SOARING Rx

BY DR. DANIEL L. JOHNSON

Am I Addicted?

To persist in doing anything –
out of proportion to its importance;
minimizing the needs of others;
without evident concern for its adverse sequelae;
not refraining when it's appropriate to.
This is "addictive behavior."

I've often said, after a day of soaring, "I've been feeding my addiction." We all hear and read allusions to the addictiveness of flying.

Is this true, or is it sardonic humor?

This month it seems fun to explore this question. Are we addicted? If so, how does this compare to other addictions? I'll write a little bit on addiction, and you can decide for yourself.

Drug addicts are pretty rare in aviation. They mostly spend their money on something other than aviation, they don't study or take tests well, they tend not to show up reliably for training appointments, and they behave strangely (which is off-putting to instructors and examiners).

Addiction is necessarily a professional interest for doctors like me, even if our only involvement is to try to avoid feeding addictions when we prescribe, so I've paid close attention to this.

External v. Internal View

Once, many years ago, a man was dragged into my exam room by his wife, who wanted him fixed. As soon as they started talking, they started correcting each other. I said, "Stop. You're both right." Looking at him, I said, "You're looking at yourself from the inside; she's looking at you from the outside. I can't understand the situation, unless I can hear both views."

We made real progress then. What I had done is something that is often needed. The inner experience and the outward behavior are not obviously linked and are often misinterpreted. We reflect each other like fun-house mirrors, with amazing distortions if we bother to ask.

Behavior is often misinterpreted. We consistently fail to say to the person who's done something annoying or inexplicable, "Excuse me. What were you thinking?"

We tend to expect our intentions to be obvious. Anyone who's been married eventually learns this is a false hope. This is not how life works. Telepathy fails. That's why we have language.

In any case, we use "addictive *behavior*" to remind ourselves that we don't know the addict's (or animal's) thoughts. Plus the "addictive *experience*" is a mental and emotional process and therefore, private.

We also use "addictive *behavior*" when we're pretty sure that a person is not physically "dependent" (won't have medical problems when they quit), yet the behavior is analogous to that of a drug addict. There are many such situations. The commonest is possibly the "workaholic."

Individual susceptibility

Even addictive chemicals do not hook everyone identically. For example, I've noticed that many people drink too much alcohol without being chemically addicted ("too much" means they have social or medical impairment from it). I've often said to a person, "You're not an alcoholic; you just drink too much." Such people can easily quit if they become convinced they should.

But about 1% or so of people who drink steadily cannot stop or even limit themselves reasonably, and have emotional or physical withdrawal symptoms when they stop.

Classic "substance" addiction

Similarly, among the most addictive drugs is nicotine. Nearly everyone who quits, suffers. (Some claim not to.) Cocaine, heroin, and opiates all have difficult withdrawal symptoms that can cause death. These classic physical withdrawal symptoms are a hallmark of standard addictions.

The *behavior* of people addicted to these classic substances creates the prototype of "addictive behavior."

Features of addictive behavior

First, researchers using animal models of addiction use the term "reward" as a general description of "something that keeps the behavior going." Obviously, "reward" is an anthropomorphism. With people, we can ask what's going on inside that keeps the addiction going, and when we do, there are disparate explanations. They all have in common that the person (or animal) persistently seeks the experience that the behavior brings.

I judge that addictions differ in two important ways:

1. Some addictions clearly involve the preexisting biochemical systems of the brain, prototypically opiates. Others clearly do not, such as music, Internet, or gambling.

2. Some addictive "rewards" result in "physical dependence." That is, the new absence of an addictive chemical causes physical or mental distress. These may be very mild, as with caffeine, or very severe, as with alcohol (DTs) or opiates ("cold turkey"). Other addictive rewards involve no physical withdrawal. Examples include soaring or reading trashy novels.

Persistent Behaviors

Compulsive behaviors are not addictions.

First, these are usually repetitive motor movements or small tasks.

Second, there's seldom an identifiable "reward."

Third, they are often distracting, but don't typically have serious adverse consequences.

Fourth, compulsive behaviors can often be left aside voluntarily.

continued on page 12

Limiting definitions

Some lay people prefer to restrict "addiction" to the physical dependence we develop to drugs. In my own experience, this is related to the shame attached to the term.

For example, decades ago, in a conversation with an obese friend, I said that sugar and fat seem addictive. He vigorously objected. But there's abundant evidence that some people display all the characteristics of addiction in their pursuit of "un-health."

For another example, in a similar conversation, a patient could not see any similarity between a friend's addiction to child pornography, which horrified him, and his own enthusiastic promiscuity. But in this situation, the friend's addiction had been secret and caused no waves until the old man's secret was discovered. On the other hand, the horrified man blew up each of his own marriages, estranging family, friends, and children.

Soaring as addiction

Just for fun, let's look at the criteria that I invented and ask ourselves whether we are addicted.

