

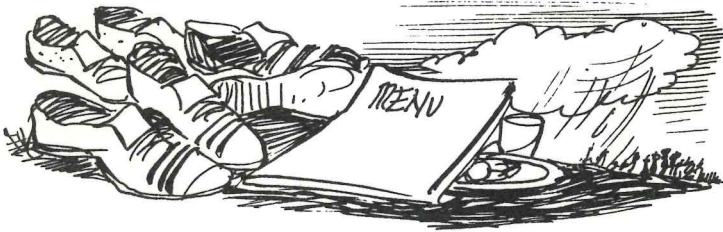
# SHOES FOR RUNNERS





\$1.95

# SHOES FOR RUNNERS



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## WORLD PUBLICATIONS

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**RIGHT: Steve Prefontaine (leading) and Paul Geis still get traction from a wet track. (Jeff Johnson)**



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## FOREWORD

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When we talk of shoes, we're really talking of feet—how to make those feet go as fast as they're capable of going, and how to keep them from getting hurt.

Of the two functions of shoes—traction with the ground and protection of the foot—protection is by far the most important.

Recent studies have shown that barefoot running is still the fastest way to go. But other studies, including one for this booklet, indicate that the injury rate among runners is soaring. Our survey shows that two in every three runners have suffered a serious injury related to running stress. Nearly all of those problems started in the feet and were transmitted to shins, achilles tendons, knees, hips.

The reason for the injury epidemic, Desmond O'Neill wrote in the January 1973 *Runner's World*, is that the human body wasn't built for the pounding we're giving it.

"Primitive man may very well have loped barefoot over the veldt in pursuit of his dinner," O'Neill said, "but he did his loping on soft surfaces, with only occasional high-speed bursts. Certainly he rarely had to run long distances at a fast steady pace on hard road surfaces, and therefore never evolved the body necessary for that sort of activity. That leaves us, his descendants, ill-equipped for our self-appointed tasks..."

There's an obvious gap between what nature gave the runner and what he wants to do with it. Perhaps that gap can never be filled entirely, but shoes can do much of it. They can help make our somewhat unnatural forms of running more safe and comfortable.

Since running starts and frequently ends with the feet, the feet have to be wrapped and handled with care. In the modern running environment, bare feet won't do. Any old pair of sneakers won't do. Runners need specialized footwear for their special work.

This booklet goes into detail on that footwear, and on feet as well because the two topics are inseparable.

Desmond O'Neill said, "I am particularly concerned with the relationships between feet, shoes and injuries. There are a few Abebe Bikilas in the world (Bikila won the 1960 Olympic marathon without shoes). But most of us wear shoes, of necessity, and a lot of injuries are direct results of failure to use proper footwear and to take proper care of the feet."

O'Neill advised runners to "take care of yourselves, take care of your feet, make sure that you give them all the help that they need by giving them good shoes to operate in and on."

Shoes are the runner's only major money investment. Most runners spend \$30-50 a year on shoes, according to our poll, which is less than a skier might spend in one weekend. Good running shoes pay off in terms of faster, longer, more comfortable miles. It pays to pamper himself in this one area. Cutting corners here ends up costing more than it's worth.

This booklet, the third edition (others were published in 1967 and 1971), isn't trying to sell particular shoes. It is trying to put runners and race walkers into the best possible footwear, for the sake of their feet.

## Chapter 1

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# THE CHOICES



Good shoes don't exactly grow on trees, but runners have more choices of models than ever before. (Pantovic)

# NOTHING BUT THE BEST

The damage is done now. We have worn shoes since birth, and have pounded pavement since the first step. We've wrapped up the feet to protect them, then have beaten them to death on unyielding concrete. But it's too late now to change that fact.

There is no sure way out of this mess. We're stuck with shoes, concrete and weakened feet, and aren't likely to get rid of any of them completely. The next best solution is to keep the cure from hurting worse than the ailment. In other words, select shoes that stall trouble (no shoe can promise to *prevent* it completely) rather than contributing to it.

Shoes do contribute to foot damage, from blisters on up. It doesn't stop with the foot, either. The achilles tendons suffer, and the calf muscles, the knees, the sciatic nerves that start in the lower back. All these difficulties can radiate from weak feet wrapped in poor shoes that strike hard surfaces.

Shoes contribute in a number of ways—both when they're too light, flimsy and thin-soled and when they're too heavy, rigid and thick. Too light shoes don't protect adequately against unnatural surfaces. Too heavy ones alter the foot's natural relationship with the ground.

The "best" shoes are compromises, often meaning giving up some speed in the name of safety. Barefoot is fastest, but we've grown too tender for that, and we've run out of safe surfaces. Next best is a minimal shoe that is (1) so flexible it can be wadded into a ball; (2) thin enough so you can feel there's earth underneath, without feeling its bite; (3) low-heeled with a straight and non-irritating back. Yet many runners still can't tolerate this little of a shoe, so they have to compromise further.

The "best" shoe would be made to the individual's own imprint. But even if the facilities were available for producing custom-made shoes, the prices would be prohibitive. So we have to compromise here, too, accepting mass-produced models and making individual modifications to them if our problems are serious enough.

Choosing the "best" shoes, then, means finding the amount of protection needed and filling it with the most adequate shoes on the market.

The shoe market is getting better, if only because of the intense competition for the runner's dollar. We wrote in the 1971 shoe booklet, "As recently as 10 years ago, few runners ventured far from the boundaries of the track. The pain of doing it often outweighed the pleasure, as they were forced to slog along in a pair of sneakers designed for basketball or tennis. Or they might have owned a pair of warmup flats, a cheaply-made version of a track shoe with a sole slapped on that was as soft and flexible as a piece of mahogany."

The market has revolutionized since then, even since that was written two years ago. Nearly all the most popular models of running shoes have been developed since the mid-'60s. There are half-again as many choices now than in 1971.

Manufacturers have to produce new and better models to compete, and runners profit from the in-fighting. The surfaces and the feet are as inadequate as ever, but the material in between is improving.

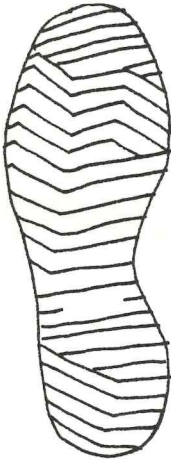


# BASIC SHOE ANATOMY

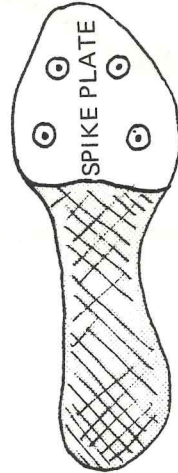
Before getting on to the descriptions of various brands and styles of shoes, a brief course in shoe anatomy is in order. We'll be throwing out some terms which may be confusing or unfamiliar.

**Last**—The form determining the shape of the sole, which is the foundation of the shoe. Flats and spikes have different lasts.

FLAT LAST



TRACK SHOE LAST

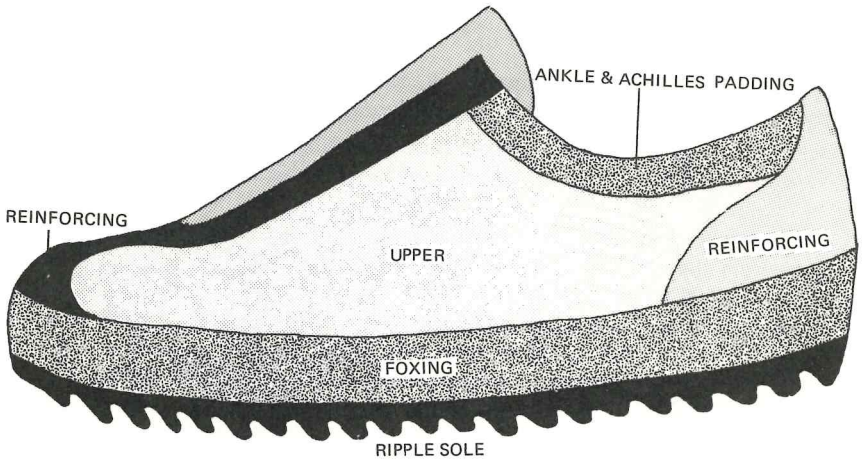


**Sole**—The bottoms of shoes have several layers; two or more of the following:

- *Outer sole* which makes contact with the ground (always made of rubber for flats, but types of rubber vary. Few outer soles are smooth; most range from gently ridged to deeply rippled to give greater traction and more cushioning.)
- *Spike plate* which, obviously, holds the spikes of track shoes; usually made of plastic.
- *Midsole* beneath the outer sole for extra cushioning.
- *Wedges or lifts* of rubber which are generally used to elevate and cushion the heel.
- *Insole* which makes contact with the foot (usually fabric or leather).
- *Foxing* is the rubber rim going around the lower portion of the shoe, designed to give lateral support and to protect against weathering and wear.
- *Toe cap* which is partial foxing to slow down wear at this vulnerable area.

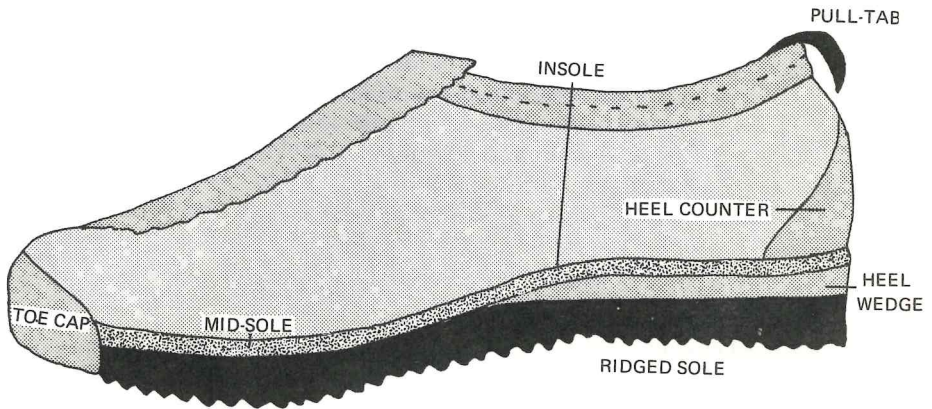
**Upper**—This, of course, is the material which holds the sole in the position where it can do its job. It can have any of several components:

- *Ankle and achilles tendon padding* –a cushioned rim which runs around the top of the shoe and protects the area.
- *Heel and toe reinforcing* which both supports the foot and



keeps it from breaking through at these points.

- *Heel counter*—an inflexible piece of material for heel protection.
- *Pull-tab* to assist in pulling on shoe.



# SURVEYING THE MARKET

Even as recently as 1971, tradition still ruled the shoe market. Shoes were still mostly made of leather. Track shoes had spikes. Adidas and Puma monopolized the spiked-shoe market, and Tiger and Adidas had most of the sales in flats.

Times changed quickly. Just two years later, the traditions and the power balances had shifted so dramatically that our earlier booklet (*All About distance Running Shoes*) was completely outdated.

Only Tiger was heavily into nylon uppers then. Adidas was just coming out with its first nylon shoe. Now the seven most popular models of racing flats are nylon. Three runners in four wear them, according to our survey. Any company that hopes to compete in the distance marketplace, has to have a nylon model.

Puma developed a track racing shoe called "The Claw." It's designed for synthetic tracks, and has no spikes. Instead, it has a dozen claw-like track grippers. Adidas has a similar model.

Bill Bowman's inventive mind produced an all-purpose racing shoe called "The Waffle." Instead of the usual smooth or rippled sole of a flat, it has dozens of quarter-inch nubs. He claims it grips like a spike on soft surfaces and cushions like a conventional flat on hard ones.

Not only have more than a dozen other less radical models appeared since '71, but also a whole new line of shoes. The Nike company didn't even exist when the last booklet was published. Already it is one of the Big Three in the field, and by far the biggest of the US-owned producers.

The Big Three—Adidas, Tiger and Nike—now account for nearly 90% of the shoe sales to runners in the United States. Adidas leads Tiger slightly, 35-33%, with Nike having a strong foothold at 18%. Only six companies can claim more than 1% of the market. And only one of those brands—New Balance—is made in the US. West Germany exports Adidas, E. B. Sport International and Puma. Japan makes Tiger and Nike (though Nike is Oregon based, its shoes come from a Japanese factory).

Two other companies rate attention here for attracting at least 1% of the flat buyers: Karhu of Finland and Road King of the US. Together, these eight shoe producers outfit nearly all the runners in North America.

The selection of brands and models was never better, but at the same time prices have gone up. They took a sudden jump in mid-1973, when the dollar was revalued in relation to German and Japanese currencies. Even before that, material and labor costs had been rising—particularly in Japan—and of course that increase was passed on to the consumer.

These eight companies that have cornered a profitable share of the market have done it by advertising heavily, by making the product available to a large and widespread number of runners and by having competitive prices. But mainly they've succeeded by turning out quality shoes for runners who no longer have to accept anything less.

**ADIDAS**—The West German giant was the first big running shoe company, and it's still the biggest overall (though Tiger appears to have a larger

share of the flats market). Three runners in every four wear Adidas spikes. And an increasing number are wearing the nylon flats—SL72 and Dragon.

**US Distributors:** Clossco, Inc., 2200 Martin Ave., P. O. Box 299, Santa Clara, Calif. 95050. Hughesco, Inc., 3000 Junius St., P.O. Box 1769, Dallas, Tex. 75221. Libco, 78 Diamond Rd., Springfield, NJ 07081. Vanco, 5133 W. Grand River Ave., P. O. Box 870, Lansing, Mich. 48901.

**Canadian Distributors:** Adidas Canada, Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario.

**E. B. SPORT INTERNATIONAL**—Arthur Lydiard designed the model that put the company on solid footing in the US—the Lydiard Road Runner. That flat alone (fourth in popularity for training) accounts for most of E. B.'s sales. The West German company also makes a quality racing flat, but to date it is hard to find in the US.

**US Distributor:** Starting Line Sports, P.O. Box 366, Mountain View, Calif. 94040.

**KARHU**—For many years, this company has shown promise of scoring in the sales race, but it hasn't yet taken off. Maybe the Finns' success at Munich will give these Finnish shoes a boost. So far they show up in our survey only in the training flats category, with just over 1% of the market. Arthur Lydiard, who coached in Finland for a time, also had a hand in the design of those flats.

**US Distributor:** The Sportgroup Inc., Harrel St., Morrisville, Vt. 05661.

**NEW BALANCE**—With one exception, US shoe manufacturers are hopelessly behind the Japanese and Europeans. That exception is New Balance, which makes a sturdy and functional line of ripple-soled flats. A major selling point for these shoes is that they come in widths—something the Germans and Japanese have overlooked. New Balance advertises that it comes in "168 sizes."

