Food Addiction: Truth or Scare?

By MEGAN SENGER

Cocaine. Heroin. Chocolate fudge brownies. All could be dangerous substances of abuse leading to chronic addiction and possibly death, recent research suggests. So when your fitness client sheepishly says he can't help gorging on ice cream, you may in fact be speaking to someone with a clinical problem.

But can a person really be addicted to food? While rarely discussed in scientific literature as recently as a decade ago, the nascent concept of food addiction is making rapid inroads in the academic community and popular culture. "It's still a relatively new area [of scientific inquiry,] but as more studies emerge on this topic the concept is gaining more validity," says researcher Nicole Avena, Ph.D.

Have you exerienced or witnessed addictive behaviors related to food? Let us know your thoughts in the comment section below.

Because this is an emerging theory, you and your clients may be unfamiliar with this growing field of study. Read on for a comprehensive overview on the topic, and learn exactly what food addiction is, the scientific evidence supporting the theory, and what to do if you see behavioral red flags that may indicate your client is a food addict.

Food Addiction Defined
Food addiction is a chronic, out-of-control or compulsive overconsumption of certain types of pleasure-giving foods despite potentially negative social and health consequences.

"Food addiction involves the compulsive pursuit of a mood change [through binge eating]," says Kay Sheppard, M.A., a mental health counselor and certified eating disorder professional who has authored three books on food addiction. "This is a disease that is primary, chronic, progressive and potentially fatal."

Are all foods addictive?
Scientific literature describes the plausibility of becoming addicted to certain highly palatable components of food such as fats, sugars and potentially salt, which are typically found in abundance in processed food products.

Interestingly, there are virtually no whole foods found in nature containing high amounts of both sugar and fat (with human breast milk being one notable exception), explains Ashley Gearhardt, M.S., M.Phil., a doctoral candidate in clinical psychology at Yale University in New Haven, Conn., and a student affiliate of the Rudd Center for Food Policy and Obesity.

The absence of high sugar-and-fat combinations in nature means that foods with the strongest addictive potential are most likely modern and man-made. Yet whether the mere presence of fat or sugar—or their presence in specific proportions to each other—increases a food's addictive potential remains relatively unstudied and unknown.

Are all food addicts obese?
Size and addiction do not necessarily correlate, says Avena, an assistant research

professor at the University of Florida College of Medicine in Gainesville, Fla. "It is likely that a subset of obese people have food addiction, but not all," she explains. "Also, there is likely a subset of people who are not obese, but who may also meet the criteria for food addiction."

Science Weighs In: The Evidence for Food Addiction
"Food addiction is still a controversial issue, but evidence for its existence is steadily building," Gearhardt notes. Such substantiation comes from three sources: evolutionary plausibility, behavioral evidence and biological evidence.

Evolutionary Plausibility
For our early ancestors, it would have been highly advantageous for a fat/sugar "high" to be hard-wired into our brains, as it would encourage the search for, and consumption of, life-sustaining energy sources.

Yet today's food environment—with its easily accessible, mass-produced sources of fat, sugar and salt—is unique in human evolution, Gearhardt explains. The accessibility of these so-called "palatable" foods, combined with this Darwinian enjoyment of fats and sweets, supports the notion that food addiction is highly plausible in the modern junk-food era (Taylor, Curtis and Davis, 2010).

Behavioral Evidence
The medical community recognizes certain behaviors to be associated with substance abuse. According to the American Society of Addictive Medicine (ASAM), a physicians' professional organization, these include an increased "hunger" for substances of abuse (i.e., cravings) and an inability to consistently abstain from use (see sidebar, "Addiction Defined," for more details). Put in terms of food addiction:

- Sugary foods stimulate the same "tolerance" and "withdrawal" behaviors associated with drug addiction. Rats allowed to binge-feed on sugar solution consume increasingly greater amounts over time, demonstrating an increasing tolerance to the effects of the substance. When deprived of the sugar solution, the rats also showed signs of opiate-like withdrawal, including teeth-chattering, tremors, shakes and "behavioral manifestations of anxiety" (Avena et al., 2009).
- Some gastric bypass patients who lose weight "transfer" their addictive behaviors to other compulsions, such as gambling or compulsive spending. Known as a "transfer of addictions," this phenomenon supports the notion that some people have a "hard-wired" tendency to become addicted (Taylor, Curtis and Davis, 2010).

Biological Evidence
Research in this area is extensive and biochemically complex. Major findings include the following:

- **Drugs and sugar release the same pleasure-inducing chemicals in the brain.** Ingestion of sugar stimulates the release of opioids (a morphine-like chemical) and dopamine (a neurotransmitter that regulates nerve functions) in the brain—as do drugs of abuse. Dopamine, in particular, is known to play a major part in the brain's ability to predict reward and motivation, and is associated with the feelings of enjoyment felt from alcohol, cocaine and heroin use (Wang et al., 2009).
- **Drugs and food activate the same regions of the brain.** Imaging studies show that the same areas of the mesolimbic pathways (i.e., neural areas associated with motivation and reward) are activated by both drugs and food (Taylor, Curtis and Davis, 2010).
- **The same medications can be used to treat withdrawal from both food and drugs.** The medication naltrexone is used to help recovering addicts combat cravings for alcohol, heroin, morphine and other drugs of abuse. As an opioid blocker, it has also been shown to reduce cravings for food (Taylor, Curtis and Davis, 2010).
- **Brain activity associated with substance abuse correlates positively to self-assessed levels of food addiction–related behaviors.** The Yale Food Addiction Scale (YFAS) is a psychometric questionnaire that asks subjects to self-assess how frequently they display food addiction–related behaviors. By using magnetic resonance imaging (MRI) scans of the subjects' brains, high YFAS scores were shown to positively correlate to neural activation patterns associated with substance abuse (Gearhardt et al., 2011).

