

RUN SMART. RUN SAFELY. REDUCE INJURY.



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Running is a great way to achieve physical fitness and a healthier lifestyle.¹ It is proven to reduce risk factors for cardiovascular disease and improve longevity.¹

A runners training load should not exceed their tissue capacity.^{2,3,4}



The ground reaction force when running is 3 x body weight and the peak load on the soleus muscle during running is 7 x body weight.³ Runners need to be strong enough to manage this load.³



HOW CAN THIS BE ACHIEVED?



Strength and conditioning training will help runners to improve their load tolerance, improve their performance and reduce their risk for injury.²

Reduce the training load by modifying training volume, frequency, and intensity.²



Promoting a healthy diet. A healthy diet improves energy availability which reduces the risk of bone stress injuries by affecting bone load capacity.²



Consistent training by increasing the running workload in small increments over a long period of time to reach the expected goal will improve fitness and prevent fatigue.^{2,4}



Reducing stress levels. Stress may slow injury healing by 40 – 60%.²



Promoting improved sleep patterns. A lack of sleep affects tissue's ability to adapt to load. Injury risk increases with < 8 hours of sleep per night.²



A positive mindset after injury is associated with a greater likelihood of returning to running at preinjury level.²



BIOMECHANICS



8 Gait Retraining can reduce high impact loading in runners.^{3,5,6}



9 Retraining faulty running patterns gradually over time can reduce injury risk.³



10 Encouraging running with a higher cadence and a smaller step length can reduce forces in the knee and hip joints.^{1,5}



11 Reducing extreme rearfoot or forefoot striking by changing foot strike patterns gradually can prevent injury specifically in conditions such as patellofemoral pain and compartment syndrome.^{3,5,6}



12 Worn-out running shoes will increase the risk for running injuries. Rotating running shoes can reduce running injury risk.¹

References:

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Advancing runners slowly and cautiously for safer running participation during their training will help them achieve their goals.³

