

100% CHANCE OF A RUN

Cold, fresh air in your lungs, the wind at your back, the deep-down warmth in your limbs, the carefree feeling of splashing through muddy puddles, and the exhilaration of a sudden downpour...winter running is a liberation. It's a chance to get out of stuffy rooms and appreciate brisk, fresh air and a frosty winter landscape. It's an excuse for some time away from the stresses of work and life. It's about embracing the elements, not dreading or battling against them.

True, there will be days when the weather just seems to be against you, when darker days filled with rain or snow do little to inspire you to do anything outdoors. Instead of asking "why should I?", accept the challenge and ask "why not?". Pull on your running gear, protect yourself from the elements and hit the route. Soon your blood will be pumping, the fresh air clearing your head. You'll feel invigorated. You'll feel alive.

This winter you can choose to sit and watch the season unfold through a fogged-up, double-glazed window pane, or you can lace up your running shoes, get outside and be part of it.

BRING THE RAIN

For many, rain is a year-round presence. But in winter, as temperatures drop, rain can definitely make for a more unpleasant run.

In the Pacific Northwest U.S., most of the rain falls in the winter months with averages of 5.9 inches (149.86mm) in December, in contrast to the relatively light 0.8 inches (20.32mm) in July.¹ Similarly Rio de Janeiro in Brazil sees the average monthly rainfall rise from 1.6 inches (40mm) in June through August, to 4.7 inches (120mm) in December through March.² Over on the other side of the Atlantic, South East England experiences on average 30-40 rainy days in winter, compared with 25-35 in summer.³

However, rainy days are not only experienced in winter, so not everyone can use that as an excuse. Berlin's rainfall is fairly even all year (between 38 and 48mm per month) and actually peaks in the summer months at an average 2.8 inches (71mm) in July.⁴ In most of Japan, including the main cities such as Tokyo, winter is a relatively dry season, and in fact considered a much more pleasant time to run than humid summer months. Average rainfall in June, the wettest month, is 6.6 inches (167.7mm, compared with just 2 inches (51mm) in December and January.⁵

Although running in the rain can be exhilarating once you accept you are going to get wet, it will hamper your performance if you are not properly prepared. As well as cooling you down, rain reduces your grip on running surfaces, increasing your chances of slipping and the need to tread carefully, makes it harder to see, and generally does its best to put you off your stride. All these things will inevitably slow you down as celebrated marathon runner Paula Radcliffe knows well. Paula won the 10,000m final in the 2002 European Athletics Championships in Munich breaking a European record and did so in driving rain. Under normal conditions she would have been at least 10 seconds faster.⁶

But don't let this put you off. What the rain may take away in terms of performance, it definitely makes up for in atmosphere. As Mariana Ciscato, of Kainágua Club in Sao Paulo, says, "Running in the rain is never a problem for me – I find it quite poetic."

1 www.sea-seattle.com/weather.htm

2 www.rio-de-janeiro.world-guides.com/rio_de_janeiro_weather.html

3 www.metoffice.gov.uk/climate/uk/averages/ukmapavge.html

4 berlin-sxf.airports-guides.com/sxf_climate.html

5 www.worldweather.org/068/c00183.htm

6 www.european-athletics.org/general-news/radcliffe-set-to-run-in-berlin.html

EXPERIENCE THE RAIN

Transfer of heat through water

While water is an essential accompaniment for any sport, if it's in the form of rain instead of a replenishing drink, runners need to be prepared and protected. Heat transfer through water (called conduction) is 70 times greater than air, so body heat is easily lost – even in the lightest of showers.⁷

“Water is a good conductor of heat,” says Brad Wilkins, senior physiologist at the Nike Sports Research Lab. “If you allow your clothes to get really wet, they conduct heat away from your body and you will feel a lot colder, as wet clothing loses its capacity to insulate.”

The fewer clothes worn during a rainy run, the greater the cooling effect. The more skin that's exposed, the greater the surface area available to transfer the body's heat into the rain's water droplets, causing the core body temperature to decrease even more rapidly. If you're running outside in the rain in low temperatures, say 5°C (41°F), and your clothes get wet, expect your body to lose heat twice as fast than if you were dry.⁸

“Rain will wet the surface of the skin and when it evaporates, like sweat, it will give extra cooling,” says George Havenith, professor of environmental physiology and ergonomics at Loughborough University in England. He also warns, “Both rain and wind combined can lead to dangerously fast cooling.”

If unprepared, the uncomfortable combination of getting cold and wet means the only way to maintain your body temperature is to increase the intensity of your run. When your body temperature gets dangerously low, your heart rate slows down. Less oxygen and fewer fluids and nutrients are then pumped around the body in the blood, necessary to help produce energy in your body's cells. Without this, running becomes difficult as muscles cannot relax and contract as effectively.