**Manufacturer and Distributor:** New Balance Athletic Shoe Company, 176 Belmont St., Watertown, Mass. 02172.

**NIKE**—The new company grew out of irreconcilable differences between the Tiger parent organization in Japan and its major US distributor. Blue Ribbon Sports set up its own factory in Japan and came out with a new line of shoes, starting in 1972. Nike already is a strong third in sales to runners, having set up an effective distribution network and aimed its advertising directly at runners.

**US Distributor:** Blue Ribbon Sports Inc., 6175 S.W. 112th Ave., Beaverton, Ore. 97005.

**PUMA**—Puma competes vigorously (but not altogether successfully), judging by our figures) with Adidas in track shoes. But Puma until recently has almost been shut out in running flats. At least they haven't been worn by the most active distance runners. A new nylon shoe, the 9190, could remedy that.

**US Distributors:** Sports Beconta Inc., 50 Executive Blvd., Elmsford, NY 10523. Sports Beconta Inc., 91 Park Lane, Brisbane, Calif. 94005.

**ROAD KING**—Besides New Balance, this is the only US-made flat that has been able to corner a significant share of the market. A New Zealander

designed the shoes specifically for road running. Easily-replaceable soles, which the user can apply himself, are available from the company.

**Manufacturer and US Distributor:** Friberg Enterprises, 9433 Alto Dr., La Mesa, Calif. 92041.

**TIGER**—Tiger revolutionized the flats market by being the first company to use nylon uppers, an innovation which has been widely copied. Over half our running sample race in Tiger's nylon flats, and nearly a third train in some type of Tigers. Even Tiger spikes rate surprisingly well—a distant second to Adidas but ahead of Puma.

**US Distributors:** Pete Buckley & Co., 440 Armour Pl. N.E., Box 13875, Atlanta, Ga. 30324. Curley-Bates Co., 860 Stanton Rd., Burlingame, Calif. 94010. George A. Davis Inc., 7205 Hibbs Ln., Levittown, Pa. 19057. Demco, 5121 N. Ravenswood Ave., Chicago, Ill. 60640. Olympic Sports, 2607 National Circle, Garland, Tex. 75041. Universal Resilite, 43 Polk Ave., Hempstead, NY 11550.



Track shoes are built for speed, and in the speed market Adidas is the unquestioned leader. Gerry Lindgren (striped shirt in Pumas) is a dissenter. (Stan Pantovic photo)

# LEADERS IN THE SALES RACE

## ALL RUNNING-WALKING SHOES

1. Adidas	35.8%	5. Puma	3.3%
2. Tiger	33.7%	6. New	
3. Nike	18.3%	Balance	2.2%
4. E.B. Sport			
Intl.	3.4%		

## RUNNING-WALKING FLATS

Racing		Training	
1. Tiger	51.0%	1. Tiger	31.4%
2. Nike	22.9%	2. Adidas	30.6%
3. Adidas	19.3%	3. Nike	22.7%
4. New		4. E.B. Sport	
Balance	1.6%	Intl.	6.0%
5. E.B. Sport		5. New	
Intl.	1.5%	Balance	4.0%
		6. Puma	2.1%
		7. Karhu	1.4%
		8. Road King	1.1%

## RUNNING SPIKES

Racing		Training	
1. Adidas	74.0%	1. Adidas	73.3%
2. Tiger	15.5%	2. Puma	13.2%
3. Puma	8.1%	3. Tiger	10.3%
4. Nike	1.4%		

(Figures obtained from a survey of 1600 Runner's World subscribers, March 1973. Only companies with 1% or more of the market are included.)

**RIGHT:** In the heat of a race, no one notices shoes—unless something goes wrong with them.  
(Jay McNally photo)



# SHOE-SHOPPING GUIDE

Each shoe is going to strike the ground some 800 times a mile, each step almost exactly like the one before. Think about what each small flaw may mean, of each extra ounce of weight that has to be lifted, when it is multiplied by 800, 80,000 or 800,000. Choose your shoes with that in mind.

Obviously, the best way to choose shoes is to examine them yourself. to try them on and run in them before any money changes hands. This is the ideal situation, to fit running shoes with almost as much care as eyeglasses. It isn't always possible to be so careful, though, since running shoe dealers aren't as accessible as optometrists.

So runners often find their own best shoe through trial and error. Nearly every runner's closet is littered with erroneous trials. Once they find their own best brand, model and size, mail-ordering will do. But on the first trial, a trip to the nearest running shoe store is a good investment no matter what the expense in time and money. This trip could save trouble later on.

Once in the shop, don't be overwhelmed by the displays and by the salesman. There'll be lots of models on the shelves, and the salesman will be anxious to put a pair on your feet right away and send you down the street.

Take your time. It's your money and your feet. Sort through the models. Squeeze them. Bend them. Feel every inch of them, inside and out. Try on as many pairs as you need to find the right one. When you find that one, at least walk in it. If the office space and the salesman allow, run in it.

What do you look for in a good running shoe? At least eight things. Taken together, they can be called the "Guide to Shoe-Shopping."

**1. Needs**—How will the shoes be used? Racing or training? Road, track or cross-country? Hard or easy running? Shoe needs, of course, vary from running type to running type. In general, runners in the shortest and fastest activities wear the flimsiest shoes, and long slow distance runners use the most substantial shoes. This is because protection gets progressively more important than speed as distances grow. Fit shoes to the activity.

**2. Price**—Get the best ones you can afford. The runners we surveyed go through an average of two pairs of shoes a year. That's \$30-40 at today's prices. Few are willing to spend much more than \$20 for a single pair, no matter how special they look. They shouldn't be expected to pay more when adequate shoes are available for less. On the other hand, avoid bargain-basement specials. The true bill for them comes due later.

That takes care of the visual screening. You've seen the models the store has and you can use, the ones that look good and have the right price. Don't be swayed yet by appearance and fad before making a closer inspection.

**3. Weight**—Pick up each shoe. Weigh it in your mind. Lightness is a virtue, but only to a point. You obviously can run a bit faster in light shoes like the nylon racing flats. But in doing so you give up the support features of the thick "stone-crushers." You may be willing to sacrifice support in races, where efforts are relatively short. In prolonged training, though, a little extra well-placed weight won't hurt.

Just make sure the shoes are worth their weight.



4. **Last**—The last is one of the first things to examine. This is the shape of the shoe when you look at it from the bottom. Ideally, it should be the same basic shape as the foot. Unfortunately, most running shoes aren't.

Arthur Lydiard, a running coach and shoemaker from New Zealand, said several years ago in an *RW* interview, "The worst feature of most of the shoes sold in this country (the US) is that the lasts are wrong. They don't conform to the shape of the foot. The lasts are straight, so your big toe is in the wrong place, forcing you to run on the side of your foot."

When the lasts are wrong, the foot constantly fights the shoe, trying to make it conform to the foot structure. The shoe is less pliable than the foot, so the shoe has its way.

Other problems: German and Japanese shoes are made for German and Japanese feet, and they come in only one width. Pity the person with feet of another nationality or another width.

Most of these shoes, says Desmond O'Neill, "don't even fit the foot at rest, much less in motion—a point which you may easily prove by tracing an outline of the sole of your shoe on paper, and then superimposing an outline of your own foot."

Chances are, the forefoot won't line up with the shoe's last, and the toes will either be lost in the front of the shoe or will lap over the edges. It doesn't take a podiatrist to guess what happens when you start running: twisting, cramping, slipping, all of which are most unsettling.

5. **Cushion**—Squeeze and bend the sole. This is what the shoe is all about. The rest of it just holds the sole—either rubber or spikes—in place.

In flats, you're looking for a sole that makes you feel like you're crossing a bed of marshmallows, right? Not exactly. Remember, you're running on your feet with full body weight on them—not on your hands. So the pinch test isn't entirely reliable.

Des O'Neill says, "What looks like nice, soft, comfortable sponge rubber when squeezed between thumb and forefinger will distort almost flat, almost simultaneously under full body weight. That fast distortion of the rubber means that almost all the shock is transmitted through your foot, all the way to the top of your head."

He feels most sponge rubber in shoes doesn't absorb much shock, its intended role, because it's too soft. Higher-density rubber may do a better job of neutralizing shock, to say nothing of lasting longer. Yet it can't be so hard that it's wood-like. If that is the case, shock again radiates from toe to head.

A second sole factor to check is flexibility. The shoes should bend, but only selectively. Noted sports podiatrist Richard Schuster of New York recommends that all distance runners have shoes with "rigid shanks." By this, he means limited flexibility from the heel to the back of the ball of the foot—the metatarsal heads. The rigid shank, Schuster says, reduces strain on the arches.

From the metatarsal heads forward, though, the shoe must have good flexibility. This area, the front one-third of the foot, is where the roll of toe-off occurs. If the shoe doesn't bend here, the leg takes the stress.

The bending shouldn't take any unusual effort.

Now slip inside, wearing the socks you use when you run. If you don't use socks, don't wear them. Test the feel and the fit of the shoes—both of

them. Stomp on the heels and soles. Spring off the toes. Jog around the shop if you have the nerve.

The shoes, if they're good ones, should immediately feel comfortable. If they don't feel right in this limited test, think how they'll feel when they start hitting the ground 800 times a mile.

Give special attention to three more areas while you're inside:

**6. Upper**—Wiggle your heels, arches and toes, feeling out irritating breaks or seams in the material. Think of each one as a potential blister.

The upper should be snug from one end to the other, but not overly tight. If you feel cramped, go to a larger size. If you still feel too tight in some places yet too loose in others, go to another model. This one will never fit properly.

Nylon or leather? Both have advantages and disadvantages. Nylon is lighter, softer and washable. But leather is more rugged and offers better support. Good shoes are made of both materials—also bad ones. You have to look at other factors.

**7. Heel**—This can cause trouble in any number of ways, because about 80% of the runner's weight comes down on a few square inches of heel on each step.

"The forward part of the shoe, if ill-fitting," says Des O'Neill, "can be uncomfortable. An ill-fitting or badly designed heel, however, can be downright dangerous due to the loads on the heel, and few shoes are more than barely adequate there."

Look for the following in heels:

- Slightly higher than ball of foot, but not so high that it throws the weight too far forward.
- Wide enough to prevent instability, a rolling motion, on footplant.
- Riding counter on back and sides of upper, to stabilize heel.
- No "bite" into heel bone and achilles tendon at top of heel.

Look for moderate elevation and a feeling of snug stability in the entire heel area.

**8. Arch**—An arch is something like a fingerprint. It's personal. It's doubtful whether the arch supports built into running shoes do much good. Many shoemakers add these supports almost as an afterthought, and many runners immediately rip out the foam rubber cookies.

Des O'Neill says, "They're too light and insubstantial to support anything, and really serve as filler material. You may feel them there, but they aren't doing very much good."

Some runners don't need arch supports. Those who do need them need more than half-measures. A more substantial slip-in support (such as Dr. Scholl's) may do the trick, or perhaps a custom-molded insert from a doctor.

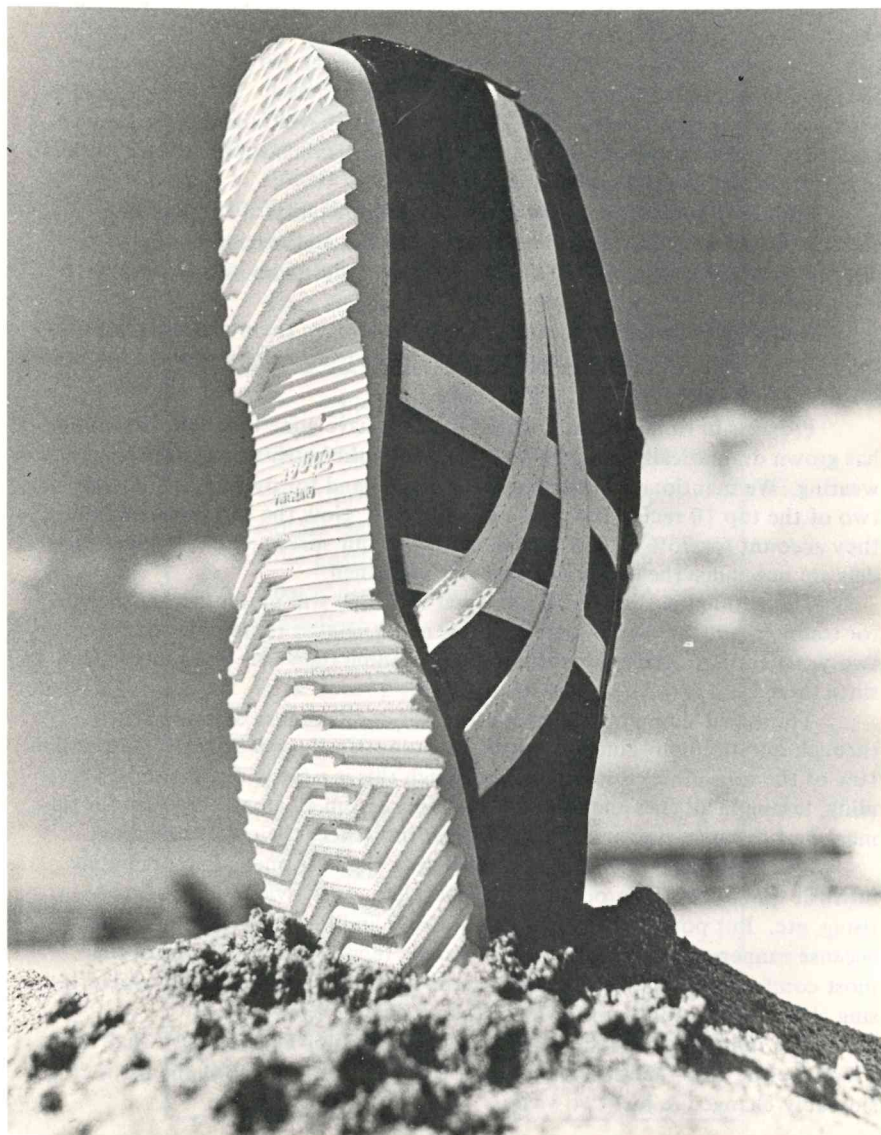
The shoe should have nothing inside that isn't needed, and room for what is.

All this examining takes time, both yours and the shop's. But this isn't an impulse item. If the shoes you finally decide on are good ones, they'll be part of you—the very important part that contacts the ground—for the next million footsteps or so.

## Chapter 2

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# THE FLATS



Stan Pantovic photo

# RUNNING FOR MILEAGE

Training and racing are both harder and easier now that the flat-shoe selection has improved. These shoes have eliminated a lot of the little pains that come with hard training and fast racing.

