



Sneaker freaker



he latest gadgets, the perfect pumped-up playlist and tracking apps won't get you anywhere if you're lacing up the wrong runners. Jennifer Dodge, physiotherapist and founder of theofficeathlete.com.au, says matching a shoe to your foot and workout type is more important than you might think. Which is tough when there are over 300 styles to choose from.

"Footwear should be prescribed to an individual much in the same way glasses are." Dodge says. Considerations include foot type (high, medium or low arch) and shape (broad or narrow), foot function, dynamic function (usually achieved by a video gait analysis), running surfaces, workout frequency and injury history... confused yet?

While being so picky might seem like overkill, sport podiatrist Paul Dowie from Foot + Leg Pain Clinics (footlegpainclinics.com.au) says "footwear is your safety equipment." As such, he recommends ditching that well-worn pair in favour of shoes that minimise injury risk. (That's a 'no' to hidden wedge high tops.)

According to Dodge, common side effects of wearing the wrong sneakers include foot and lower limb-related injuries such as plantar fasciitis, Achilles tendinopathy, patellofemoral (knee) pain, iliotibial band syndrome and metatarsal fractures. Told you this was serious.

Shop 'til you sprint

When you're in the market for a new pair, don't be fooled by the razzle-dazzle lining the shelves. Dodge recommends ignoring buzzwords and eye-catching colours "whose only function is to keep you from getting lost in a crowd".

Instead, shop around for a store with knowledgeable staff to ensure you get sound advice. While Dodge recommends finding a shop with a treadmill and video camera setup, Dowie says a run analysis isn't essential.

Both Dowie and Dodge agree that knowing what worked for you in the past can be helpful. And, if you're onto a good thing, there's no need to stray. "Know what has worked for you in the past and how you want to complement your workout," says Dodge. Along with taking your old runners and orthotics (if needed), our experts recommend trying before you buy. And a hot tip to avoid buying a size too small:

"Another smart move is to go at the end of the day as our feet swell throughout the day, especially after a workout," Dodge says.

Also resist being seduced by the price tag: dearer doesn't always mean better. "There are some ridiculously over-priced, fad-focused shoes out there, but it's more important to consider the quality of the shoe and the research that each various shoe company puts into their footwear," Dodge says.

It's been great, but...

Even the perfect sneaks lose their mojo in time. "Worn-out running shoes lose shock absorption, cushioning and stability over time," Dodge warns. So when's the right time to break up with an old faithful pair? According to Dowie, it's complicated. "It is not easy to determine the end-life of a shoe, so a guide is to annually consider the use of your shoes over the past year, and replace them if worn for exercise at least two to three times per week."

Dodge advises replacing your shoes after between 300 and 900 kilometres. She even suggests marking the date in your calendar if you're tracking your kms. The variation accounts for the fact that some surfaces degrade sneakers more quickly than others; if you're a road runner you'll need a trade-in earlier than a treadmill enthusiast.

Sneaker lifespan is not a perfect science, so it pays to keep an eye on how your current pair's wearing. "Regularly observing the integrity of the sole and the upper combined with how it feels will offer consistent feedback," Dowie says.

Common side effects of wearing the wrong sneakers include foot and lower limb-related injuries.

Swot up on sneaker science to get more from your feet



YOUR

GAIT

Some complicated phrases get thrown into the mix when it comes to determining your foot function, but they're important to understand. Start with your arch, which tends to hint at your foot's natural motion. There's a simple trick to ID your feet. "Once you hop out of the shower, take a step back on the tiles and look at your footprint and your arch shape," Dodge says.

IF IT LOOKS LIKE THIS.



YOU HAVE A **HIGH ARCH** So what? This foot type is generally characterised by a high arch and a slight outward roll, according to specialist sneaks shop The Athlete's Foot. Muscles and tendons tend to be tight and rigid, meaning your foot has a hard time absorbing shock. Wearing the wrong shoes can increase your risk of foot and lower limb problems, including Achilles tendonitis and stress

Which shoe? Look for a neutral cushioned shoe without any stability devices to allow for natural pronation.

IF IT LOOKS LIKE THIS,



YOU HAVE A **AVERAGE** ARCH

So what? Your foot type is

denoted by a 'normal' arch height, which rolls in slightly to absorb shock. You're sitting pretty to skip biomechanical issues affecting your extreme arched contemporaries.

Which shoe? Try a stability shoe with medial support devices.

IF IT LOOKS LIKE THIS.



YOU HAVE A LOW ARCH

So what? Your flat feet probably roll a long way inwards. While your muscles and tendons tend to be relaxed and your foot does a good job absorbing shock, an inappropriate shoe may increase your susceptibility to knee pain and plantar fasciitis.

Which shoe? You want a stability or motion-control shoe with medial support devices.



Upper: Secures foot and guards against environmental hazards. Often a fusion of

A running shoe comprises three separate parts: upper, midsole and outsole.

synthetic leather and breathable mesh.