A windy day will also speed up evaporation and cool you down more quickly. “Wet and windy is definitely the worst combination as far as keeping your skin surface warm,” adds Wilkins. “Your skin is the primary interface between your body and the environment. A cold skin surface is just going to draw heat away from your core much more rapidly.”

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8 As above

The best way to avoid losing too much body heat while running in the rain is to wear layers. “It’s very, very important if you go out in wet and cold weather to keep your clothes as dry as possible, for example, by wearing a water-resistant jacket,” says Wilkins.

Wet surfaces

Running in the rain can be exhilarating but, if you’re not careful and well equipped, it does increase the possibility of injury. Wet roads, paths and sidewalks can be slippery so extra care needs to be taken. Running footwear also needs a good grip to cope with the reduction of friction caused by the rain.

How wet will you get?

If it’s raining, of course you’re bound to get wet. But are you likely to get wetter when running than walking? Believe it or not, all sorts of theories and equations have been formulated. Students at Canada’s Brock University even wrote a computer program trying to work it out. They investigated – mathematically – the number of raindrops that could hit a person at varying rain, wind and running velocities.

Their conclusions? It all depends on the direction of the rain. If it’s windy then the optimum running speed also varies. However, if there’s no wind and the rain is falling in the opposite direction to where you’re headed, there is a solution: simply run faster (but carefully!) and you’ll get less wet.⁹

⁹ www.brocku.ca/mathematics/resources/learningtools/learningobjects/mathobjects/rain/index.php

EMBRACE THE RAIN

Going for a run in the rain is a little like going for a swim – you only notice the water for the first few moments, and after that you forget about being wet. Atticus Harris, of Run Dem Crew in London, says, “I love running in the rain. It usually means I run faster. Running in the rain, without music, can lead to strangely atmospheric, immersive runs.”

Gear-up for wet weather

Being properly outfitted with the right gear certainly helps. Avoid non-wicking garments (such as cotton) which will retain water and become heavy and soggy. Don't make the mistake of overdressing – we tend to assume that wet weather means cold weather, but that's not always the case. Dress in lightweight, breathable layers and add a water-resistant jacket on top. The Nike Storm-FIT fabrics – used for jackets from the lightweight Nike Element Shield Max jacket to the heavy-duty Nike Storm Fly X Max – are designed to keep out the wind and rain while allowing skin and inner clothing layers to breathe. Think about the sort of conditions you'll be mostly running in when you choose a jacket – you need to strike a balance between breathability and water resistance. Regular runners also recommend wearing a hat to keep the rain out of your eyes and off your face.

As well as making you cold, wet clothes can also exacerbate chaffing. Apply a body lubricant or petroleum jelly to vulnerable areas such as the chest, inner-thigh, underarm, neck/collar, and anywhere you are carrying equipment as these might rub.

When it's wet – or cold or windy, for that matter – warm up indoors by jogging on the spot, running up and down the stairs and performing some dynamic moves, such as lunges, squats and leg swings. That way, you'll be more primed for running by the time you get out the door and will need less time to get into your stride.

If you are regularly faced with wet conditions, it can be helpful to have a couple of pairs of running shoes 'on the go' at once, so that while one pair is drying out, you can use the other pair. You can dry out shoes fast by loosening the laces, removing the insole and stuffing them with newspaper to suck up the moisture. All Nike winter-running footwear has easy-to-clean water-resistant uppers, but fully waterproof shoes are not essential – wet feet are an occupational hazard for runners during wet months, and it's more important to prevent feet getting cold by wearing warm wicking socks and winterized footwear. Some diehard runners wrap plastic bags over their feet, inside their shoes, to keep out moisture.

Watch your step

If rain freezes into ice (most likely in the early morning and late evening), take extra care with your footing. Shorten your stride and adjust your pace – even to a walk – where necessary. If possible, avoid icy roads and sidewalks and opt for softer surfaces, like grass or trail, which tend not to turn glassy in sub-zero temperatures.

Motivating through it

Find whatever works for you when you need that extra bit of motivation whether it is a great tune or some fuel in the form of a treat. Carl Tolson, of the Shanghai Hash Hound Harriers, shares his method: “Personally, when I go running on my own in the winter, I let myself take a bar of chocolate with me. When I’m running and it’s raining or it’s really windy and I’m getting fed up and thinking of stopping and walking, I’ll have some of the chocolate. It sounds silly, but it keeps me motivated.”

