foot, see an orthopedist.

# 20 FUEL

## EATING FOR PERFORMANCE



I'D LIKE TO OFFER YOU an exclusive miracle diet that could propel you beyond your goals. There are tales of such experimental approaches. In 1978, Dick Gregory prepared a special diet for one of Boston's better marathoners, Vinny Fleming. After following it for several weeks, he ran in the famous hometown marathon that year and took a special concoction at the 20-mile mark. Not only did he lower his time by several minutes, but he said he felt a great lift when he took the "brew" at 20 miles.

So far as I know, this was the only success of this mystery food, and I'm glad. I don't like hearing of "miracle foods" because they cloud the basic truth, which is that training does a lot more to improve performance than diet. It was Fleming's condition that allowed him to improve, not the drink. Given a certain level of conditioning, some diets will help a little, others will hinder a little. Diet matters more in long-term health than in an individual performance.



# 22

## SHOE SECRETS

### INSIDE INFORMATION ON SHOE DESIGN

LIKE THE QUEST FOR THE HOLY GRAIL, runners search for the perfect shoe. We feel that somewhere there's a perfect pair that will cure foot problems, make us run faster and lead us bounding effortlessly into the sunset. We're persuaded by ads, influenced by magazine surveys, and tempted by the shoes our friends wear.

Well, don't get your hopes too high. Although shoes have come a long way, I have yet to meet a runner who's found the perfect pair. Forty years ago the hot shoes were Converse All-Stars, regulation

issue on high school basketball teams. They were theoretically also designed for indoor running, ping-pong, volleyball, or anything the salesman could talk you into. The black cloth absorbed perspiration and salt, which would frequently rub against your feet until they were blistered or raw. There was a hard gum-rubber sole glued directly to the canvas . . . and that was it. Stability, cushioning, pronation control, and other things we now take for granted were in the realm of science fiction.



## **Here's What the Experts Say About Galloway's Book on Running:**

"Jeff Galloway is one of those rare individuals who not only knows his craft, but also has the ability to convey this knowledge through teaching."

—Frank Shorter

Gold Medalist, 1972 Olympic Marathon

"Jeff Galloway is perhaps the one individual in the American running community who can combine superior knowledge of our sport with the highest level of achievement—making the Olympic team."

—Bill Rodgers

Four-time winner of the Boston Marathon

"Certainly Jeff Galloway has both the knowledge and the physical ability to speak from experience. His book is an outstanding contribution to competitive running."

—Kenneth H. Cooper, M.D.

Author of *Aerobics*

"Jeff Galloway is one of the most experienced, thoughtful, and innovative distance runners in America today. His book now allows all runners to benefit from his ideas and to improve their running with field-tested methods."

—Joan Ulliot

Author of *Running Free*

"A book whose time has come . . . a must for runners of all abilities."

—Bob Anderson

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