Aching fatigue can't be eliminated by shoes, but it can be neutralized to some extent by a regular training routine. Aching feet work against that kind of regularity, and many foot miseries can be prevented with proper shoes. These shoes themselves can't make a runner go faster, but they can clear the way for training which allows that.

Improved shoes that blistered less and cushioned better made possible the great increases in training mileage of the '60s and early '70s, which in turn produced better race results. And as more runners have trained more they've created a demand for more comfortable footwear, which suppliers have rushed in to fill. It has worked both ways.

Without a geometric rise in the number and quality of running flats, there probably wouldn't have been the road racing and jogging booms of the last few years. Running on the streets in 1960 model shoes would have been too painful.

And if there hadn't been this rush to the streets, there probably wouldn't have been a Tiger or a Nike company operating successfully in the United States, turning out at least one new model a year.

Progress in running and progress in shoes have gone together. Running has grown dramatically since 1971, and so have the shoes these runners are wearing. We mentioned earlier the growing demand for nylon. In '71, only two of the top 10 racing flats had nylon uppers. Now the top seven do, and they account for 75% of the sales according to our survey. Five of those models are new since the earlier booklet was published.

The 1600-plus runners we surveyed this time still prefer leather shoes for training, but the margin over nylon is much smaller there now than it was two years earlier. And four of the top 10 training flats have been introduced since then.

This latest shoe popularity contest was conducted in March 1973, through questionnaires included with that month's *Runner's World*. More than 10% of the subscribers responded. Although this is a fairly representative sampling, taking in all ages and abilities of runners from all areas, these are for the most part distance runners. This of course influences their shoe selection.

"Most popular" shoes aren't necessarily the best ones. Factors beside intrinsic quality of the product come into play: cost, availability, advertising, etc. But popularity is still a reasonably good gauge of a shoe's worth, because runners whose foot health is at stake tend to gravitate toward the most comfortable models—no matter how expensive or hard to get. Advertising claims can't fool them for more than a mile or two.

The most popular racing and training models of 1971 are still that way. These are the Tiger Marathon and Tiger Cortez. But the rest of the list is considerably changed in just two years.

Each of the models worn by at least 1% of the surveyed runners will be covered separately, along with several other newer types which are just coming into general distribution. (The Adidas Mexicana doesn't have an article because it has been discontinued.)

## FLATS THE RUNNERS WEAR

### RACING FLATS

Brand and Model	% Worn	Details
1. Tiger Marathon	32.3%	41
2. Tiger Boston	12.0%	39
3. Nike Obori	11.9%	35
4. Adidas SL-72	8.3%	26
5. Nike Nylon Cortez	4.3%	34
6. Nike Marathon	4.2%	32
7. Adidas Dragon	2.4%	21
8. Tiger Bangkok	2.3%	38
9. Adidas Gazelle	2.1%	22
10. Nike Leather Cortez	1.5%	32
Tiger Cortez	1.5%	40

### TRAINING FLATS

Brand and Model	% Worn	Details
1. Tiger Cortez	13.5%	40
2. Adidas Gazelle	9.1%	22
Nike Leather Cortez	9.1%	32
4. Nike Nylon Cortez	8.9%	34
5. Tiger Boston	8.0%	39
6. Adidas SL-72	7.2%	26
7. E. B. Sport Lydiard	5.0%	27
8. Adidas Olympia	4.4%	24
9. Tiger Marathon	3.5%	41
10. Nike Obori	2.9%	35
11. New Balance		
Trackster II	2.6%	28
12. Adidas Rom	2.5%	25
13. Tiger Bangkok	1.9%	38
14. Adidas Italia	1.3%	23
15. Adidas Mexicana	1.6%	
Adidas Dragon	1.0%	21
Road King	1.0%	37
18. Tiger Tahoe	1.1%	42

# ADIDAS COUNTRY



**Shoe:** Adidas Country (Model No. 11330)

**Price:** \$18.95 (suggested retail, mid-1973)

**Sizes:** 4-13, one standard width per size

**Use:** primarily training

**Weight:** 11 ounces (one shoe, size 9)

**Sole:** gum-rubber ridged outer sole, wrapping up on rounded heel and toe, harder mid-sole, heel wedge

**Upper:** leather, white with green trim, reinforced toe and heel

**Arch:** removable sponge cushion

**Appraisal:** This new shoe (it came on the US market in 1973) is designed for rough going, such as found in cross-country. The leather upper and much wider-than-normal heel provide more stability than the average shoe. Good potential as a training shoe, but probably a bit too heavy for any serious racing over the country or roads.

**US Distributors:** Clossco Inc., 2200 Martin Ave., P. O. Box 299, Santa Clara, Calif. 95050. Hughesco Inc., 3000 Junius St., P. O. Box 1769, Dallas, Tex. 75221. Libco, 78 Diamond Rd., Springfield, NJ 07081. Vanco, 5133 W. Grand River Ave., P. O. Box 870, Lansing, Mich. 48901.

**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

# ADIDAS DRAGON



**Shoe:** Adidas Dragon (Model 333)

**Price:** \$18.45 (suggested retail, mid-1973)

**Sizes:** 4-15, one standard width per size

**Use:** used more for racing than training among those in our survey, but adaptable to all purposes

**Weight:** 9 ounces (one shoe, size 9)

**Sole:** white rubber ripple outer sole, heel wedge

**Upper:** nylon, blue with white trim, suede leather reinforcing, toe and heel, padded top of heel

**Arch:** removable sponge cushion

**Appraisal:** In many ways, this is a lighter and cheaper version of the number one Adidas nylon shoe—the SL-72. And it is similar to Tiger's popular Boston. The back of the Dragon is lower than the SL, and it has more solid reinforcement than the Boston. These features appeal to many wearers. Critics, though, say it doesn't have the SL's heel height or the Boston's padding under the ball of the foot and width across the toes.

**US Distributors:** Clossco Inc., 2200 Martin Ave., P. O. Box 299, Santa Clara, Calif. 95050. Hughesco Inc., 3000 Junius St., P. O. Box 1769, Dallas, Tex. 75221. Libco, 78 Diamond Rd., Springfield, NJ 07081. Vanco, 5133 W. Grand River Ave., P. O. Box 870, Lansing, Mich. 48901.

**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

# ADIDAS GAZELLE



**Shoe:** Adidas Gazelle (Model No. 311 Red and 321 Blue)

**Price:** \$23.95 (suggested retail, mid-1973)

**Sizes:** 4-13, one standard width per size

**Use:** more for training than racing, according to our survey, though some do race in it

**Weight:** 10 ounces (one shoe, size 9)

**Sole:** White rubber ridged outer sole with harder rubber beneath, all-around rim of rubber foxing

**Upper:** suede, blue or red with white trim, reinforced toe and heel, padded ankle and top of heel (extra-high back)

**Arch:** removable sponge cushion

**Appraisal:** The Gazelle is Adidas' bread-and-butter shoe, both among runners and in the much more lucrative "casual" market. It's good looking, and it's widely available. But those facts don't completely explain why it's the second most popular training shoe behind Tiger's Cortez. The Gazelle is solidly built from toe to heel, has excellent support and adequate cushioning. The only criticism is one that runs through the Adidas line: toes too cramped to suit many runners.

**US Distributors:** Clossco Inc., 2200 Martin Ave., P. O. Box 299, Santa Clara, Calif. 95050. Hughesco Inc., 3000 Junius St., P. O. Box 1769, Dallas, Tex. 75221. Libco, 78 Diamond Rd., Springfield, NJ 07081. Vanco, 5133 W. Grand River Ave., P. O. Box 870, Lansing, Mich. 48901.

**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)



# ADIDAS ITALIA



**Shoe:** Adidas Italia (Model No. 302)

**Price:** \$22.95 (suggested retail, mid-1973)

**Sizes:** 4-13, one standard width per size

**Use:** training, according to our survey

**Weight:** 11¼ ounces (one shoe, size 9)

**Sole:** green rubber ridged outer sole, softer heel wedge, rubber toe cap

**Upper:** leather, white with green trim, padded ankle and top of heel

**Arch:** removable sponge cushion

**Appraisal:** This longtime member of the Adidas family has slipped significantly in popularity among runners in recent years—simply because new models have moved in ahead of it. In 1971, it ranked seventh among shoes sold to active runners. Now it is down to 15th. But its solid heel alone is still a key selling point.

**US Distributors:** Clossco Inc., 2200 Martin Ave., P. O. Box 299, Santa Clara, Calif. 95050. Hughesco Inc., 3000 Junius St., P. O. Box 1769, Dallas, Tex. 75221. Libco, 78 Diamond Rd., Springfield, NJ 07081. Vanco, 5133 W. Grand River Ave., P. O. Box 870, Lansing, Mich. 48901.

**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

# ADIDAS OLYMPIA



**Shoe:** Adidas Olympia (Model No. 301)

**Price:** \$23.95 (suggested retail, mid-1973)

**Sizes:** 4-15

**Use:** training, according to our survey

**Weight:** 13¼ ounces (one shoe, size 9)

**Sole:** gum-rubber ridged outer sole, harder sole beneath, all-around rubber foxing

**Upper:** leather, white with black trim, padded ankle and top of heel (extra-high back)

**Arch:** removable sponge cushion

**Appraisal:** The venerable Olympia has served runners well for years. It was one of Adidas' first good flats. But now it's showing the effects of age and a changing market. In 1971, it ranked second among training shoes, and now it's eighth. Fewer runners are wearing white-leather shoes, and those who do use Tiger or Nike Cortez. Many runners feel \$24 Olympias are no longer worth their weight (13¼ ounces).

**US Distributors:** Clossco Inc., 2200 Martin Ave., P. O. Box 299, Santa Clara, Calif. 95050. Hughesco Inc., 3000 Junius St., P. O. Box 1769, Dallas, Tex. 75221. Libco, 78 Diamond Rd., Springfield, NJ 07081. Vanco, 5133 W. Grand River Ave., P. O. Box 870, Lansing, Mich. 48901.

**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

# ADIDAS ROM



**Shoe:** Adidas Rom (Model 303)

**Price:** \$19.95 (suggested retail, mid-1973)

**Sizes:** 4-15, one standard width per size

**Use:** training, according to our survey

**Weight:** 11 ounces (one shoe, size 9)

**Sole:** white rubber ripple outer sole, heel wedge, rubber toe cap.

**Upper:** leather, white with blue trim, padded ankle and top of heel

**Arch:** removable sponge cushion

**Appraisal:** The relatively low price, combined with the ripple sole (same as the one on the Dragon) are the commendable features of the Rom—German for Rome, as in Italy. Except for the leather upper, this shoe is much like the Dragon described earlier.

**US Distributors:** Clossco Inc., 2200 Martin Ave., P. O. Box 299, Santa Clara, Calif. 95050. Hughesco Inc., 3000 Junius St., P. O. Box 1769, Dallas, Tex. 75221. Libco, 78 Diamond Rd., Springfield, NJ 07081. Vanco, 5133 W. Grand River Ave., P. O. Box 870, Lansing, Mich. 48901.

**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

# ADIDAS SL-72



**Shoe:** Adidas SL-72 (Model No. 347)

**Price:** \$22.95 (suggested retail, mid-1973)

**Sizes:** 4-14, one standard width per size

**Use:** all-purpose, almost an equal percentage use if for racing and training, according to our survey

**Weight:** 9½ ounces (one shoe, size 9)

**Sole:** white rubber ripple outer sole, wrapping up on back of rounded heel, thick black heel lift

**Upper:** nylon, blue with white trim, suede reinforced toe, side and heel, padded ankle and top of heel (extra high back)

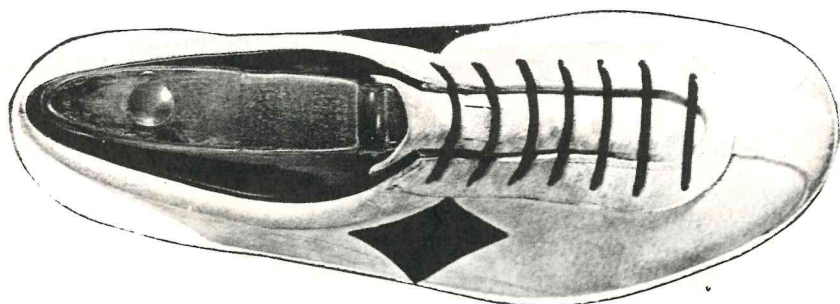
**Arch:** removable sponge cushion

**Appraisal:** Adidas wasn't the first to come out with a nylon upper, but it produced the first light nylon shoe with this much support. No shoe, not even most leather ones, could match the stability of the SL's heel until Puma released its similar 9190. The rounded heel is another Adidas innovation. A number of runners complained, though, that the heel caused them irritation at the top.

**US Distributors:** Clossco Inc., 2200 Martin Ave., P. O. Box 299, Santa Clara, Calif. 95050. Hughesco Inc., 3000 Junius St., P. O. Box 1769, Dallas, Tex. 75221. Libco, 78 Diamond Rd., Springfield, NJ 07081. Vanco, 5133 W. Grand River Ave., P. O. Box 870, Lansing, Mich. 48901.

**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

# E. B. SPORT LYDIARD



**Shoe:** E. B. Sport International Lydiard Road Runner (Model No. 1130)

**Price:** \$20.95 (suggested retail, mid-1973)

**Sizes:** 3-13, one standard width per size

**Use:** training, according to our survey

**Weight:** 11 ounces (one shoe, size 9)

**Sole:** white rubber ridged outer sole, harder sole beneath, all-around rubber foxing

**Upper:** suede, tan with red trim, padded ankle and top of heel, rubber heel reinforcing

**Arch:** built-in support

**Appraisal:** The interior construction of the "Lydiard" is unique. The heel is cupped, the arch is built-in, and there is no insole except under the ball of the foot. The inside conforms to the shape of the foot and gives it balance. This design is the shoe's most popular feature. Runners praise that, but have reservations about the rather bulky and inflexible structure of the outer sole. Also, the supply of these shoes was severely limited in the US when this booklet was published.

**US Distributors:** Starting Line Sports, P. O. Box 366, Mountain View, Calif. 94040. (E. B. shoes generally available only from distributors.)

# TRACKSTER III

## NEW BALANCE



**Shoe:** New Balance Trackster III

**Price:** \$23.75 (suggested retail, mid-1973)

**Sizes:** 4½-13, AA to EEE widths

**Use:** training

**Weight:** 13½ ounces (one shoe, size 9)

**Sole:** black rubber ripple outer sole, softer white heel wedge, all-around rubber foxing

**Upper:** suede, black with red trim

**Arch:** very slight built-in

**Appraisal:** This new model has all the good features of the Trackster II, and some additional ones. Its suede uppers are softer than New Balance's traditional white leather, and ankle-heel padding have been added. However, the extra support pushes the weight up to 13½ ounces, making the "Three" one of the heaviest shoes. Comes with Spenco Insole.