Yet the concept of food addiction it is not without its detractors, including David Benton, Ph.D., D.Sc., a professor of psychology at the

Addiction Defined

For physicians and mental health professionals, the clinical definition of a "substance-use disorder" is recorded in the standard reference for psychiatric diagnoses, the *Diagnostic Statistical Manual* (DSM-V.) The DSM-V defines addiction as "a maladaptive pattern of substance-use leading to clinically significant impairment or distress, as manifested by two (or more) of the listed criteria occurring within a 12-month period." Such DSM criteria include: consuming a substance in larger amounts or over a longer period than was intended and a persistent desire or unsuccessful efforts to cut down or control substance use. The American Society of Addiction Medicine (ASAM) cautions that "the diagnosis of addiction requires a comprehensive biological, psychological, social and spiritual assessment by a trained and certified professional." And while food addiction is not as of yet specifically recognized by either the DSM or the ASAM, Gearhardt notes that this may change. "If evidence continues to build, acceptance in the DSM and ASAM would be an important indicator of validity and may allow people to get insurance funding for food-addiction treatment," she says. For additional information on red-flag behaviors that may indicate food addiction, check out the following resources:

- Kay Sheppard's food addiction definition and self-assessment for clients
- Full YFAS study self-assessment criteria for food addiction

University of Swansea in Swansea, Wales. Benton authored a 2010 paper questioning the conclusiveness of current theory. "Remember that animal models and brain scans can never demonstrate addiction," Benton says. "Rather, they can only generate a hypothesis that needs testing."

For example, while it is true that eating sugar and ingesting drugs each correlate to a pleasurable dopamine response in the brain, Benton argues that such a chemical response is also elicited by food, sex, music and humor, and does not necessarily signal a physical addiction.

Nevertheless, the vast majority of scientific inquiry to date supports the theory of food addiction, and papers refuting the concept outright are few and far between. "I would say that the topic is burgeoning, but that it is not as well established as that of alcohol addiction," notes Avena.

Scientific debate aside, there are many clinicians who believe that food addiction is both real and treatable. And for fitness professionals, the key to helping starts with understanding how and why to refer a troubled client for professional assistance.

Is Your Client a Food Addict?

Perhaps you have noticed suspicious patterns in your client's food journal, or maybe a trainee's lack of successful weight loss seems to indicate secret binging. "It is likely that many of [a fitness professional's] clients are secret sufferers of this disease and experience great shame about it. They may not even know that there is a solution and they may think they are alone," says Naomi Lippel, the managing director of Overeaters Anonymous in Rio Rancho, N.M.

When to refer?

To assess a client's situation, Sheppard suggests taking a closer look at some of his or her behaviors. Red flags might include if a client can't stop eating whenever he or she wishes; if a client manipulates ways to be alone so that he or she can eat privately; if he or she has ever hidden food or eaten in secret; or if his or her eating or weight has ever interfered with jobs, relationships or finances. If these types of behaviors seem to exist in a client's life, it is possible he or she needs professional help.

How to refer?

Approaching a client whom you suspect to be a food addict can be a delicate process, since treatment of addiction is not within your scope of practice and the client may be in denial. Adding confusion to the referral question is the fact that food addiction is an emerging field of research lacking a clear conclusion as to what treatment type is most effective, Gearhardt says.

With these caveats in mind, she suggests first mentioning to your client that you have noticed certain patterns of consumption and that you are concerned for his or her well-being. She recommends referring troubled clients to a 12-step program (such as Overeaters Anonymous) or to a clinician who does behavioral treatment (refer to www.abct.org). Alternately, making a referral to a medical doctor could also be of help, adds Avena.

What's the fix?

Through private therapy and self-help groups, therapists who specialize in the treatment of addictive illness can provide clients with tools for stabilizing difficult emotions, Sheppard says. Treatment begins with breaking the binge cycle and providing emotional and dietary support through withdrawal and recovery, she adds.

Will exercise help?

Although research studies have not yet formally explored this question, Mark Gold, M.D., Chair of the Department of Psychiatry at the University of Florida and an eminent addiction-research specialist, notes that the scientific community anecdotally supports the notion that exercise helps with recovery and is, therefore, typically encouraged.

Moving forward, it is universally agreed that more research is needed. "There are a few important questions we still need to answer, such as which foods or things in foods are addictive, and whether food addicts respond differently to clinical treatment," says Gearhardt.

Regardless of future findings, using compassion to approach clients who struggle with food issues will always be good medicine.

References

Avena, N.M., Rada, P. and Hoebel, B.G. (2009). Sugar and Fat Bingeing Have Notable Differences in Addictive-like Behavior. *Journal of Nutrition,* 139, 3, 623–628.

Benton, D. (2010). The plausibility of sugar addiction and its role in obesity and eating disorders. *Clinical Nutrition*, 29, 3, 288–303.

Gearhardt, A. et al. (2011). Neural correlates of food addiction. *Archives of General*

Psychiatry, 68, 8, 808–816.

Taylor, V.H., Curtis, C. and Davis, C. (2010). The obesity epidemic: The role of addiction. *Canadian Medical Association Journal,* 182, 4, 327–328.

Wang, G.J. et al. (2009). Imaging of brain dopamine pathways: Implications for understanding obesity. *Journal of Addiction Medicine,* 3, 8–18.

Megan Senger is a writer, speaker and fitness sales consultant based in Southern California. Active in the exercise industry since 1995, she holds a bachelor's degree in kinesiology and English. When not writing on health and lifestyle trends, techniques and business opportunities for leading trade magazines, she can be found in *ardha uttanasana* becoming reacquainted with her toes. She can be reached at www.megansenger.com.
