

## Physical Complications of

# Over-Exercise

Over exercise is physically and emotionally damaging and is linked to overtraining syndrome, exercise dependence, muscle dysmorphia, menstrual dysfunction, osteoporosis, depression. Over exercise is frequently observed amongst individuals with eating disorders. When exercise becomes disordered and unhealthy, individuals often ignore their bodies' signs of distress or injury.

### Physical Complications

Over exercise often has severe health impacts, especially when paired with the body not receiving proper nutrition due to other disordered eating behaviours.

### Cardiovascular Damage

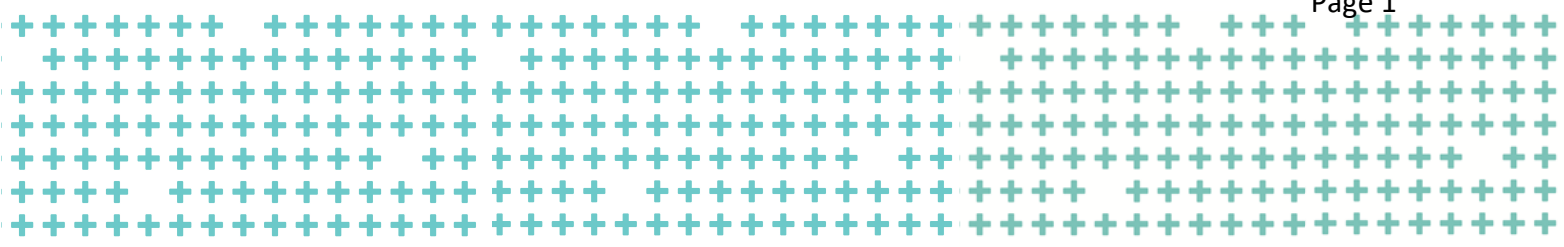
Extensive and prolonged exercise can put the body at increased risk for impaired cardiac functioning and cardiovascular disease. Frequent, excessive exercise, especially exercise that is endurance-focussed can cause damage to cardiac muscles. This can result in irregular heart rhythms and can increase the risk of heart attack.

### Internal Complications

Frequent excessive exercise can activate a condition where the stomach lining is weakened. This enables germs and toxins to enter the bloodstream and can have severe physical consequences, such as chronic fatigue. Further, increased cortisol levels – the hormone that is produced under periods of physical stress – can be detrimental to the immune system, increasing the risk of illness.

### Bone Damage, Muscular Injuries & Delayed Recovery

Increased physical demand can also cause bone damage. This increases the risk of breakages and stress fractures. Stress fractures are very small bone breaks, commonly caused by fatigue and overuse. Excessive exercise can also place the body at a higher risk of developing osteoporosis. Excessive exercise can often result in muscular injuries. These can be cured with extended periods of rest but can often become permanent if they are ignored. Muscular injuries and stress fractures can cause severe discomfort and impair the ability to participate in daily life. If the muscles or bones are already weakened as a result of excessive exercise, this often means they need a significantly longer time to heal. This slower recovery can cause significant distress.



## Reproductive Complications

Increased physical strain can also result in a loss of the menstrual cycle in females. This can lead to reproductive difficulties and in extreme causes, infertility.

### References:

Adams, J. and R. Kirkby, Exercise dependence and overtraining: The physiological and psychological consequences of excessive exercise. *Sports Medicine, training and rehabilitation*, 2001. 10(3): p. 199-222.

Meyer, C. and C. Plateau, Compulsive Exercise, in *Encyclopedia of Feeding and Eating Disorders*, T. Wade, Editor. 2016, Springer Singapore: Singapore. p. 1-4.

Mountjoy, M., et al., The IOC consensus statement: beyond the female athlete triad—Relative Energy Deficiency in Sport (RED-S). *Br J Sports Med*, 2014. 48(7): p. 491-497.