

EXERCISE ADDICTION

addiction is a prevalent and growing concern in all aspects of our modern society. There are considerable concerns for the growing frequency of addictions to drugs, alcohol, gambling, eating, and even sex. Though exercise is generally accepted as a positive behaviour that has many benefits associated with enhanced physical and psychological wellbeing, there is an increasing awareness that exercise addiction is becoming a common phenomenon

William Glaser (1976) in his seminal book *Positive Addiction* first distinguished between positive and negative addiction to exercise. In this initial work Glaser examined addiction in relation to running. He referred to a positive addiction to exercise as involving a love of the activity that is characterised by controllability, an ability to integrate exercise into everyday activities, and an ability to miss exercise sessions when it is necessary. Individuals with a positive addiction to exercise carefully schedule their exercise sessions around other aspects of their life (social, relationships and work commitments) so that their exercise schedule is not detrimental to their wellbeing in these areas. In reality, the outcome of this positive exercise addiction is that the individual experiences increased feelings of control, competence, and physical and psychological wellbeing. In contrast, a negative addiction to exercise involved a compulsive desire/need to exercise that overrides the individual's considerations about their health, relationships and career. When an exerciser with negative addiction has to miss an exercise session they typically experience feelings of loss, guilt, physical and psychological discomfort¹. The term for this compulsive behavioural syndrome (addiction), within psychological research, is frequently replaced by labels including dependence, obligatory, compulsive, commitment, morbid, excessive, habitual and chronic. The use of these new terms is often confusing as subsequent peer-reviewed meta-analysis research has not always clarified whether these terms represent the same phenomenon as what was intended by the label addiction.²

Sachs (1984) viewed exercise addiction as forming a bipolar continuum with negative and positive addiction being placed at the extremes of this continuum. This allows individuals who exercise to be placed anywhere along the continuum and the physical and psychological consequences of their exercise regime will relate to their position on this continuum. For example, individuals who are positioned closer to the "negative addiction" end of the continuum will typically experience greater levels of compulsion to exercise that adversely impacts on their health, relationships and career than those exercisers located towards the "positive addiction" end of the continuum, who experience greater levels of control and contentment.

Veale (1995) worked towards a method of diagnosing exercise addiction that was based on the Diagnostic and Statistical Manual for Mental Disorder's (DSM-IV: American Psychiatric Association, 1994) criteria for substance dependence that acknowledged biomedical (tolerance, withdrawal), and psychosocial characteristics (interference with social and occupational functioning). From this framework Veale believed that exercise addiction can be operationalised as a "multidimensional maladaptive pattern of exercise, leading to clinically significant impairment or distress"³.

Subsequent attempts to diagnose exercise addiction led Hausenblas and Downs (2002) to state that there were seven features of exercise addiction, and that if an individual displayed three or more of these characteristics then they would meet the criteria for diagnosis as being addicted to exercise.

Tolerance: This refers to the need for an individual to significantly

table 1: diagnostic criteria for exercise addiction

CRITERIA	DESCRIPTION
A	Narrowing of repertoire leading to stereotyped pattern of exercise with a regular schedule once or more daily.
B	Salience with the individual giving increasing priority over other activities to maintain the pattern of activity.
C	Increased tolerance to the amount of exercise performed over the years.
D	Withdrawal symptoms related to a disorder of mood following the cessation of the exercise schedule.
E	Relief or avoidance of withdrawal symptoms by further exercise.
F	Subjective awareness of the compulsion to exercise.
G	Rapid reinstatement of the previous pattern of exercise and withdrawal symptoms after a period of abstinence
ASSOCIATED FEATURES	
H	Either the individual continues to exercise despite a serious physical disorder known to be caused, aggravated or prolonged by exercise and is advised as such by a health professional, or the individual has arguments or difficulties with his/her partner, family, friends or occupation.
I	Self-inflicted weight loss by dieting as a means of improving performance.

Veale (1987)

increase the amount of exercise they engage in to achieve the desired effect, or that there is a decreased exercise effect if they continue to train at constant levels. Aidman and Woollard (2003) questioned the appropriateness of tolerance as a diagnostic criterion, because tolerance is a chronic condition that may only be experienced in the later stages of addiction.

Withdrawal: That an exerciser will experience withdrawal symptoms if they do not exercise (eg, anxiety, fatigue), or they have to exercise to relieve their withdrawal symptoms. Aidman and Woollard (2003) showed that club runners reported withdrawal symptoms after only one day without running.

Intention Effects: The amount of exercise that an individual participates in is greater, or over a longer period of time, than they originally intended.

Loss of Control: The exerciser has a persistent desire, or makes unsuccessful attempts to reduce the amount of exercise they engage in.

Time: Large amounts of time are dedicated to exercising.

Conflict: The exerciser reduces or gives up other important aspects of their life (social, occupational and recreational) to accommodate the large amount of time they need to dedicate to their exercise routine.

