Since the ‘fitness boom’ of the 1970s, much has been written about the benefits of physical activity. At every turn, we hear that we should exercise more – and with good reason, given all the physiological, psychological and social benefits of being physically active. But does an activity associated with so many benefits have the potential to be harmful?

For a small number of people (about 0.4% of the population), physical activity goes into overdrive and becomes an addiction. Exercise addiction is a craving for leisure-time physical activity, resulting in uncontrollably excessive exercise behaviour that manifests itself in physiological (eg tolerance) and/or psychological (eg withdrawal) symptoms.

A lot of men seem to be ‘gym crazy’ these days – but for some, exercise can become an addiction. Identifying when exercising to keep fit tips into an addiction with all the characteristics such as tolerance and withdrawal is difficult, as the authors describe.

BLOG
Can you become addicted to exercise?
Join the discussion:
www.trendsinmenshealth.com/blog
Primary exercise addiction is different from the excessive exercise that occurs in some patients with eating disorders (also known as secondary exercise addiction), in which the exercise represents a means to control weight. In eating disorders, excessive exercise is used for caloric control and weight loss, rather than for escape from a psychological hardship. Men are more at risk of primary exercise addiction and women secondary exercise addiction.\textsuperscript{3,4} The focus of this article will be on primary exercise addiction.

**IDENTIFYING EXERCISE ADDICTION**

It is important to emphasise that while exercise may represent an addictive behaviour for a small number of people who engage in it to an extreme and unhealthy level, habitual exercise is not inherently abusive. It is the compulsive need and pathological motivation to exercise that distinguishes exercise addicts from other high-volume exercisers, like elite athletes, whose intrinsic desire to exercise is under control and does not regularly result in emotional, social or occupational disruptions.

To determine the extent of an exercise addict’s suffering, seven key criteria have been developed (Box 1). At least three of the seven criteria must apply for an exerciser to qualify as addicted.

It can be difficult to separate healthy exercise from obsessive exercise. Meeting some of the criteria does not necessarily mean someone is an exercise addict. A lot of people with a healthy attitude towards exercise choose to become trainers, work at a gym and run marathons. It is when exercise becomes all-consuming – when one starts losing friends, having conflicts with family, forgoing social activities or missing work opportunities – that a workout schedule becomes cause for concern.

**WHAT ARE THE RISK FACTORS?**

A positive relationship exists between exercise addiction and other addictions such as overuse of the internet and alcohol addiction.\textsuperscript{5}

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**Box 1. Seven criteria that indicate exercise addiction. People fulfilling three out of the seven criteria can be regarded as exercise-addicted**

1. **Tolerance:** The exerciser needs to increase the time spent or the intensity of the workout to achieve the originally desired effect (e.g., better mood, more energy). The amount of exercise that once sufficed no longer makes as much of a difference.
2. **Withdrawal:** In the event an exerciser cannot undertake his preferred routine as planned, negative emotional states/moods like anxiety, depression, anger and frustration occur. Addicts may also feel compelled to exercise just to offset these negative feelings.
3. **Intention effects:** Despite originally planning to spend 30 minutes on the treadmill, an exercise addict might spend upwards of 50 or more minutes in motion.
4. **Loss of control:** Even with the awareness that the exercise schedule is getting out of hand, an exercise addict is unable to stop or cut back. More repetitions are added and more miles are run, even if the exerciser wants nothing more than to go home, have dinner with family/friends, or sit on the couch and relax.
5. **Time:** A large part of an exercise addict’s time during the day is devoted to physical activity. Vacations are often fitness-oriented (e.g., skiing, walking), employment may be exercise-oriented (e.g., working at a gym or being a personal trainer) and reading material may be largely fitness-related. Thus, recreation/social interactions are centered around exercise, making it a major part of the individual’s identity.
6. **Conflict:** Non-fitness-related activities fall by the wayside. Time spent relaxing with friends or family is truncated to make more room for exercise. What once brought an exercise addict fulfillment may seem like a nuisance because it gets in the way of exercise.
7. **Continuance:** Exercise addicts often push past pain and illness to finish a workout – even against their doctor’s orders. This can have long-term consequences in relation to chronic injury.

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**Figure 2. Exercise addicts often continue to exercise even when injured, and this can lead to chronic long-term injury**
People who strongly identify themselves as an exerciser and have low self-esteem are more at risk for exercise addiction. Individuals with neurotic and extroverted, as opposed to agreeable, personalities are more at risk of exercise addiction.

**DIAGNOSING EXERCISE ADDICTION**

Exercise addiction falls within the field of behavioural addictions, but due to the lack of sustained and methodologically rigorous research for exercise addiction as a morbidity, it is not listed as a mental disorder in the latest (fifth) edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). Thus, the diagnosis of exercise addiction is a clinical judgment. Validated and reliable assessment tools exist to determine symptom severity, such as the Exercise Dependence Scale (Figure 3).

