



Injuries – don't get caught out.

It's alarming the number of injuries reported by runners.

Most of the common injuries are avoidable if a little common sense is applied.

Assuming a regular or average physique: injuries can be caused by:-

- Running too far, too fast or too soon
- Running on uneven surfaces
- Changing direction or accelerating
- Lack of support for foot arches
- Running up and down hills with the wrong technique
- Trying to keep up with others

Running to lose weight may cause additional problems due to the extra load on running muscles – diaphragm, heart, upper and lower legs. In particular, shins often grumble at the extra workload. They should be supported until they are used to the additional activity.

People with a less than perfect skeletal physique (many of us) may need to have their gait analysed to correct mechanical problems. Uneven leg length, different foot sizes, pronation, and even upper body movement can overstress hips, legs and joints.

The Importance of Hydration

Water is essential to maintain blood volume & viscosity, which helps regulate body temperature and, along with electrolytes, allows muscle contractions to occur. During exercise, the primary way the body regulates body temperature is by sweating. The body is cooled when beads of sweat on the skin evaporate, resulting in a loss of body fluid. Therefore, sweat production and body fluid loss will increase with a rise in body temperature, ambient temperature and humidity, and exercise intensity.

It is essential to hydrate to maintain your blood's viscosity. As you dehydrate, your blood gets thicker, making oxygen delivery to the muscles more difficult, placing additional strain on the heart. Oxygen starved muscles are prone to spasms (cramps), which can lead to injury. Failing to hydrate correctly is often the unseen cause of injuries. Taking electrolyte drinks before and after a running session will help reduce cramps and "after-run stiffness".

Breathing

The technique of "breathing correctly" is one we tend to master quite well for steady pace running. However, there are times when our rhythm is interrupted – e.g. talking, losing concentration, climbing hills or accelerating in a road race to find clear running space. Always prepare for hills and acceleration by breathing more deeply in advance – tell your body what you are intending rather than it telling you. High humidity can affect the efficiency of your regular breathing pattern. By volume, humid air has more water molecules and less oxygen/nitrogen. Again, these things affect the amount of oxygen carried by the blood – poor breathing can lead to injury – learn the tricks and minimise the risk.

Tips

- Beginners - don't talk, concentrate on breathing and keep your pace to a jog.
- Niggles become injuries - treat niggles or suffer the consequences.
- Shin problems - wear support when running until the muscle & tendons are conditioned.

- Replace running shoe liners with heel/arch support High-Med-Low to suit
- If your group's pace improves and you're struggling – move down a group.
- Trying to improve to meet a deadline? - as an amateur without a good coach, you are just asking for trouble.
- There is a lot to be said for non-impact or strength training in the gym.
- "Long and Slow" a great technique - add 2/3 mins to your regular pace & run a little further.
- Hydrate the night before a long run – drink as much as you like until your pee runs clear
- The body has a natural healing process – the stimulation of endorphins¹ (acupuncture or TENS) or increasing blood flow (heat or massage) can help speed up this process.
- Don't necessarily follow the advice given to professional athletes – their aims are entirely different, and they compete at the highest level. They often mask problems to enable them to compete. These athletes can often take years to knock off a few seconds off their PBs.
- Stretching is also beneficial but be careful not to stretch cold muscles – you may tear muscles or aggravate tissue where it connects to bone.

Things for your kit bag to treat niggles and prevent further injury.

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| • Tubigrip | • Ibuprofen |
| • Compression bandage | • Deep Heat |
| • Knee or Ankle supports | • 1000 mile socks |
| • Freezable gel - Velcro to hold it in place | • TENS/EMS machine |
| • Voltarol gel | • Electrolyte replacement drink/tablets |

Balancing your fitness

As you become physically fit, your cardiovascular system may not cope with the increased physical ability. Conversely, your cardiovascular system may become very much more efficient, encouraging you to run faster when your body is not ready. Don't be fooled by these Cardiovascular & Physical imbalances; they can cause injury. Therefore, always run at a pace where both body and breathing are comfortable.

From a running point of view, the cardiovascular system delivers oxygenated blood to the muscle tissue - primarily the legs, arms and diaphragm. However, runners should know the purpose of blood.

- The Red blood cells transport oxygen and nutrients to the lungs and muscle tissues.
- The White blood cells: carry cells and antibodies to fight infection
- Forming blood clots to prevent excess blood loss
- Disposing of waste products to the kidneys and liver, which filter and clean the blood
- The regulation of body temperature

Viruses – Careful!

At various times of the year, there can be an imbalance between red & white blood cells. Distance and altitude training increase plasma volume and red cell/haemoglobin levels leaving a runner more susceptible to viral infections due to a relatively lower white cell count. No matter how mild the symptoms, running with a viral infection or after vaccination will undoubtedly affect performance and possibly cause injury due to compromised red cell count.

They never get injured?

Runners that never suffer major injuries are smarter than you think.

They "listen" to their bodies and know automatically when to moderate or intensify their weekly training. Training is not always about pushing harder, and often a few less intense sessions will prove beneficial.

The running fitness of these runners is not an accident.

¹ A chemical naturally released by the brain to reduce pain & inflammation, that in large amounts can make you feel relaxed or full of energy