Continuance: The individual will continue to exercise even though they are aware that they have a persistent/recurring

physical, and or, psychological issue that has been caused, or is exacerbated by exercise.

links with overtraining

Overtraining syndrome is a condition that would seem to align easily with an individual who is addicted to exercise. Overtraining syndrome has been attributed to excessive levels of high intensity exercise/training accompanied with inadequate rest and recovery⁴. Associated symptoms of overtraining syndrome have been classified as having both physiological and psychological components. Physiological symptoms of overtraining include suppressed immune function (with an increased incidence of upper respiratory tract infection), increased resting heart rate, and cortisol concentration, and decreases in testosterone, maximal blood lactate concentration, and overall athletic performance. The exerciser will also be more susceptible to repetitive loading injuries. Psychological symptoms associated with this disorder include mood disturbance, perceptions of chronic fatigue, appetite loss, and insomnia.⁵ This disorder is unlikely to affect a “normal” exercising population, but individuals who are addicted to exercise have an increased risk of experiencing this disorder. It is important to acknowledge that the increased probability of injury, decrease in performance, loss of appetite and the other associated symptoms linked with overtraining will have a traumatic impact on someone who is addicted to exercise because they are likely to attempt to train through these symptoms, and cope maladaptively to periods when their exercise is interrupted or has to stop. Overtraining is not uncommon among elite level athletes with research highlighting that 50% of elite marathon runners have overtrained and experienced this condition.⁶

why do some exercisers become addicted?

Proposed explanations of exercise addiction can help to further our understanding of the issues related to this condition. Though there is still great debate about the origins of the condition⁷ there have been several theoretical models proposed to explain the etiological underpinning of the condition.

Davis et al (1993) explained exercise addiction as being associated with an obsessive-compulsive personality trait. Individuals addicted to exercise have also shown to score highly in personality traits such as narcissism, compulsiveness, high self-imposed expectations, and a high pain tolerance level.⁸

Szabo (2000) proposed exercise addiction is a result of low levels of self-esteem and that exercise is used to increase their levels of self-esteem in the sufferers. This view would seem to be supported by the negative psychological consequences of not exercising for this group as their self-esteem would quickly reduce during this time due to their forced inactivity.

Thompson and Blanton (1987) produced a physiological explanation of exercise addiction termed the sympathetic arousal hypothesis. This theory explained that increased fitness levels increase the efficiency of energy utilisation, resulting in decreased sympathetic nervous system output (ie, catecholamines) and a negative state with feelings of lethargy, fatigue and low state arousal. The individual is then susceptible to becoming addicted if they rely on exercise to increase their arousal level to an optimal level.

primary and secondary exercise addiction

The distinction between primary and secondary exercise addiction is crucial when examining this phenomenon. Research examining the incidence of exercise addiction has consistently shown that females with eating disorders are particularly vulnerable to exercise addiction. Secondary exercise addiction refers to when an

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individual has evolved their exercise addiction in conjunction with a second disorder. In the case of exercise addiction this is often an eating disorder, usually anorexia nervosa. An individual with anorexia nervosa is at high risk of exercise addiction because they will use exercise to lose weight, and it is the losing weight element of exercise that fuels the addiction, not the exercise itself. Davies et al (1998) discovered that 80% of participants with anorexia nervosa also experienced exercise addiction. An individual with primary exercise addiction will not use their addiction to increase their ability to reduce their weight.

increasing client awareness of exercise addiction

The use of client education and awareness strategies is a productive method to ensure that your clients, who may suffer from this disorder, are given the opportunity to help overcome exercise addiction. The following questions and statements can form an effective guideline for an awareness campaign within your practice. The following guidelines could be incorporated into semi-structured informal interviews with your clients or as a poster/information sheet for clients at potential risk:

1. Do you think exercise is compulsive for you?
2. Is exercise the most important priority in your life?
3. Is your exercise pattern very routine and rigid? Could people “set their watches” by your exercise patterns?
4. Are you doing more exercise this year than you did last year to gain that feel-good effect?
5. Do you exercise against medical advice or when injured?
6. Do you get irritable and intolerable when you miss exercise and quickly get back to your exercise routine if you are forced to miss it?
7. Have you ever considered that you were risking your job, your personal life, or your health by overdoing your exercise?
8. Have you ever tried to lose weight just to make your exercise performance better?

If you have answered yes to most of the questions, or if you are worried about becoming dependent on exercise, then please seek assistance or try to incorporate these self-help strategies into your routine:

- Use cross-training to avoid over-use injuries; remember aerobic fitness, strength and flexibility are all important aspects of fitness.
- Schedule a reasonable rest between two bouts of exercise to prevent physical and psychological fatigue.
- Schedule one complete rest day a week and note how energetic you are the next day.
- Exercise your mind by getting involved in mental and social activities that can lower anxiety and raise self-esteem.
- Try to learn stress management techniques such as relaxation, yoga, t'ai chi or meditation.

Adapted from Zaitz (1989)

summary

Exercise addiction is an increasingly common disorder that is predominantly found in female exercisers. Female exercisers who suffer from anorexia nervosa are particularly vulnerable. An individual who suffers from this disorder can be subjected to extreme physiological and psychological distress.

It is important that personal trainers, and other professionals working in the health and fitness industry, are aware of the early signs and symptoms of exercise addiction to ensure that their clients enjoy an adaptive, long lasting, and enjoyable exercise experience.

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