**Manufacturer and Distributor:** New Balance Athletic Shoe Company, 176 Belmont St., Watertown, Mass. 02172. (Contact distributor for information on local outlets; company also offers a resoling service.)

# TRACKSTER III

## NEW BALANCE



**Shoe:** New Balance Trackster III

**Price:** \$23.75 (suggested retail, mid-1973)

**Sizes:** 4½-13, AA to EEE widths

**Use:** training

**Weight:** 13½ ounces (one shoe, size 9)

**Sole:** black rubber ripple outer sole, softer white heel wedge, all-around rubber foxing

**Upper:** suede, black with red trim

**Arch:** very slight built-in

**Appraisal:** This new model has all the good features of the Trackster II, and some additional ones. Its suede uppers are softer than New Balance's traditional white leather, and ankle-heel padding have been added. However, the extra support pushes the weight up to 13½ ounces, making the "Three" one of the heaviest shoes. Comes with Spenco Insole.

**Manufacturer and Distributor:** New Balance Athletic Shoe Company, 176 Belmont St., Watertown, Mass. 02172. (Contact distributor for information on local outlets; company also offers a resoling service.)

# NIKE DELUXE CORTEZ



**Shoe:** Nike Deluxe Cortez

**Price:** \$24.75 (suggested retail, mid-1973)

**Sizes:** 3-13, one standard width per size

**Use:** training

**Weight:** 13½ ounces (one shoe, size 9)

**Sole:** white rubber-ridged outer sole, heel lift and softer mid-sole with padding under ball of foot, rubber toe cap

**Upper:** suede, blue with white trim, high-backed padded heel

**Arch:** removable sponge cushion

**Appraisal:** The Deluxe Cortez has several modifications to the ultra-successful Cortez design. The Deluxe has raised and padded the top of the heel, a "long-wearing" heel plug of hard rubber, and has a reversed leather upper. The shoe is certainly more colorful than the standard white models, but whether runners will pay \$2-5 for them remains to be seen. The model was just coming on the market when our survey occurred.

**US Distributors:** Blue Ribbon Sports Inc., 6175 S.W. 112th Ave., Beaverton, Ore. 97005. (Contact distributor for information on local outlets.)



# NIKE FINLAND/KENYA



**Shoe:** Nike Finland Blue and Kenya Red

**Price:** \$16.95 (suggested retail, mid-1973)

**Sizes:** 3-13, one standard width per size

**Uses:** primarily training, but also light enough for some long racing.

**Weight:** 9¾ ounces (one shoe, size 9)

**Sole:** white rubber ridged outer sole, heel lift and softer midsole with padding under ball of foot (very similar to Cortez sole)

**Upper:** nylon, blue or red with white trim, suede reinforced toe and heel, padded ankle and top of heel

**Arch:** removable sponge cushion

**Appraisal:** The busy shoe developers at Nike know the value of names. "Finland" and "Kenya" have a certain magic to them, even if the shoes have nothing to do with the runners in those countries. These models have similar cushioning to the Cortezes, but much lighter weight and lower pricetags. The drawback, if any, will be the one most nylon training shoes have in common: lack of lateral support and stability in the heel. The new Finland and Kenya are made with Spenco Insoles.

**US Distributor:** Blue Ribbon Sports, Inc., 6175 S.W. 112th Ave., Beaverton, Ore. 97005. (Contact distributor for information on local outlets.)

# NIKE LEATHER CORTEZ



**Shoe:** Nike Leather Cortez

**Price:** \$22.90 (suggested retail, mid-1973)

**Sizes:** 3-13, one standard width per size

**Use:** primarily training, but many runners race in it as well, according to our survey

**Weight:** 13½ ounces (one shoe, size 9)

**Sole:** white rubber ridged outer sole, heel lift and softer mid-sole with padding under ball of foot, rubber toe cap

**Upper:** leather, white with red trim, reinforced heel, heel pull-tab

**Arch:** removable sponge cushion

**Appraisal:** The young leather Cortez already has cut deeply into its Tiger counterpart's lead among training flats. The Tiger Cortez is the only shoe with more wearers among runners we surveyed. The major difference in the two shoes, besides the stripes, is Nike's long-wearing heel plug. A criticism of all the Cortez models—Tiger and Nike—is their relatively inflexible sole, and narrow and unstable heel.

**US Distributor:** Blue Ribbon Sports Inc., 6175 S.W. 112th Ave., Beaverton, Ore. 97005. (Contact distributor for information on local outlets.)

# NIKE MARATHON



**Shoe:** Nike Marathon

**Price:** \$13.85 (suggested retail, mid-1973)

**Sizes:** 3-13, one standard width per size

**Use:** almost exclusively racing, according to our survey

**Weight:** 8¼ ounces (one shoe, size 9)

**Sole:** white rubber ridged outer sole, softer midsole, cutaway (thinner) arch

**Upper:** nylon, blue with white trim, leather heel and toe reinforcing

**Arch:** none on sole of shoe but has an "arch bandage" in the upper

**Appraisal:** The Nike Marathon goes a couple of steps beyond the Tiger version. It has a Spenco insole as standard equipment (yet the price is lower), and it has arch reinforcement sewn into the upper. This is particularly important in the Marathon with its super flexible cutaway sole. Podiatrists say such soles invite arch trouble in susceptible individuals.

**US Distributor:** Blue Ribbon Sports Inc., 6175 S.W. 112th Ave., Beaverton, Ore. 97005. (Contact distributor for information on local outlets.)

# NIKE NYLON CORTEZ



**Shoe:** Nike Nylon Cortez

**Price:** \$19.25 (suggested retail, mid-1973)

**Sizes:** 3-13, one standard width per size

**Use:** all-purpose, about an equal percentage using it for racing and training

**Weight:** 12½ ounces (one shoe, size 9)

**Sole:** white rubber ridged outer sole, heel lift and softer mid-sole with padding under ball of foot, rubber toe cap, "long-wearing" heel plug

**Upper:** nylon, blue with white trim, suede reinforced toe and heel, pull-tab on heel

**Arch:** removable sponge cushion

**Appraisal:** Surprisingly, a greater percentage of runners use this shoe for racing than training—this despite the fact that it weighs three-quarters of a pound per shoe. It must be comfortable and *seem* light. However comfortable and light, the nylon upper apparently compounds any instability of the heel. There's a greater tendency to roll to the sides than with leather models. Many runners reported that their Nylon Cortez uppers came unglued from the sole after limited wear. But the manufacturer says this problem now has been corrected.

**US Distributor:** Blue Ribbon Sports, 6175 S.W. 112th Ave., Beaverton, Ore. 97005. (Contact distributor for information on local outlets.)

# NIKE OBORI



**Shoe:** Nike Obori

**Price:** \$18.20 (suggested retail, mid-1973)

**Sizes:** 3-13, one standard width per size

**Use:** primarily racing, but also a significant amount of training, according to our survey

**Weight:** 9 ounces (one shoe, size 9)

**Sole:** gum-rubber ridged outer sole, wrapping up around toe and rounded heel, midsole and heel wedge

**Upper:** nylon or suede, blue with white trim, suede reinforced heel, padded on top of heel

**Arch:** built-in

**Appraisal:** It's the fastest-rising shoe on the market. It only became available in late 1972, yet six months later it had cornered almost 12% of the racing market. Selling points include: built-in arch support under a Spenco insole, no seams across toes, good cushioning. Negative comment most often voiced: quick wear through outer gum-rubber sole.

**US Distributor:** Blue Ribbon Sports Inc., 6175 S.W. 112th Ave., Beaverton, Ore. 97005. (Contact distributor for information on local outlets.)

# PUMA 9190



**Shoe:** Super Long Distance Training Shoe (Model No. 9190)

**Price:** Puma lets dealers set prices, but they generally range from \$22-25 for this model

**Sizes:** 6-13, one standard width per size

**Use:** primarily training

**Weight:** 11½ ounces (one shoe, size 9)

**Sole:** yellow rubber ridged outer sole, wrapping up on rounded heel, softer midsole and thick heel wedge

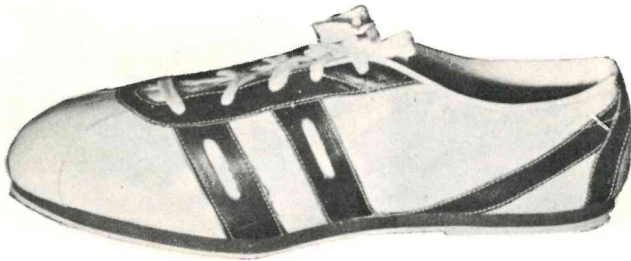
**Upper:** nylon, blue with white trim, suede reinforced toe and heel, padded ankle and solid high-backed heel

**Arch:** removable sponge cushion

**Appraisal:** Puma, big as it is in sprinter and field eventer shoes, has never set the road afire in running flats. In 1971, none of its models were worn by more than 0.4% of the runners surveyed. The 9190 could change all that. It's built along the lines of Adidas' SL-72—only better in many wearers' estimation. It is more roomy in the toes and is at least equal in cushioning and heel support. However, the new Puma is two ounces heavier per shoe.

**US Distributors:** Sports Beconta Inc. 50 Executive Blvd., Elmsford, NY 10523. Sports Beconta Inc., 91 Park Lane, Brisbane, Calif. 94005. (Contact distributors for information on local outlets.)

# ROAD KING



**Shoe:** Road King

**Price:** \$16.90 (suggested retail, mid-1973)

**Sizes:** 4-13½, one standard width per shoe

**Use:** primarily training, according to our survey

**Weight:** 10½ ounces (one shoe, size 9)

**Sole:** gum-rubber outer sole, soft full-length mid-sole, slightly elevated heel

**Upper:** leather, white with black trim, reinforced toe and heel, padded ankle and top of heel

**Appraisal:** Like the New Balance, Road King profited greatly from the dollar's devaluation abroad. Prices are now lower than most imported models. Road King is a US-made shoe, the only one besides New Balance with a significant share of sales. Its full-length spongy mid-sole offers good cushioning (much like the Tiger Boston), but a major criticism of the Road King is its low heel. Unlike the comparable Tiger Boston, the Road King has no heel wedge.

**Manufacturer and Distributor:** Friberg Enterprises, 9433 Alto Dr., La Mesa, Calif. 94005. (Most shoes sold directly through manufacturer-distributor. Company offers replaceable soles. Also available from Road King are similar brown suede shoes, and a new model called the "Olympic Shoe.")

# TIGER BANGKOK



**Shoe:** Tiger Bangkok (Model No. T-21)

**Price:** \$18.95 (suggested retail, mid-1973)

**Sizes:** 3-13, one standard width per size

**Use:** more racing than training, according to our survey

**Weight:** 9¾ ounces (one shoe, size 9)

**Sole:** white rubber ridged outer sole, padding under heel and ball of foot, thinner at arch than ball and heel

**Upper:** suede, blue with white trim, reinforced heel

**Arch:** none

**Appraisal:** The Bangkok's main distinction is being the leading non-nylon racing flat. It's an old standby in the Tiger line, and is still preferred by a large number of runners. It obviously has value. But two faults have been pointed out: non-flat sole which has a tendency to "collapse" at the arch, heel without a solid counter.

**US Distributors:** Pete Buckley & Co., 440 Armour Pl. N.E., Box 13875, Atlanta, Ga. 30324. Curley-Bates Co., 860 Stanton Rd., Burlingame, Calif. 94010. George A. Davis Inc., 7205 Hibbs Ln., Levittown, Pa. 19057. Demco, 5121 N. Ravenswood Ave., Chicago, IL 60640. Olympic Sports, 2607 National Circle, Garland, Tex. 75041. Universal Resilite, 43 Polk Ave., Hempstead, N.Y. 11550. (Contact nearest distributor for information on local outlets.)



# TIGER BOSTON



**Shoe:** Tiger Boston (Model No. T-26)

**Price:** \$17.95 (suggested retail, mid-1973)

**Sizes:** 3-13, one standard width per size

**Use:** racing and training in that order, according to our survey

**Weight:** 9½ ounces (one shoe, size 9)

**Sole:** white ridged rubber outer sole, softer full-length mid-sole, heel wedge

**Upper:** nylon, blue with white trim, suede reinforced toe and heel

**Arch:** removable sponge cushion

**Appraisal:** The leading all-purpose shoe to date, ranking second in racing and fifth in training. The Adidas SL-72, a comparable shoe in both style and weight (but not in price) is the only one close. The Boston's upper is identical to the Tiger Marathon's, but the flat bottom offers far superior cushioning properties.

**US Distributors:** Pete Buckley & Co., 440 Armour Pl. N.E., Box 13875, Atlanta, Ga. 30324. Curley-Bates Co., 860 Stanton Rd., Burlingame, Calif. 94010. George A. Davis Inc., 7205 Hibbs Ln., Levittown, Pa. 19057. Demco, 5121 N. Ravenswood Ave., Chicago, Ill. 60640. Olympic Sports, 2607 National Circle, Garland, Tex. 75041. Universal Resilite, 43 Polk Ave., Hempstead, N.Y. 11550. (Contact nearest distributor for information on local outlets.)

# TIGER CORTEZ



**Shoe:** Tiger Cortez (Model No. T-24)

**Price:** \$20.95 (suggested retail, mid-1973)

**Sizes:** 3-13, one standard width per size)

**Use:** primarily training, but a significant number race in it too, according to our survey

**Weight:** 13½ ounces (one shoe, size 9)

**Sole:** white rubber ridged outer sole, heel lift and softer mid-sole with padding under ball of foot, rubber toe cap

**Upper:** leather, white with blue and red trim, reinforced heel, pull-tab heel

**Arch:** removable sponge cushion

**Appraisal:** It's hard to criticize success, and the Cortez has had plenty of that. This, along with the Marathon, is the shoe that made Tiger. The Cortez is still the leader among training flats (though not by as much since Nike threw in three Cortez competitors of its own). It is a good, solid, no-nonsense flat that relies on its cushioning for sales.

**US Distributors:** Pete Buckley & Co., 440 Armour Pl. N.E., Box 13875, Atlanta, Ga. 30324. Curley-Bates Co., 860 Stanton Rd., Burlingame, Calif. 94010. George A. Davis Inc., 7205 Hibbs Ln., Levittown, Pa. 19057. Demco, 5121 N. Ravenswood Ave., Chicago, Ill. 60640. Olympic Sports, 2607 National Circle, Garland, Tex. 75041. Universal Resilite, 43 Polk Ave., Hempstead, N.Y. 11550. (Contact nearest distributor for information on local outlets.)