Do we persist in soaring activity –

- out of proportion to its importance
- minimizing the needs of others
- without evident concern for its adverse sequelae
- not refraining when it's appropriate

Disproportionate importance

Soaring cannot be addictive, because – if we think about this soberly, *nothing* is actually more important. Sure, there are competing interests that sometimes prevent us from exercising the right to fly – job, weddings, funerals, kids' juvenile activities, births, surgery, and so on – but the idea that any of these is actually more important than soaring is simply divorced from reality.

The needs of others

Might we, in our soaring involvement, fail to recognize the needs of others? If we invite our children to the gliderport, and they decline for whatever childish reason, are they not themselves responsible?

And adults – the definition of "adult" is "independent in self-care." We aren't responsible for other adults, are we? As Cain said to God, "Am I my brother's keeper?" (It seems that God and Cain answered this question differently, and that God did not view this as a rhetorical question with a strictly negative answer.)

So we see, based on this reasoning that soaring can't be addictive because "needs of others" is a concept that belongs, perhaps, to the non-aviating part of society.

Concern for adverse sequelae

We've seen the old smoker suffer the ravages of tobacco; we've seen or read about the terrible things those other people do when they've been drunk. We know that sharing needles also shares HIV and hepatitis C.

What consistent adverse effects pertain to soaring? None come to mind as I ask myself this question. Can't think of one, despite scratching my head slightly. So soaring cannot be addictive because it has no bad side effects.

Inability to quit when it's time

As we all know, great soaring days are few and far between, though sometimes there's a run of them. "Quit" has no meaning on snow-covered tundra because it's not possible to start.

Besides the scarcity of great days, there are other hindrances to getting a frequent soaring fix, such as availability of glider operations, a slender bank account, getting crew together, and so on.

We can reasonably ask, given the scarcity of days and resources, whether it's *ever* appropriate to refrain from soaring when it's possible.

Based on this fact, soaring can't be addictive because it is never appropriate to hold back when it is possible to go.

Chemically Addicted Pilots?

With that taken care of, let's turn to the traditional addictions – tobacco, alcohol, narcotics, and street drugs – and newer "behavioral" addictions: sugar, fat, caffeine, work, sex, fast cars, gaming, et cetera.

It's clear that chemical addiction is less common in soaring than in the general public, just as it's less common in other life roles that require planning, training and certification, and group cooperation.

Still, it's not unheard of. I have personally seen one or two soaring pilots actually smoke cigarettes. Humorous specula-

tion occurred when a beloved designated examiner insisted on being paid only in Bombay Sapphire ("for wintertime consumption around the fire").

In soaring, as in the rest of society, the "behavioral" addictions are more common. There's always debate whether these are truly addictions rather than indiscipline. In any case, there's no question that the behavior often follows the addictive pattern.

Besides this, when I talk to patients who should limit their use of fat, sugar, and amount of food because they are suffering physically from having not done so, they are quite clear that they want to limit themselves, are ashamed of not doing so, understand they will suffer more if they do not, and yet are unable to limit themselves as they need to.

People are "the same" in general, but individuals differ, sometime profoundly, in both heredity and formative experiences. This yields dramatic differences in susceptibility to addiction and its persistence.

The physiology of addiction.

When I began work on this topic, I intended to review the neuroanatomy and neurophysiology of addiction and summarize it for you. But there are too many things that must be done this week, and this column is, actually, an optional activity. Plus, this is a dauntingly complex area.

First, addiction seems to deeply involve malfunction of dopamine activity in particular regions of the brain. (It's curious that schizophrenia involves similar abnormalities.)

Second, "the same neurobiological pathways that are implicated in drug abuse also modulate food consumption..." (Blumenthal, DM; Gold, MS. Neurobiology of food addiction, in Current Opinion in Clinical Nutrition & Metabolic Care: July 2010 – Volume 13 – Issue 4 – p 359–365 doi: 10.1097/MCO.0b013e32833ad4d4.)

This being the case, the addictive behavior of the obese may actually involve the same brain processes as drug addiction.

In addition, genetic associations have been demonstrated for addiction to alcohol and drugs and for obesity.

The problem with "food addiction" is that though we can safely go "cold turkey" from food, we can't abstain long. We can safely stop permanently narcotics, alcohol, marijuana, nicotine, marijuana, and even sex. But we cannot permanently stop using food. I guess you knew that.

Besides this, research has shown that in drug addiction, there is "dysfunction in cortical networks for decision-making and cognitive control," meaning that addicts not only are hooked biologically, but their decision-making circuits are damaged. This implies that one cannot expect current or former addicts to be able to reliably exercise good judgment and self-control.

The bottom line is, I think, that we have to be wary of permitting ourselves to be captured by either behavior or chemistry that has been associated with addictive behavior. Self-discipline can become a habit.

Acknowledgments.

Thanks to Dr. Rex Ragsdale for suggesting this topic (perhaps tongue-in-cheek).