**TREATMENT OF EXERCISE ADDICTION**

Limited literature exists on how to treat exercise addiction. Like most behavioural addictions, some form of cognitive-behavioural therapy (CBT) is recommended to help manage the underlying mood, emotional and cognitive issues that give rise to, fuel and become exacerbated by exercise addiction.

Identifying exercise addiction in its early stages can direct patients towards behavioural treatments that help them manage symptoms before they become excessive, or irreversible injury ensues. Although no longitudinal studies of exercise addiction exist, case reports reveal that individuals suffer for many years with long-term physical overuse injuries and emotional distress. Working with a fitness professional familiar with excessive exercise to re-learn what a moderate amount of physical activity looks and feels like is also advisable in helping exercise addicts adjust to a more manageable lifestyle.

**SUMMARY**

Exercise addiction is a pattern of physical activity that exceeds what most fitness and medical professionals consider ‘normal’, causes immense psychological anguish (either during, following or in anticipation of exercise), engulfs an exercise addict’s personal, professional and social life, and is experienced by the addict as difficult to control or reduce in frequency – even in the face of illness or injury. If a person reports feelings of anxiety and depression when unable to exercise, spends little or no time with family or friends because of physical activity involvement, or continues to exercise despite a doctor’s advice to allow an overuse injury to heal, he or she could be considered at high risk for exercise addiction.

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**Instructions.** Using the scale provided below, please complete the following questions as honestly as possible. The questions refer to current exercise beliefs and behaviours that have occurred in the past three months. Please place your answer in the blank space provided after each statement.

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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tbody>
<tr>
<td>1</td>
<td>I exercise to avoid feeling irritable.</td>
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<td>2</td>
<td>I exercise despite recurring physical problems.</td>
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<td>3</td>
<td>I continually increase my exercise intensity to achieve the desired effects/benefits.</td>
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<td>4</td>
<td>I am unable to reduce how long I exercise.</td>
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<td>5</td>
<td>I would rather exercise than spend time with family/friends.</td>
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<td>6</td>
<td>I spend a lot of time exercising.</td>
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<td>7</td>
<td>I exercise longer than I intend.</td>
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<td>8</td>
<td>I exercise to avoid feeling anxious.</td>
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<td>9</td>
<td>I exercise when injured.</td>
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<td>10</td>
<td>I continually increase my exercise frequency to achieve the desired effects/benefits.</td>
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<td>11</td>
<td>I am unable to reduce how often I exercise.</td>
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<td>12</td>
<td>I think about exercise when I should be concentrating on school/work.</td>
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<td>13</td>
<td>I spend most of my free time exercising.</td>
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<td>14</td>
<td>I exercise longer than I expect.</td>
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<td>15</td>
<td>I exercise to avoid feeling tense.</td>
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<td>16</td>
<td>I exercise despite persistent physical problems.</td>
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<td>17</td>
<td>I continually increase my exercise duration to achieve the desired effects/benefits.</td>
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<td>18</td>
<td>I am unable to reduce how intensely I exercise.</td>
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<td>19</td>
<td>I choose to exercise so that I can get out of spending time with family/friends.</td>
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<td>20</td>
<td>A great deal of my time is spent exercising.</td>
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<tr>
<td>21</td>
<td>I exercise longer than I plan.</td>
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</table>

**Scoring:** Individuals who are classified into the dependent range on three or more of the DSM criteria are classified as having exercise dependence. The dependent range is operationalised as indicating a score of 5 or 6 for that item. Individuals who scored in the 3 to 4 range are classified as symptomatic. These individuals may theoretically be considered at risk for exercise dependence. Finally, individuals who score in the 1 to 2 range are classified as asymptomatic.

**Criteria:** Withdrawal effects = items 1, 8, 15; Continuance = 2, 9, 16; Tolerance = 3, 10, 17; Lack of control = 4, 11, 18; Reduction in other activities = 5, 12, 19; Time = 6, 13, 20; Intention effects = 17, 14, 21.

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**Figure 3. Exercise Dependence Scale-21**
KEY POINTS

- Primary exercise addiction is more common in men than women
- Because people with exercise addiction often present with main complaints related to extreme exercise (e.g., overuse injuries), healthcare professionals must be vigilant in recognizing the symptoms of exercise addiction
- Although exercise addiction is not classified as a behavioral addiction in the Diagnostic and Statistical Manual of Mental Disorders, it is characterized by similar negative effects on emotional and social health as other addictions
- Low self-esteem and agreeableness, and high perfection, neuroticism and extroversion are related to exercise addiction
- Screening tools such as the Exercise Dependence Scale can be used to determine if someone is at risk for exercise addiction

Declaration of interests: none declared.

REFERENCES