# TIGER MARATHON



**Shoe:** Tiger Marathon (Model No. G-9)

**Price:** \$14.95 (suggested retail, mid-1973)

**Sizes:** 3-13, one standard width per size

**Use:** primarily racing, but a significant number also train in it, according to our survey

**Weight:** 7¼ ounces (one shoe, size 9)

**Sole:** white rubber ridged outer sole, full-length soft midsole, sole thinnest at arch

**Upper:** nylon, blue with white trim, suede reinforced toe and heel

**Arch:** none

**Appraisal:** Tiger's Marathon is so far ahead of the competition that it can coast on its reputation. One runner in three races in the shoe which perhaps is badly named. Those who use it find it's more satisfactory for cross-country and for short road racing than for the full-length marathon. The pounding there is sometimes too much for this next-to-nothing shoe (no arch support, no insole, cutaway "collapsible" sole) to handle.

**US Distributors:** Pete Buckley & Co., 440 Armour Pl., N.E., Box 13875, Atlanta, Ga. 30324. Curley-Bates Co., 860 Stanton Rd., Burlingame, Calif. 94010. George A. Davis Inc., 7205 Hibbs Ln., Levittown, Pa. 19057. Demco, 5121 N. Ravenswood Ave., Chicago, Ill. 60640. Olympic Sports, 2607 National Circle, Garland, Tex. 75041. Universal Resilite, 43 Polk Ave., Hempstead, N.Y. 11550. (Contact nearest distributor for information on local outlets.)

# TIGER TAHOE



**Shoe:** Tiger Tahoe (Model No. T-4)

**Price:** \$21.95 (suggested retail, mid-1973)

**Sizes:** 3-13, one standard width per size

**Use:** primarily training, according to our survey

**Weight:** 12 ounces (one shoe, size 9)

**Sole:** white rubber ridged outer sole, all-around rubber foxing

**Upper:** suede, blue with white trim, reinforced toe and heel, pull-tab on heel, padded ankle

**Arch:** removable sponge cushion

**Appraisal:** The Tahoe represented a radical departure from Tiger tradition when it came out in the late 1960s. With its more solid construction, padded ankle and foxed sole, it was intended as a challenger to the Adidas Gazelle—both in the running and casual market. It has only been modestly successful.

**US Distributors:** Pete Buckley & Co., 440 Armour Pl. N.E., Box 13875, Atlanta, Ga. 30324. Curley-Bates Co., 860 Stanton Rd., Burlingame, Calif. 94010. George A. Davis, Inc., 7205 Hibbs Ln., Levittown, Pa. 19057. Demco, 5121 N. Ravenswood Ave., Chicago, Ill. 60640. Olympic Sports, 2607 National Circle, Garland, Tex. 75041. Universal Resilite, 43 Polk Ave., Hempstead, N.Y. 11550. (Contact nearest distributor for information on local outlets.)

# COMPARISON OF MAJOR MODELS

Brand & Model (Model No.)	Uses (1)	Price (2)	Weight (3)	Sole	Upper
Adidas Dragon (333)	Racing	\$18.45	9 oz.	Deep-ripple	Blue nylon
Adidas Gazelle (311/321)	Training	\$23.95	10 oz.	Ridged, foxed	Blue/red suede
Adidas Italia (302)	Training	\$22.95	11½ oz.	Ridged	White leather
Adidas Mexicana (322)	Training	Discont.	10 oz.	Ridged, foxed	Gold suede
Adidas Olympia (301)	Training	\$23.95	13¼ oz.	Ridged, foxed	White leather
Adidas Rom (303)	Training	\$19.95	11 oz.	Deep-ripple	White leather
Adidas SL-72 (347)	Racing	\$22.95	9½ oz.	Deep-ripple	Blue nylon
E. B. Lydiard (1130)	Training	\$20.95	11 oz.	Ridged, foxed	Tan suede
New Balance Trackster II	Training	\$17.95	11¼ oz.	Deep-ripple	White leather
Nike Leather Cortez	Training	\$22.90	13½ oz.	Ridged	White leather
Nike Nylon Cortez	Training	\$19.25	12¼ oz.	Ridged	Blue nylon
Nike Marathon	Racing	\$13.85	8¼ oz.	Ridged	Blue nylon
Nike Obori	Racing	\$18.20	9 oz.	Ridged	Blue nylon
Road King	Training	\$16.90	10½ oz.	Ridged	White leather
Tiger Bangkok (21)	Racing	\$18.95	9¼ oz.	Ridged	Blue suede
Tiger Boston (26)	Racing	\$17.95	9½ oz.	Ridged	Blue nylon
Tiger Cortez (24)	Training	\$20.95	13½ oz.	Ridged	White leather
Tiger Marathon (9)	Racing	\$14.95	7¼ oz.	Ridged	Blue nylon
Tiger Tahoe (4)	Training	\$21.95	12 oz.	Ridged, foxed	Red/blue suede

(1) Most common uses according to March 1973 runner survey, though many of the models are all-purpose;

(2) Prices as of June 1, 1973; (3) Weights of one shoe, men's size 9.

# SHOES FOR RACE WALKS

Walkers are hardly keeping pace with runners as far as development of new shoes is concerned. The few models made specifically for walkers are hard to get, and the running shoes they're forced to use are generally unacceptable for heel-and-toe action.

Jack Mortland wrote in the 1971 shoe booklet, "The Adidas is presently the most popular among walkers in this country, and probably throughout the world. They are seen quite frequently on East German and Russians these days (political considerations being put aside) and the Englishmen also appear to be going in this direction."

Mortland, a veteran competitor and editor of *Ohio Race Walker* magazine, said then that Adidas' Model 709—the Walking Special—was the most popular shoe among walkers. It still is. Adidas has its monopoly on the market by default. Few other companies have promoted a good walking shoe.

Manny Adriano, a national junior champion walker, manages an athletic shoe shop in California. He says, "Most walkers are wearing Adidas because they're easy to get. They're about the only available ones for walkers."

Adriano's company sells several major brands of shoes, so he owes no special allegiance to Adidas. But he recommends the German manufacturer's Walking Specials. He says support in the heel is the most important feature in a walking shoe, and the Model 709 is one of the few that offers enough.

Walkers come down on the back of the heel with even more force than runners (more of the running shock is taken up by the ball of the foot; the landing is flatter). Walkers, then, need a heel that will stand up to this slamming action. Support from the rubber and support around the back are essential.

Adriano says, "I don't recommend Tigers for walking because they can rip you up in the heels. They're not well enough supported for walking." Yet he doesn't think well-supported running shoes such as the Adidas SL-72 and Puma 9190 are the answer either. He says their heels are too high, giving walkers the feeling they're falling off a ledge when they plant their feet.

A good shoe, walkers say, has a rather low yet solid heel. Preferably it would be angled somewhat, so they don't have to come down on a sharp angle.

Adidas' 709 (see accompanying analysis) fits most of these needs, but an improved version of the shoe appears even better. It's the 709-1, and wasn't yet available in the United States when this booklet was published. It is more than three ounces per shoe lighter than the current walking special. At 7¼ ounces, it's the same as the Tiger Marathon. The uppers are blue suede, dotted with ventilation holes, and there are no seams across the toe. It has a black sole ("Harder for the judges to see," says Adriano), with a 45-degree angle at the heel.

Puma released an almost identical shoe in 1973. The Model 250 has a red suede upper and the Puma stripe, but otherwise is almost a twin brother to Adidas' top walking flat.

# WALKING SPECIAL

## ADIDAS



**Shoe:** Adidas Walking Special (Model No. 709)

**Price:** \$28.95 (suggested retail, mid-1973)

**Sizes:** 6-13, one standard width per size

**Use:** all-purpose walking

**Weight:** 10½ ounces (one shoe, size 9)

**Sole:** white rubber ridged sole, somewhat softer than a running shoe sole

**Upper:** suede, blue with white trim, reinforced toe and heel, padded ankle and top of heel (pull-tab in older versions)

**Arch:** removable sponge cushion

**Appraisal:** As mentioned in the previous story, this may not be the best of all possible walking shoes but it's one of the few in circulation. It has the feature walkers need: a substantial and not-too-high heel.

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**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

## Chapter 3

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# THE SPIKES



All-weather tracks have changed spikes dramatically. The spikes themselves have almost disappeared, as on these Pumas. But the padding has become more important. (Tony Duffy photo)



# RUNNING FOR SPEED

Spikes are for speed on the track. And through most of their history spiked shoes had been designed for the speediest runners and the softest tracks. These shoes were made to grip loose cinders or dirt. The cushioning and durability of distance flats weren't considerations.

The runners who used spikes looked for the closest thing to nothingness, and paid more for less weight. Then as now, feather-weight spiked shoes which would be lucky to hold up for a hundred miles cost more than flats that weigh twice as much and would wear at least 10 times as long. (The most expensive spike here lists for \$34, while the top flat is \$24.)

But some of the same forces that have changed flats are changing spikes as well. Distance runners, different surfaces and nylon are three of those forces.

Spikes have been made for sprinters who run on their toes. No one beyond a quarter-miler does that. The shoes have been lower in the toe than in the heel since sprinters rarely need heels anyway. Most shoes have sponge cushions in the heels, but little else.

Middle and long distance runners have two things going against them when they use these no-heeled shoes: (1) they've done much of their training in heeled flats, and (2) they come down on their heels when racing, giving the achilles tendons and calves an extra stretch at a time when they can least afford it.

Spikes are still far from adequate for distance runners, but they're improving. Several models now give extra rigidity and padding around the upper part of the heel bone. Heels, though, are still a problem. Two Adidas models and one Puma are the only major ones to apply a solid flat-type heel lift. The Adidas and Puma Interval shoes, which have been available for years, have this heel. So does the new Adidas Racer. They are all rather heavy as spikes go, but they are as light as the Tiger Marathon, the lightest flat.

When long distance runners headed for the roads, they needed special shoes for it. The same has happened with trackmen who now run on solid and consistent all-weather tracks such as Tartan. Special shoes have been designed for this.

Several years ago, Puma developed a shoe called the Brush. Instead of the traditional four or six spikes, it had dozens of tiny pin-point spikes. The shoe was effective on Tartan—so effective that John Carlos set a world 200-meter record in it. But international officials banned the Brush as "dangerous." They said the pin-points gripped the track too well and could cause injury.

Descendants of the Brush include Puma's Claw, which has a dozen finger-nail-like grippers instead of spikes. Adidas' three most recent spikes—the Spider, Racer and Sprint—all have gripper-type bottoms in addition to spikes, specifically for all-weather tracks. These harder tracks also accentuate the need for more substantial heels, which many companies are providing.

Nylon was Tiger's contribution in flats, and the Japanese manufacturer first added spikes to a nylon upper, too. The Olympiad was for many years the only nylon model, but now Adidas has joined the race with its Sprint. More are bound to follow because of nylon's lower cost and lightness.

Each of the models worn by 1% or more of the surveyed runners will be covered separately, along with several other newer types which are just coming onto the market. (The Adidas Azteca Gold and Melbourne don't have articles because the models have been discontinued.)

## SPIKES THE RUNNERS WEAR

<b>RACING SPIKES</b>		
<b>Brand and Model</b>	<b>% Worn</b>	<b>Details</b>
1. Adidas Tokyo	30.5%	58
2. Tiger Olympiad	10.9%	64
3. Adidas Titan	9.0%	57
4. Adidas Meteor	8.7%	52
5. Adidas Saturn	5.4%	55
6. Adidas Interval	5.0%	51
7. Puma Wonder Shoe	4.3%	62
8. Adidas 9.9	3.3%	53
9. Adidas Azteca Gold	1.8%	
Adidas Comet	1.8%	50
11. Adidas Avanti	1.4%	49
12. Tiger Helsinki	1.3%	63

<b>TRAINING SPIKES</b>		
<b>Brand and Model</b>	<b>% Worn</b>	<b>Details</b>
1. Adidas Interval	21.9%	51
2. Adidas Tokyo	16.3%	58
3. Adidas Meteor	11.9%	52
4. Adidas Titan	5.2%	57
Tiger Olympiad	5.2%	64
5. Adidas Saturn	4.4%	55
6. Adidas Comet	3.3%	50
7. Puma Collegiate	3.0%	60
8. Adidas Avanti	1.8%	49
Puma Interval	1.8%	61
Tiger Helsinki	1.8%	63
11. Adidas Melbourne	1.5%	
Adidas Racer	1.5%	54

# ADIDAS AVANTI



**Shoe:** Adidas Avanti (Model No. 113060)

**Price:** \$11.95 (suggested retail, mid-1973)

**Sizes:** 4-13, one standard width per size

**Use:** racing and training in that order according to our survey

**Weight:** 6 ounces, (one shoe, size 9)

**Spikes:** four

**Sole:** plastic spike plate, ball to heel rubber, slight heel padding

**Upper:** leather, blue with white trim, reinforced heel

**Appraisal:** Quite frankly, one reason the Avanti is so popular is the price. It costs less than half as much as other leading types of spikes, and is a particularly good choice for those training on the track and those who race there infrequently or casually. It does not have a suede top, so tends to be more rigid than most Adidas styles.

**US Distributors:** Clossco Inc., 2200 Martin Ave., P. O. Box 299, Santa Clara, Calif. 95050. Hughesco, Inc., 3000 Junius St., P. O. Box 1769, Dallas, Tex. 75221. Libco, 78 Diamond Rd., Springfield, NJ 07081. Vanco, 5133 W. Grand River Ave., P. O. Box 870, Lansing, Mich. 48901.

**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

# ADIDAS COMET



**Shoe:** Adidas Comet (Model No. 505)

**Price:** \$18.45 (suggested retail, mid-1973)

**Sizes:** 4-14, one standard width per size

**Use:** training and racing, in that order, according to our survey

**Weight:** 7 ounces (one shoe, size 9)

**Spikes:** four

**Sole:** plastic spike plate, ball to heel rubber, slight heel padding

**Upper:** leather, white with blue trim, reinforced heel

**Appraisal:** The Comet is the next step up from the Avanti, and is favored for training because it combines reasonable cost with durability. Again, because the uppers are standard leather, the shoe lacks the "glovelike fit" of suede styles.

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**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

# ADIDAS INTERVAL



**Shoe:** Adidas Interval (Model No. 506)

**Price:** \$23.95 (suggested retail, mid-1973)

**Sizes:** 6-14, one standard width per size

**Use:** primarily training, but a significant number also race in it, according to our survey

**Weight:** 7½ ounces (one shoe, size 9)

**Spikes:** four

**Sole:** plastic spike plate, solid rubber heel lift ball to heel

**Upper:** leather, white with blue and red trim, reinforced heel, the toe area and padded, high-backed heel (pull-tab on older versions)

**Appraisal:** Ah, the answer to the trainer's and the distance racer's prayers. A spiked shoe with a heel to take the strain and the pounding off his feet and legs. The Interval was the first major company to provide this relief. Not surprisingly, it's the leading training model.