Dry off as soon as possible

At the end of a rain-drenched run, don’t linger in soaking wet gear to stretch – change into dry clothing and refuel to help you warm up. If you are driving somewhere to run or race, carry a towel and dry clothing in the car so that you don’t have to make the return journey in wet, chilly gear. Although cold weather should not significantly impact your immune function, exercising really hard and allowing yourself to get cold will make you vulnerable to coughs and colds, so you need to take extra care of yourself and warm up quickly.

BEAT THE RAIN

Nike Storm Fly X Max Jacket

For a lightweight jacket, the Nike Storm Fly X Max is heavy duty when it comes to keeping you dry. The use of high-performance Storm-FIT 10 fabric ramps up the water resistance to a level able to withstand 10,000mm of water pressure – the equivalent of a heavy downpour - while still allowing sweat to evaporate. The removable, running-specific hood stays in place as you run, held firm with front and back cord locks, and a built-in removable face mask provides extra coverage against the elements. Reflective details on the jacket make sure you are visible even during low-light runs.

Nike Element Shield Tight

An ultra-comfortable running tight to keep you warm and dry. The Dri-FIT fabric moves sweat from the skin to the surface of the garment, where it evaporates quickly to help keep you comfortable and dry. This fabric has a brushed surface to trap warm air between fibers for warmth and a soft feel against the skin. The most exposed parts of the leg – the front thigh and calf – are protected from rain by strategically placed Durable Water Resistant (DWR) treated panels. The design includes an articulated knee for a greater range of motion and a natural fit while running as well as reflective elements to keep you visible.

Nike LunarGlide+ 3 Shield

Superior stability, ultra-soft cushioning and secure fit come together in the Nike LunarGlide+ 3 to deliver a smooth ride and great support in a lightweight, flexible and breathable package. The Nike LunarGlide+ 3 features the distinctive Dynamic Support wedge that provides smooth transitions throughout the run; improved use of ultra-soft Lunarlon foam along the footbed for cushion and comfort; and an innovative midfoot strap to deliver improved fit and support.

The Nike LunarGlide+ 3 Shield design includes insole fabrication for warmth which is uber important when your feet are likely to get wet. Deep grooves in the sole (cut differently on the men's and women's shoe to suit gender-specific running styles) and green rubber lugs keep your gait efficient and your footing firm, especially in wet or slippery conditions. Easy-to-clean water-resistant uppers mean you don't need to worry about steering clear of muddy puddles, and high reflectivity ensures you'll be seen even if light is really gloomy.

Nike+ SportWatch GPS powered by TomTom

The Nike+ SportWatch GPS Powered by TomTom is the most dynamic running watch for athletes combining a simple navigation, a beautiful design, GPS location tracking, and the motivation of Nike+, the world's leading running community with more than 4 million members strong. The GPS technology works in tandem with the Nike+ sensor so that whether you head inside or outside, every mile will be remembered. An innovative, waterproof tap screen allows you to easily tap to activate the backlight, mark laps and personalize the data that you want to see during your run, even on the dreariest and wettest of days.

Nike Cheyenne Vapor Backpack

The Nike Cheyenne Vapor Backpack is constructed using the lightweight Nike Hypervoid material – perforated padding that reduces bouncing and shifting – for engineered stability to keep your gear protected. The Nike Aerospan back panel has a convex design to hold the pack off the body, increasing airflow and limiting the area where sweat can get trapped. The eight-point adjustment system further ensures a perfect, personalized fit. The pack also has a removable raincover with reflective hits to ensure your gear stays dry while you stay seen.

Thanks to...

Runners

Berlin Graviteam: graviteam.de

Chicago Area Runners Association (CARA): www.cararuns.org

Club der Töchter, Germany: www.facebook.com/clubdertoechter

Companhia Athletica, Sao Paulo

Hash House Harriers (Beijing and Shanghai branches): www.hash.cn and www.shanghaih3.com

Hong Kong Runners: HKRunners.com

Kainágua Club, Sao Paulo

New York City Bridge Runners: nycbridgerunners.com

Run Dem Crew, London

Running in Cold Weather: runningincoldweather.com

Running in Tokyo: runningintokyo.com

4Us Club, Sao Paulo

Experts

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George Havenith, professor of environmental physiology and ergonomics at Loughborough University, U.K.

Dr Costas Karageorghis, author of *Inside Sport Psychology* (Human Kinetics, 2011)

Sam Murphy, author of *Marathon and Half Marathon from Start to Finish* (A&C Black, 2004), www.sam-murphy.com

Dr Jenna Stevens-Smith, Society of Biology, U.K. www.societyofbiology.org

Brad Wilkins, senior physiologist, Nike Sport Research Lab, U.S.