Midsole: Here's where it's at. This critical shoe organ can be made from featherweight foam-based cushioning called EVA, the hardcore dual density EVA (also referred to as the 'medial post') and the

ultra-durable but heavier polyurethane.

Outsole: The part that connects with the ground and is defined by the quotient of traction and flex. This can be made from tyre-like material called 'carbon rubber' or ultra light carbon rubber, which is super flexible but falls down on durability.

Shape: The shape of the shoe is a clue to its purpose. A straight shape hints at motion control kicks engineered to neutralise overpronation, while a semi-carved silhouette connotes stability and neutral sneaks. Ultra-curvy shoes tend to be lightweight and neutral, geared to faster runners.



WEIGHTS ROOM

What you need

DODGE: "Comfort is key. If you're not running in these shoes, you can opt for

something more all-purpose, such as a cross-trainer," says Dodge. "Any pair of runners you use that are comfortable, lightweight and look good in the mirror. You're not placing too much stress on your feet in the weights room; although, it is important to have your feet protected by suitable footwear in case any stray dumbbells head south."

DOWIE: "A stable cross-training shoe; this will provide a wide, stable foundation that's resistant to unnecessary movement." Look for a firm leather upper, he suggests.

RUNNING

What you need

DODGE: "Motion control, neutral and cushioning are the main categories for running shoes." Dodge says the lightweight phenomenon is here to stay, which "adds a new element to consider for your workout." However, not all running is created equal. "Road running shoes are light and flexible, made to cushion or stabilise feet during repetitive strides on hard surfaces, whereas trail running shoes are enhanced with aggressive outsoles for solid traction and fortified to offer stability and support and underfoot protection." Distance is another matter. "Stability and support are the main features due to the different running style adopted for distance."

DOWIE: The right amount of grip for purpose is critical. "Too much grip or not enough can cause injury," Dowie says. When buying into the sneaker market, it's worth weighing up the proportion of time you spend on the road versus the track or treadmill. For distance, comfortable kicks will keep you on your feet. If you're gunning for an ultramarathon, look for ultra-cushioned French shoes to reduce muscle and joint fatigue. At the opposite end of the spectrum, minimalist sneaks have extreme cushioning and bulging midsoles. Hey, by kilometre 20 you'll be glad you did.

BAREFOOT

What you need

DODGE: "The oxymoron 'barefoot running shoes' means a glove for the feet, designed to protect from any nasties on the ground," says Dodge. She says they are a cross between barefoot shoes and traditional sneakers, offering little to no arch support or structure. The thickness of the cushioning in the rear foot and forefoot should be about the same, and not too thick – you should be able to easily twist the shoe along the long axis and bend the shoe at the midfoot, with no stiff arch support.

DOWIE: "Minimalist shoes still need to fit well and have some protective features to reduce risk of injury from environmental factors such as sharp objects, hot or cold surfaces and sunburn," says Dowie. There's more to barefoot running than shoes, though. The discipline demands specific technique and an ease-in period to adapt to changes in joint tissue stress, Dowie says. Get the lowdown on our barefoot running article.

HIIT/SPRINTS

What you need

DODGE: "A lightweight shoe with a low heel," Dodge says. "Racing flats tend to be raised at the front, or 'tapered', to encourage mid and forefoot running to increase speed, and some have metal spikes on the taper to provide increased grip."

DOWIE: Dowie votes for comfort, a mesh upper and cushioned midsole to reduce oxygen consumption and fatigue.

WALKING

What you need

DODGE: Dodge says you'll need "a more general purpose running shoe or cross-trainer". Now's not the time to spring for bells and whistles. "Look for a low, supportive heel that rounds or 'bevels' in." A thick heel or one that flares will cause your foot to slap down rather than roll, she warns. "This slows down forward momentum and increases injury risk."

DOWIE: "A walking or running shoe," recommends Dowie. He says a toning may be a good choice for some, but only if you're not carrying war wounds and your balance is good. At the store, look for a flexible toe box and low shear materials in the forefoot midsole to maximise big toe joint function during the push-off phase of each step.

OBSTACLE COURSES TO TENNIS... DOUBLE DUTY SHOES

What you need

DODGE: Cross-trainers are Dodge's weapon of choice here. She says these shoes tend to be a more multi-purpose shoe, giving you more bang for your buck. "A good cross-trainer should have the flexibility in the forefoot you need for running and the lateral control necessary for other activities such as aerobics or tennis." A cross-trainer has the basic cushioning, stability and durability of various specialist shoes rolled into one, Dodge says. The drawback is that they tend to be too rigid and heavy for serious running. How to decide between cross-trainers and sport-specific shoes? "You should wear sport-specific shoes for sports you play more than three times a week," Dodge says.

DOWIE: Dowie lends a second vote to cross-trainers. "They incorporate a range of features to safely be able to do a range of activity types without changing shoes."