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**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

# ADIDAS METEOR



**Shoe:** Adidas Meteor (Model No. 503)

**Price:** \$25.95 (suggested retail, mid-1973)

**Sizes:** 4-14, one standard width per size

**Use:** training and racing, in that order, according to our survey

**Weight:** 6½ ounces (one shoe, size 9)

**Spikes:** four

**Sole:** plastic spike plate, ball to heel rubber, slight heel padding

**Upper:** leather, white with black trim, reinforced little toe area and heel, pull-tab on back

**Appraisal:** Along with the Titan and Tokyo, this is one of Adidas' Big Three in spikes. The Meteor is a useful all-purpose shoe, ranking third among trainers and fourth among racers. The Meteor's thin-leather upper gives it a closer and more comfortable fit than cheaper models have.

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**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview, 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

# ADIDAS 9.9



**Shoe:** Adidas 9.9 (Model No. 502)

**Price:** \$29.95 (suggested retail, mid-1973)

**Sizes:** 5-14, one standard width per size

**Use:** almost exclusively racing, according to our survey

**Weight:** 5 ounces (one shoe, size 9)

**Spikes:** four

**Sole:** plastic spike plate, suede and sponge padding from ball to heel, slightly more sponge in heel

**Upper:** leather, white with blue trim, reinforced little toe area, padded high-backed heel

**Appraisal:** Nine-nine is a 100-meter time, which tells the purpose of this shoe. It's for sprinting. It's extremely light (the lightest shoe in this book, at five ounces) but lacks the durability for prolonged use. The uppers are very thin leather. This model reportedly was about to be discontinued in mid-1973.

**US Distributors:** Clossco Inc., 2200 Martin Ave., P. O. Box 299, Santa Clara, Calif. 95050. Hughesco Inc., 3000 Junius St., P. O. Box 1769, Dallas, Tex. 75221. Libco, 78 Diamond Rd., Springfield, NJ 07081. Vanco, 5133 W. Grand River Ave., P. O. Box 870, Lansing, Mich. 48901.

**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

# ADIDAS RACER



**Shoe:** Adidas Racer (also called "Special"; Model No. 509)

**Price:** \$34.95 (suggested retail, mid-1973)

**Sizes:** 6-13, one standard width per size

**Use:** racing and training on synthetic tracks:

**Weight:** not available

**Spikes:** seven

**Sole:** ridged plastic spike plate, rubber lift from ball to heel

**Upper:** suede, green with black trim, or black with red trim, reinforced heel and little toe area, extra-high padded top of heel

**Appraisal:** The shoe was released shortly before the Munich Olympics, and has just hit the US market. Its purpose is quite specific: Tartan and similar surfaces. Other tracks reportedly have a tendency to chew up the sole. That sole on this colorful model appears to offer more support than any other type of racing spike, and may be ideal for track distance runners.

**US Distributors:** Clossco Inc., 2200 Martin Ave., P. O. Box 299, Santa Clara, Calif. 95050. Hughesco Inc., 3000 Junius St., P. O. Box 1769, Dallas, Tex. 75221. Libco, 78 Diamond Rd., Springfield, NJ 07081. Vanco, 5133 W. Grand River Ave., P. O. Box 870, Lansing, Mich. 48901.

**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)



# ADIDAS SATURN



**Shoe:** Adidas Saturn (Model No. 504)

**Price:** \$21.95 (suggested retail, mid-1973)

**Sizes:** 4-14, one standard width per size

**Use:** racing and training, in that order according to our survey

**Weight:** 6½ ounces (one shoe, size 9)

**Spikes:** four

**Sole:** plastic spike plate, ball to heel rubber, padded heel

**Upper:** suede, red with white trim, reinforced heel, extra-high padded top of heel

**Appraisal:** The Saturn is the economy model of the Adidas suede shoes. It's the next thing to the popular Titan, only for all types of tracks and at a price of \$10 lower. Because it is more adaptable and cheaper than the Titan, and yet has similar comfort features, the Saturn works well for either racing or training.

**US Distributors:** Clossco Inc., 2200 Martin Ave., P. O. Box 299, Santa Clara, Calif. 95050. Hughesco Inc., 3000 Junius St., P. O. Box 1769, Dallas, Tex. 75221. Libco, 78 Diamond Rd., Springfield, NJ 07081. Vanco, 5133 W. Grand River Ave., P. O. Box 870, Lansing, Mich. 48901.

**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

# ADIDAS SPRINT



**Shoe:** Adidas Sprint (Model No. 510)

**Price:** \$31.95 (suggested retail, mid-1973)

**Sizes:** 6-13, one standard width per size

**Use:** racing and training on all-weather tracks

**Weight:** not available

**Spikes:** seven

**Sole:** ridged plastic spike plate, wrap-around rubber from ball to heel, padded heel

**Upper:** nylon, blue with white trim, suede reinforced heel and toe, padded extra-high top of heel

**Appraisal:** Adidas joined the nylon race with this shoe. A fine one it is, but the company hurt itself by designing it only for synthetic tracks. This is the kind of shoe which should be made for all purposes and, if possible, at lower cost. Thirty-two dollars for limited useage is the only apparent drawback of the recently released Sprint.

**US Distributors:** Clossco Inc., 2200 Martin Ave., P. O. Box 299, Santa Clara, CA 95050. Hughesco Inc., 3000 Junius St., P. O. Box 1769, Dallas, Tex. 75221. Libco, 78 Diamond Rd., Springfield, NJ 07081. Vanco, 5133 W. Grand River Ave., P. O. Box 870, Lansing, Mich. 48901.

**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

# ADIDAS TITAN



**Shoe:** Adidas Titan (Model No. 551)

**Price:** \$31.95 (suggested retail, mid-1973)

**Sizes:** 6-13, one standard width per size

**Use:** racing and training in that order, according to our survey

**Weight:** not available

**Spikes:** six

**Sole:** wrap-around blue rubber "suction-cup" material on entire sole, padded heel

**Upper:** suede, red with white trim, reinforced heel, padded extra-high top of heel

**Appraisal:** The bottom construction of the Titan, again, is aimed at modern track surfaces. The wrap-around rubber coating on the entire bottom gives a wonderful feeling over Tartan, but it's questionable how well it will hold up over rough dirt or cinders—still the common ground for most runners. Yet the Titan's rankings—third among racers and fourth in training—speak for themselves.

**US Distributors:** Clossco Inc., 2200 Martin Ave., P. O. Box 299, Santa Clara, Calif. 95050. Hughesco, Inc., 300 Junius St., P. O. Box 1769, Dallas, Tex. 75221. Libco, 78 Diamond Rd., Springfield, NJ 07081. Vanco, 5133 W. Grand River Ave., P. O. Box 870, Lansing, Mich. 48901.

**Canadian Distributors:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

# ADIDAS TOKYO



**Shoe:** Adidas Tokyo (Model No. 501)

**Price:** \$30.95 (suggested retail, mid-1973)

**Sizes:** 4-14, one standard width per size

**Use:** racing and training, in that order, according to our survey

**Weight:** 6 ounces (one shoe, size 9)

**Spikes:** four

**Sole:** plastic spike plate, wrap-around rubber from ball to heel, extra-high padded top of heel (or pull-tab on older versions)

**Upper:** suede, blue with white trim, reinforced heel, padded extra-high top of heel

**Appraisal:** For nearly 10 years now, ever since the shoe was designed before the 1964 Olympics, the Tokyo has been Adidas' spike leader. Among our sample of runners, it is the favorite racing shoe by nearly a three to one margin and is a strong second for training. It's the king, and we find it hard to criticize royalty.

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**Canadian Distributor:** Adidas Canada Ltd., 550 Oakdale Rd., Downsview 479, Toronto, Ontario. (Contact nearest distributor for information on local outlets.)

# PUMA CLAW



**Shoe:** Puma Claw (Model No. 289)

**Price:** individual Puma dealers set their own prices

**Sizes:** 6-13, one standard width per size

**Use:** racing on synthetic tracks

**Weight:** not available

**Spikes:** 12 plastic "claws"

**Sole:** rubber from ball to heel, padded heel

**Upper:** suede, red with white trim, rubber reinforcing at little toe area, reinforced heel, high-topped padded back

**Appraisal:** Puma took the bold step away from spikes by introducing its Claw. It has a dozen plastic ridges, sort of like fingernails, rising out of what normally would be a spike plate. The Puma people say spikes do their job too well on surfaces such as Tartan. They dig into the track full length and hold so well that there's no "give." The Claws don't grab so tightly.

**US Distributors:** Sports Beconta Inc., 50 Executive Blvd., Elmsford, NY 10523. Sports Beconta Inc., 91 Park Lane, Brisbane, Calif. 94005. (Contact nearest distributor for information on local outlets.)

# PUMA COLLEGIATE



**Shoe:** Puma Collegiate (Model No. 225)

**Price:** individual Puma dealers set their own prices

**Sizes:** 6-13, one standard width per size

**Use:** primarily training, according to our survey

**Weight:** not available

**Spikes:** four

**Sole:** rubber from ball to heel, slight padding in heel

**Upper:** leather, white with blue trim, reinforced heel and little toe area, high-topped padded heel

**Appraisal:** The sturdy Collegiate is Puma's leading training model among the runners we polled. It held the same position in 1971. The major improvement since then has been the addition of the high-topped padded heel. This is one of Puma's lower-cost quality shoes, and it adapts to all purposes.

**US Distributors:** Sports Beconta Inc., 50 Executive Blvd., Elmsford, NY 10523. Sports Beconta Inc., 91 Park Lane, Brisbane, Calif. 94005. (Contact nearest distributor for information on local outlets.)

# PUMA INTERVAL



**Shoe:** Puma Interval (Model No. 248)

**Price:** individual Puma dealers set their own prices

**Sizes:** 6-13, one standard width per size

**Use:** almost exclusively training, according to our survey

**Weight:** not available

**Spikes:** four

**Sole:** thin outer sole, solid two-layer lift from ball to heel, with heel rounded in back

**Upper:** leather, white, reinforced at little toe area and heel, high-topped padded back

**Appraisal:** Though not nearly so popular, the Puma Interval is comparable in every way to the Adidas by the same name. If anything, the Puma may be more substantial in the heel. It is ideal for track training, but because of the thick heel is probably too heavy for any serious racing. Recommended for runners with foot and lower leg troubles.

**US Distributors:** Sports Beconta Inc., 50 Executive Blvd., Elmsford, NY 10523. Sports Beconta Inc., 91 Park Lane, Brisbane, Calif. 94005. (Contact nearest distributor for information on local outlets.)

# PUMA WONDER SHOE



**Shoe:** Puma Wonder Shoe (Model No. 292)

**Price:** individual Puma dealers set their own prices

**Sizes:** 6-13, one standard width per size

**Use:** primarily racing

**Weight:** not available

**Spikes:** four

**Sole:** rubber from ball to heel, padded heel, sole wrapping around to reinforce heel and little toe area

**Upper:** suede, red with white trim, reinforced heel, pull-tab at top of heel

**Appraisal:** Anyone who has ever had a shoe come untied at a crucial point in a race will appreciate Puma's innovation. Instead of shoestrings, the Wonder Shoe has Velcro fasteners. This is Puma's top-of-the-line, and is quite light despite its rather bulky appearance. Briefly, it also came with dozens of pin-spikes for all-weather tracks. But the International Amateur Athletic Federation never approved the shoe for competition.

**US Distributors:** Sports Beconta Inc., 50 Executive Blvd., Elmsford, NY 10523. Sports Beconta Inc., 91 Park Lane, Brisbane, Calif. 94005. (Contact nearest distributor for information on local outlets.)



# TIGER HELSINKI



**Shoe:** Tiger Helsinki (Model No. G-30)

**Price:** \$20.95 (suggested retail, mid-1973)

**Sizes:** 3-13, one standard width per size

**Use:** training and racing, in that order, according to our survey

**Weight:** 7¼ ounces (one shoe, size 9)

**Spikes:** four

**Sole:** plastic spike plate, rubber from ball to heel, slight heel cushion

**Upper:** suede, blue with white trim, reinforced heel and little toe area, pull-tab on heel (not included in older versions)

**Appraisal:** This is Tiger's version of the Adidas Tokyo. The shoes look and feel similar, and the Helsinki costs considerably less. But it weighs more and lacks the Tokyo's support through the heel. You pay for lightness and support.

**US Distributors:** Pete Buckley & Co., 440 Armour Pl., N.E., Box 13875, Atlanta, Ga. 30324. Curley-Bates Co., 860 Stanton Rd., Rd., Burlingame, Calif. 94010. George A. Davis, Inc., 7205 Hibbs Ln., Levittown, Pa. 19057. Demco, 5121 N. Ravenswood Ave., Chicago, Ill. 60640. Olympic Sports, 2607 National Circle, Garland, Tex. 75041. Universal Resilite, 43 Polk Ave., Hempstead, NY 11550. (Contact nearest distributor for information on local outlets.)

# TIGER OLYMPIAD



**Shoe:** Tiger Olympiad (Model No. G-29)

**Price:** \$22.95 (suggested retail, mid-1973)

**Sizes:** 5-13, one standard width per size

**Use:** racing and training, in that order, according to our survey

**Weight:** 5½ ounces (one shoe, size 9)

**Spikes:** four

**Sole:** plastic spike plate, rubber from ball to heel, slight heel cushion

**Upper:** nylon, blue with white trim, suede reinforced heel, rubber reinforced little toe area, pull-tab on heel

**Appraisal:** Runners love nylon. They've shown that conclusively in flats, where the first seven racing models have nylon uppers, and there's a demand for nylon spike shoes too. The Olympiad was first in this line, and only the Adidas Tokyo has more wearers. Only one shoe (the Adidas 9.9) weighs less than the nylon Olympiad.

**US Distributors:** Pete Buckley & Co., 440 Armour Pl., N.E., Box 13875, Atlanta, Ga. 30324. Curley-Bates Co., 860 Stanton Rd., Burlingame, Calif. 94010. George A. Davis Inc., 7205 Hibbs Ln., Levittown, Pa. 19057. Demco, 5121 N. Ravenswood Ave., Chicago, Ill. 60640. Olympic Sports, 2607 National Circle, Garland, Tex. 75041. Universal Resilite, 43 Polk Ave., Hempstead, NY 11550. (Contact nearest distributor for information on local outlets.)

# COMPARISON OF MAJOR MODELS

Brand & Model (Model No.)	Uses (1)	Price (2)	Weight (3)	Sole	Upper
Adidas Avanti (113060)	Training	\$11.95	6 oz.	4 spikes	Blue leather
Adidas Azteca Gold	Racing	Discont.	5½ oz.	4 spikes	Gold leather
Adidas Comet (505)	Training	\$18.45	7 oz.	4 spikes	White leather
Adidas Interval (506)	Training	\$23.95	7½ oz.	4 spikes, heel	White leather
Adidas Melbourne	Training	Discont.	N.A.	4 spikes	White leather
Adidas Meteor (503)	Training	\$25.95	6½ oz.	4 spikes	White leather
Adidas 9.9 (502)	Racing	\$29.95	5 oz.	4 spikes	White leather
Adidas Saturn (504)	Racing	\$21.95	6½ oz.	4 spikes	Red suede
Adidas Racer	Racing	\$34.95	N.A.	7 spikes	Green suede
Adidas Titan (551)	Racing	\$31.95	N.A.	6 spikes	Blue/red suede
Adidas Tokyo (501)	Racing	\$30.95	6 oz.	4 spikes	Blue suede
Puma Collegiate (225)	Training	N.A.	N.A.	4 spikes	White leather
Puma Interval (248)	Training	N.A.	N.A.	4 spikes, heel	White leather
Puma Wonder Shoe (292)	Racing	N.A.	N.A.	4 spikes	Red suede
Tiger Helsinki (30)	Training	\$20.95	7¼ oz.	4 spikes	Blue suede
Tiger Olympiad (29)	Racing	\$22.95	5½ oz.	4 spikes	Blue nylon

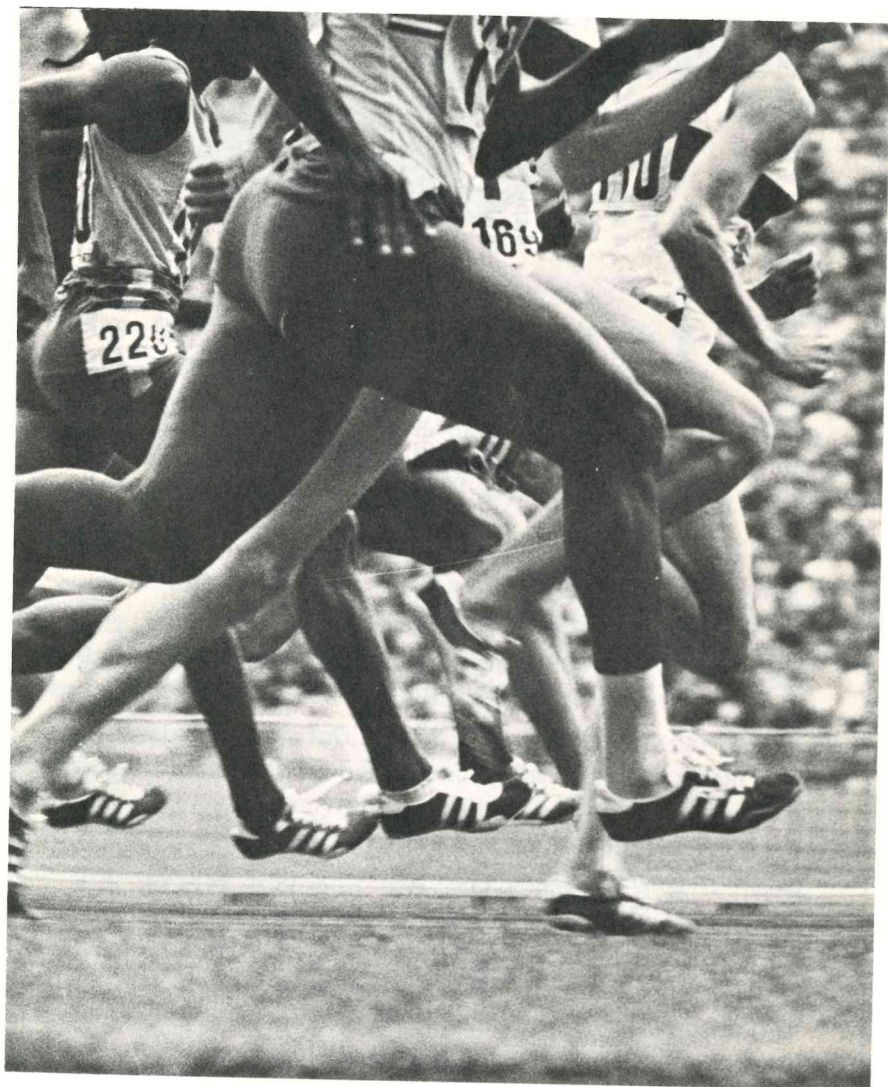
(1) Most common uses according to March 1973 runner survey, though many of the models are all-purpose;

(2) Prices as of June 1, 1973; N.A. = not available; (3) Weights of one shoe, men's size 9; N.A. = not available.

## Chapter 4

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# THE FEET



Statistically, one in three of these runners is headed for a serious injury, or has already had one. (Tony Duffy photo)

# IT ALL STARTS HERE

These are the sad facts:

- Two runners in every three that we polled has had an injury serious enough to require an interruption of running for at least one week, medical treatment and a prolonged recovery period.
- Most of these runners suffered more than one injury, and each one recurred more often than not.
- All of these injuries resulted directly from running, and were caused by the everyday stresses of running—not by specific “accidents.”

And these are the survivors. These are the runners who are still making an attempt to continue in the sport. It's frightening to think of the number so disabled or discouraged by injury that they've quit.

All but a small percentage of the injuries are from the waist down, most of them from the knee down. One runner in five has suffered knee or achilles tendon damage. One in 10 has had shin splints or forefoot breaks, bruises, strains.

The incidence of breakdowns (based on number of sufferers among 1600-plus runners, many of whom had more than one injury):

1. Knee	22.5%	8. Calf	6.8%
2. Achilles	20.3%	9. Hamstring	4.6%
3. Shin	9.9%	10. Hip	3.7%
4. Forefoot	9.4%	11. Back	3.1%
5. Heel	7.2%	12. Groin	1.8%
6. Ankles	7.0%	13. Thigh	1.5%
7. Arch	7.0%	14. Stomach Muscles	0.2%

Even more depressing is the fact that almost all of these injury statistics are up since 1971. It's ironic. Shoes apparently are better than ever, yet runners are hurting their feet more often. What's wrong?

Doctors are beginning to piece the injury puzzle together. At least three factors are to blame, they say: (1) stress of high-mileage, high-speed schedules; (2) muscle imbalance and lack of flexibility in legs; and (3) faulty footplant. Stress and strength-flexibility are subjects for other booklets. But footplant relates directly to shoes.

The foot is a complex arrangement of 26 bones, almost twice that many ligaments and muscles, and three arches. The possibilities are good that trouble will arise in one or more of these parts and their fittings when they're put under the prolonged, every-step-the-same pressure of a run.

The way the foot meets the ground makes all the difference. Even the healthiest feet need good shoes to make them strike properly. Even the best shoes aren't enough for some feet, though. Irregular feet need the attention of a specialist, a podiatrist, who can correct the strike.

The injury statistics say that most of us are hurting for one reason or the other.

# LOVING CARE FOR FEET

Dr. Sheehan is a cardiologist from New Jersey, and a regular contributor to *Runner's World*. He edited the booklet, "Encyclopedia of Athletic Medicine."

If I were to suggest to the average doctor or orthopedic surgeon that the most common clinical problems in runners are forefoot varus, narrow subtalar range, equinus influences, subtalar varus, gracile foot and a short first metatarsal, I could expect three possible reactions. One, he would not know what I was talking about. Or two, he would know what I was talking about and think I had lost my reason. Or three, he would know what I was talking about, and even believe me, but know of no way to remedy these conditions.

Yet these foot disorders (for that is what they are) are the principal rea-



Jay McNally photo

sons why runners have such symptoms as achilles tendinitis, heel spurs, metatarsalgia, shin splints and runner's knee. Therefore, proper treatment of the foot is the only way to clear up these foot, leg and knee pains.

Unfortunately, this treatment is not readily available through the usual medical channels. "Very little is known by the average orthopedist and even less by the average physician about the physiology of the foot," writes Nicholas Giannestras, one of the country's leading orthopods.

The reason for this, according to Dr. Rene Caillet of the University of Southern California Medical School, is easy to see: "The study of the bones and muscles of the foot during medical training is often presented in an uninteresting and confusing manner with no correlation to function." Because of this, says Dr. Caillet, the care of the ailing foot is often relegated to the unscientifically trained shoe salesman or the bootmaker.

There are, however, men scientifically trained in the function and biomechanical workings of the foot. They are called podiatrists. To them words like forefoot varus, narrow subtalar range and equinus influences are basic English. And they learned about these problems in their podiatric infancy. And they also learned what to do about them.

While the doctors of podiatric medicine wait in the wings to apply these remedies, sports medicine continues to provide unimaginative, inadequate and ineffectual care of the ailing runner. At the present time, the medical profession's batting average against runners' occupational hazards is close to zero. When the cause is unknown, prevention is unknown. Treatment comes down to an attack on the symptoms and not the cause. A glance at the record will bear this out:

1. **Heel spur syndrome:** Cause unknown, prevention unknown, treatment symptomatic (which means rest, painkillers, cortisone shots or surgery).
2. **Achilles tendinitis:** Cause unknown, prevention unknown, treatment symptomatic.
3. **Stress fractures:** Cause unknown, prevention unknown, treatment symptomatic.
4. **Shin splints:** Cause unknown, prevention unknown, treatment symptomatic.
5. **Runner's knee (chondromalacia):** Cause unknown, prevention unknown, treatment symptomatic.
6. Etc., etc., etc.

Sports medicine has been a case of the blind leading the blind. An uninformed patient population is being treated by doctors who don't know the cause of their ailments.

Such knowledge demands special study. "The foot," writes Dr. Giannestras, "is a marvel of engineering design. No other portion of the human anatomy is more intricately constructed from the standpoint of engineering."

It is this engineering masterpiece that the podiatrist calls his own. "For most surgeons and orthopedists the foot is not an exciting organ," said one podiatrist. "Podiatrists give the foot tender loving care. After it, it's all we've got."

Could you pick a better doctor for a foot racer?

# SHOES AND INJURIES

Dr. Subotnick teaches biomechanics and surgery at the California College of Podiatric Medicine in San Francisco, is secretary of the American Sports Podiatrists Association and is an active runner himself.

When speaking of shoes for runners, one has to distinguish between a competitor and a pleasure or health runner; a long distance, middle distance and short distance runner. One must also distinguish between a runner with a normal foot and lower extremity structure—in which there is a normal positioning of joints and a normal balance of the muscles around these joints—from a runner with mechanical weakness, malpositioning and imbalance of the foot and leg.

The needs vary greatly from one of these individuals to another, and it's impossible to prescribe one shoe for all of them.

I consider a normal foot as one with the heel perpendicular to the ground when the runner is standing on both feet. The leg is roughly perpendicular to the floor. The metatarsal heads are on the floor when the heel is perpendicular. In this way, a plumbline dropped from the hip joint would fall through the thigh, through the lower leg and come out just a little inside of the heel.

An abnormal foot is one in which this perpendicular relationship between the heel and the forefoot and the leg don't exist. Thus when a person is standing on both feet, the bisection of the heel will not be perpendicular to the floor, and the relationship between the bottom of the ball of the foot (the metatarsal heads) to the heel will not be perpendicular. The foot tends to collapse toward the inside (pronation) or to twist to the outside (supination), which predisposes a runner to injury.

A normal foot will show normal shoe wear. Typically, there is more extensive wear on the outside of the heel than on the inside, but not so excessive that the shoes are totally worn out on the outer heel within a few weeks—before the rest of the shoe shows significant wear. Wear should progress on the outside of the shoe, underneath the ball of the foot at the level of the first metatarsal head, then out through the great toe.

However, if the runner has excessive bowing of the legs there will be extensive wearing on the outside of the heel—farther out than normal. If the individual tends to flatten out or pronate the foot, there will be more wear on the back of the heel or even on the inside edge.

Runners can begin diagnosing their own foot problems simply by checking shoe wear patterns.

Ideally, a shoe for the normal foot will be flexible enough to allow for a good toe-off, yet rigid enough to support the foot from the heel to just behind the metatarsal heads. The shoe should have a good heel counter (that portion which grips and supports the heel), yet this counter should not be so firm that it rubs or blisters the heel bone or the achilles tendon as it inserts into the heel bone.

The shoe's heel should be firm, yet have some property of resiliency, which absorbs shock on heel contact. The ideal training shoe should have a heel that is not too narrow, since narrow heels predispose the runner to ankle sprains and other problems resulting from instability. The same is true of rac-



ing flats. This type of shoe is best for the heel-foot-toe gait that the long distance runner should have.

Sprinters have mostly a toe-toe gait. In their spikes, they are on their toes most of the time during running. For this reason, they need a shoe with good flexibility at the metatarsal phalangeal joints.

The middle and short distance runner/sprinter should try to train as much as possible in flats, wearing very light spiked shoes only infrequently. Spiked shoes can cause problems with pressure points from spikes on the bottom of the feet. They also don't allow any rotation between the foot and the ground. If there are abnormalities in the structure of the foot, the spiked shoe can accentuate these.

And of course the shoe should fit. A shoe that is too large might cause blistering if the foot slides on landing and toe-off. If the shoe is too short or tight, it can cause blistering or toenail damage upfront.

A runner with a normal foot should have a good sturdy pair of shoes for training which are heavier and more ruggedly constructed than his competition shoe. A good training shoe might be one with a leather outer structure, in contrast to a racing shoe which might be made with lighter but less sturdy nylon uppers.

For the runner with an abnormal foot structure, we must control the imbalance to provide for efficiency of the foot, and a normal angle of gait during running so the muscles and tendons around the joints function properly. We accomplish this by constructing a form of foot support called an orthotic. This is made from a cast of the runner's foot while the foot is being held in its normal position for efficient function. This cast should provide the needed mechanical stability.

These appliances are used at all times during non-running activities. Long and middle distance runners might use them in their running shoes, but sprinters generally prefer a less rigid type of support when they're training or racing.

The ideal shoe for a runner who is going to need support of his foot is one that is wide enough to accommodate both the orthotic and the foot. This shoe need not be as firm as usual inasmuch as the orthotic provides the necessary control for the foot; the shoe is only a device for holding the orthotic.

This should still have many of the features of all good shoes, which are (1) flexibility at the break of the metatarsal phalangeal joint, (2) good shock absorbing properties at heel contact, and (3) proper fit.

Prevention of injuries can be accomplished by the use of orthotics, by buying good shoes and keeping them in good repair, by knowing the early warning signs of overuse syndromes and by maintaining the necessary strength and flexibility in the lower extremities.

# WEAR, CARE AND REPAIR

Unlike feet, shoes are mass-produced. And unlike feet, shoes wear out. These facts make it hard to find the right shoe for your own feet, and harder yet to keep it once you've found it. It makes it necessary for most runners eventually to become their own shoemaker.

The survey showed that two-thirds of the runners require some modification of factory-made shoes, and that nearly half do repair work or have it done when the shoes start to wear out.

This is wise preventive medicine. You cut down risks of injury by modifying, repairing or discarding shoes in time.

Mass-produced shoes can't answer everyone's problems when they're new, and they can complicate these problems as they grow old. Individual work on them can help, but you have to know what you're doing, and why.

Des O'Neill said in a special shoe section of *RW*, "Few runners or shoemakers seem to realize that repairs have to be done carefully so that thickness of soles and heels of both shoes of a pair are identical (assuming that most of us have legs of equal length). A slight difference in height, less than an eighth of an inch, may be enough to unbalance the stride, so slightly as to be imperceptible to the runner but nevertheless enough to throw that extra and unusual sideways thrust into the joints. Unevenly worn heels and soles can do the same, comfortable as an old pair of shoes may feel."

Runners have had mixed results with professional shoemakers. They tend to be like doctors, obviously experts in their general field but often without a real understanding of the special needs of runners.

Of the runners in our sample who have shoes repaired or modified, only 17% trust them to shoemakers. The other 29% do their own work. Soles and heels get most of the attention, but uppers and insides also can be improved.

● **Bottoms**—E. C. Frederick, an exercise physiologist from California, says, "The soles of running shoes, because of the particular job they do, are light. For lightness, we must sacrifice a certain amount of durability, or wear-resistance. The result of this is that the soles of a runner's shoes wear rapidly and often are completely shot before the tops even show signs of wear."

The typical wear pattern of shoe bottoms is a curved line through the sole. It starts at the outer edge of the heel, goes through the ball of the foot, and out at the big toe.

The heel gets the heaviest wear in most shoes. Treatment of shoe heels ranges from minor touchups to major repair jobs.

Coatings for heels and soles include a number of liquid rubber products: Sole Saver from Carpet Products, Plastic Rubber from Duro, or G. E. Silicone Seal.

The next step up is patching high-wear spots. A common method is using bicycle tire patches, which are inexpensive, easy to apply, and more durable than the liquid coatings.

Replacement of heel and sole material is perhaps the best solution to wear problems, but it's also the most difficult to do—to do correctly, anyway.

E. C. Frederick, the physiologist, has devised a kit containing all the necessary tools ("The Runner's Professional Sole Repair Kit"), and an instruc-

tional booklet. His process involves cutting away the worn area and cementing in a new slab of rubber.

Some runners find there's not enough of a heel or sole for them. If you need an extra lift, Dr. Gabe Mirkin advises, "Do not put pads inside the shoe, under your heel. This tends to raise your heel out of the shoe and to make the heel less stable. Correction of a low heel is done by having a cobbler build a wedge into the heel of the shoe."

Bill Weigle, an Olympian in the 50-kilometer walk, couldn't walk at all six months before the '72 Trials. He had shin splints and other complications resulting from one leg being shorter than the other and the lower leg being severely bowed. Conventional podiatrists' inserts didn't help.

"After talking it over with the doctor," Bill says, "I decided simply to add a complete half-inch sole to my left shoe to see if it would eliminate the symptoms. It worked! I immediately found I could train 70-plus miles a week. I could see that as the left shoe wore, the front of it was wearing only on the outside and was more or less performing the same corrective action that the plastic insert had been."

Weigle says he let the "appliance" form itself. "Once I tried to put a new sole on my left shoe and sand it down the way another shoe had worn. But it didn't work. In fact, it was no better than not having that extra half-inch at all. The best thing seemed to be to let the extra sole wear itself into the correct mold."

● **Tops**—This area of shoes has improved so much, apparently, that few runners bother with modifying or repairing the bottoms. They last, in most cases, far longer than the bottoms. By the time the uppers wear out, shoes are usually ready for a decent burial.

The main considerations are keeping leather soft and keeping nylon from stinking. Leather-softeners, and soap and water take care of this.

Other changes include (1) punching ventilating holes; (2) cutting away tight or irritating spots, particularly in the heel area; (3) taping to repair holes and to provide added support.

● **Insides**—The survey indicates that shoes still are inadequate internally. These are figures: 30% of the runners add heel pads or cups; 25% add arch supports; 11% add custom-made inserts; 10% add special insoles. In addition, half of them feel they need to treat the feet with vaseline or tape to prevent injuries, and two-thirds wear socks primarily to protect them from the shoes.

Heel protection typically involves adding rubber or felt pads under the heel, using a heel cup (the most popular one being the M-F Company's model). Podiatrists have been successful in treating runners' ailments with specially-angled pads.

Another heel modification worth considering, according to M.D.-marathoner Gabe Mirkin, is padding the sides to improve fit and stability.

"A heel that fits loosely into the shoe," says Dr. Mirkin, "will wobble with each plant and put undue strain on the achilles tendon. Since shoe manufacturers ignore this problem, the athlete must become a shoe manufacturer.

"Moleskin can be applied with rubber tape to the inner aspect of the heel. This will make the heel more narrow and lock the heel firmly in the shoe. Do not run the moleskin around the back of the shoe, as it will push the foot forward and have the effect of shortening the shoe."

Arch supports can come from something as fancy as Dr. Scholl's pads, or as simple as "homemade cookies." Tom Knatt, a race walker, talked about the cookies in the January 1973 *RW*. Tom injured one heel and the opposite arch while racing.

"Feeling very discouraged," he said, "I mentioned the arch problem to a woman at the New Balance Athletic Shoe Company. She suggested I try her cookies. These are arch supports made of semi-hard rubber sponge and shaped like a flying saucer with one edge cut off. (The square edge fits against the side of the shoe. The rounded part supports the arch itself.)"

Knatt added the support under his injured arch, and only put one in the other shoe for a "feeling of symmetry." He hadn't counted on any achilles relief.

"To my great surprise," he said, "the achilles tendon pain cleared up in about one week." He now makes his own cookies, using the New Balance pattern.

The most commonly used insole is the Spenco.

A rare few athletes and coaches get so disturbed by the commercial selection that they design their own shoes. One is Ron Daws, a 1968 Olympic marathoner.

"Back in 1964," Daws says, "I got fed up with commercial racing flats and built my own from scratch. They weighed four ounces each and were superior to anything I could buy. I also modify commercial shoes and make my own repairs."

Mainly, Daws removes non-essential material from the shoes and adds what's missing. For one thing, he puts an extra strip of rubber around the sole and heel for added stability. He thinks, "More needs to be said about what to look for in shoes and what can be done to solve individual problems."

Ron Hill, the second fastest marathoner in history, and University of Oregon coach Bill Bowerman have been so successful in their shoe tinkering that their models have gone on the market. Hill's contribution is the Reebok World-10, and Bowerman's ideas are employed by Tiger and Nike.

Runners are even taking those and trying to personalize and improve them.

# EVERY OUNCE COUNTS

Ralph "Bud" Williams of Batavia, N. Y., has come up with a simple solution to the problems of shoe weight and cost. He runs in his bedroom slippers, and presents an intriguing case for his unusual footwear.

About the time I'd reached the mid-50s, I'd pretty much accepted the adage that there's nothing new under the sun. And since my entire running background consisted only of what I'd done for the last four years since turning 50, I was pretty well convinced that I could add little of value to the volumes of knowledge that had already been written about running.

But then I had an experience that I have to get off my chest, on the outside chance that every runner hasn't read the volumes of running advice already written and I can add a crumb of knowledge that might be put to good use.

Consider the running shoes. I've run in everything from sneakers to paratroopers' boots, and figure the more weight I can shed from my feet the more chance I'll have to improve my times.

I'm not quite sure how it happened, but somewhere along the line I picked up a pair of ordinary bedroom slippers, discovered they were light as a feather and wondered immediately how they would work as running footwear.

I weighed them on a postal scale and found they were only five ounces each—10 ounces per pair—for size 9s. The lightest running shoe I'd heard of, the Tiger Marathon, weighs 12½ ounces a pair for size 8s.

Next, I put the slippers to a five-mile road test. In a word, they were beautiful. They were the most comfortable things I'd ever had on my feet. The soles were soft and pliable, and the heels did a fantastic job of absorbing road shock. Several other road tests followed, and my enthusiasm increased with each run. My best effort with them was a non-competitive 17.1 miles in two hours.

A short time later, an 11½-mile road race cropped up locally, and I decided to put the slippers to a competitive test. This was the first race I'd ever run. I did 1:19, and finished next-to-last. But I was convinced of one thing: the 10-ounce bedroom slippers were the best shoes I'd ever tried.

In the article "Testing the Effects of Weight" (RW, Jan. 73), the subject of shoe weight and its effects on running was discussed in terms of exercise heart rates, calorie expenditure and expired air volume. Missing from the article, however, was a fourth aspect concerning shoe weight which certainly deserves consideration.

Consider that in a marathon—26.2 miles, or 46,145 yards—you're going to pick up your feet somewhere around 35,000 times, depending on the length of your stride.

The lightest running shoes weigh 6¼ ounces each and my bedroom slippers weigh five ounces each—a difference of a mere 1¼ ounces. Simple arithmetic, however, will reveal that when you pick up this "mere 1¼ ounces" 35,000 times, you're picking up 2722 pounds!

In other words, if you run the marathon with the slightly heavier shoes, you force your feet to lift nearly a ton and a half of unnecessary weight along

# GETTING DOWN TO EARTH

Modern man trudges through his days on earth at least one step removed from that earth. Either his man-made surfaces get in the way, or his man-made shoes, or both. And he suffers from toe to head. One of his important sources of communication is cut off.

Dr. George Sheehan writes in his medical encyclopedia, "Walking barefoot on softer surfaces—sand and earth—is still the best of all foot exercises, and also lets us know that the foot is part of man's communication with the universe. The feel of sand and dirt and pine needles, the sensation of running in rain and over rocks, the immediacy and expression of all the surfaces can be felt through the feet."

Alas, the surfaces have gone mute under layers of concrete, asphalt, and rubble, and the feet have gone deaf under shoes designed to protect them from hardness and sharpness. The feet have lost touch with the ground.

Only rarely can a runner risk going barefoot. The terrain has grown unnaturally harsh and the feet have grown unnaturally soft. To run barefoot is to invite trouble, or so runners seem to think.

Only one in four of those we surveyed ever runs without shoes, and even that one does it only occasionally, when he's fortunate enough to find an unlittered stretch of grass or beach.

Perhaps general foot health would be better (it's miserable now) if runners sought out these surfaces more often and ran them without shoes. Foot specialists indicate this is true. Some running coaches say racing times might even be better if more athletes went barefoot, not only in cross-country but in races of all distances on the track—on tracks that allow it.

Danie Burger, a South African coach, feels, "With all-weather tracks so common, we'll be seeing more and more shoeless sprinters."

Burger bases his prediction on several identifiable disadvantages of spiked shoes, and on research he has done in his country. He says that shoes (1) weigh too much (even if only a few ounces, they're more than nothing); (2) restrict movement somewhat; (3) create "drag" when spikes enter and leave track; (4) cause loss of "impact energy" as legs drive spikes into track, and (5) result in some adhesion between track material and spikes.

These tiny time lags, according to Burger, add up to fairly significant time differences when spread over racing distances. His athletes ran a series of shoes vs. barefoot sprint tests to prove his point. For the barefoot runs on an all-weather track, Burger painted their feet with a thin coating of liquid rubber for protection.

The coach noted a "slight variation in sprinting rhythm" in the barefoot runs, and that the stride frequency increased. He says, though, "Even the initial time trails without spikes proved to be as fast or faster than with spikes. After five runs there was an average improvement of 0.12 second over 40 meters."

After reading these results, British coach John Anderson cautioned, "His promising data may only be the result of the initial euphoria of running on one's bare feet." But the experience of several longer distance runners in Britain shows that the euphoria is more than temporary.

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Jim Hogan, one of the country's best six-milers several years ago (and a

European champion in the marathon), said in the last shoe booklet, "When I put spikes on, I feel I am tied to the ground." Hogan ran 40 seconds faster barefoot than with spikes in the six-mile.

Cliff Temple, running correspondent for the *Times of London*, feels similarly restricted in shoes. He says, "I always feel like some kind of mutant if I shuffle around in spiked shoes. It's much more comfortable and natural to run in bare feet. I run all my 10,000-meter track races on Tartan in bare feet, and my times are faster than when I run in shoes."

Other runners often ask Temple, "How on earth can you run in bare feet?" His feet speak louder than words. "They take off their shoes," he says, "to reveal blisters all over their feet, toenails held on with plaster (tape) and general disfigurement on the toes. I haven't got a mark on my feet."

But please don't interpret this as an invitation to go right out for naked sprints. Feet that are used to something else won't like that sudden change. Feet and legs that have been systematically supported through the year are likely to rebel when left without support.

For one thing, because we've worn heels all our lives, achilles tendons and calf muscles have shortened in most runners. Dr. Sheehan has had first-hand experience in this area.

He says, "My kids gave me a pair of shoes without any heels. I ran a five-mile race in these flats and could hardly walk afterwards. I thought I was finished running for life."

He recovered, but learned a valuable lesson. "I know now you have to correct your basic problem or you will surely be out of action sooner or later. You have to work at lengthening that achilles." He recommends stretching exercises as a start, and *gradual* lowering of the heels.

Sheehan concludes that heels are "vitaly necessary in the early treatment of achilles and calf troubles, but should be lowered and eliminated first in street shoes and then in running shoes." He says then to progress cautiously from slow to fast work, doing racing in low-heeled shoes or barefoot only when completely adapted to this extra stretch. Some people never adapt.

A podiatrist friend of Dr. Sheehan's agrees that while heels can give temporary relief of acute injuries, runners are better off in the long run if they can learn to get along without them—at least some of the time.

"Heels shorten the tendons," the podiatrist says. "If you accommodate these things now, you're going to run into trouble later on. You have to lengthen the tendons. If you're going to run in competition and you want speed, you're going to have to lengthen them."

Maybe you can never run barefoot. But you can do the next best thing. You can walk barefoot around the house, or maybe try a pair of shoes that simulate barefoot walking. These are the so-called Kalso Earth Shoes, available in only about 25 shops across the country.

Anne Kalso, a Danish yoga teacher, got the idea for these shoes while visiting a Hindu monastery. She noticed the beautiful carriage of the barefoot monks, and saw that their heels made deeper impressions than their toes. She later designed her shoe which would reproduce the imprint that a healthy foot makes in the earth. It has a heel lower than the toe, as on soft earth.

The foot was made to walk and to run this way, and a step or two back in this direction may prove to be valuable.



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Front and back by Stan  
Pantovic.