



A Breakfast You Can Tolerate

This is a story about a factory. It's not the best job in the world, but it's not the worst job either. After several years, the factory starts to have some success and increases its profits. The owner of the factory decides to enhance worker morale by providing free plain bagels in the morning for breakfast. The factory workers are immediately pleased with the free bagels and it becomes a treat to look forward to every morning. The workers happily praise the factory owner for his kindness providing the delightful free bagel breakfast every work day.

After a few weeks since the bagel breakfast experiment is going so well, the factory begins to provide a variety of types of bagels for the factory workers including various flavored cream cheeses. The factory also provides coffee and juice for the factory workers free breakfast. The workers are even happier. Not much later, again since the breakfast program is working so well, the owner hires a part time breakfast cook to make eggs and bacon for deluxe bagel sandwiches. Soon, a variety of flavored gourmet coffee choices are offered as well. As expected, with each added improvement, the factory workers are more and more pleased with the free breakfast program and all of the positive changes.

After a while, the factory gets another huge contract which increases profits even more. Since the free breakfast program is going so well, the owner decides to provide a full breakfast buffet every morning with a full omelet station, as well as added choices of waffles, pancakes, sausage, bacon, fresh fruit, fried potatoes, hash browns, with many choices of drinks, flavored syrups and toppings. The factory workers are ecstatic with this amazing breakfast program which increases morale, attendance and gets workers to work early every day.

After several months at the factory however, things start to change. For one thing, the factory workers attitude declines. The free breakfast buffet was once viewed as a special luxury and treat but soon is viewed as a necessity and some less grateful workers begin to complain about various aspects of the buffet. Other factory workers start treating the breakfast buffet with less appreciation by wasting food and leaving a huge mess behind in the morning.

Around the same time, the factory's profits start to dwindle due to problems in the economy and the breakfast buffet becomes too much too for the factory owner to afford. As a way to trim the budget the owner goes back to just providing basic bagels and coffee for the workers in the morning. The workers respond with the "Great Bagel Riot" in which several employees end up getting fired for throwing bagels in anger and protest. Some workers even quit in anger and they could be heard grumbling about the owners "cheap, lousy breakfast" as they walked off the job. The owner thinks to himself about how just a few months ago, everyone was so happy with the free bagels and coffee and how things had really changed for the worse rather quickly.

What is the moral of the story? It has nothing to do with breakfast. This story is an illustration of a common substance use related phenomenon of **tolerance**. Most people are quite familiar with tolerance:

Tolerance, n. – the power of enduring or resisting the action of a drug (Usually occurring over time with regular use)

Questions for Discussion:

1. Can you explain how the breakfast story illustrated tolerance? (Think about how it took more and more to get the effect desired by the owner) – How can you compare this with substance use?
2. How has tolerance come into play in your life particularly with substance use? (If you had a high tolerance, please explain without bragging about it)
3. How does tolerance play a role in the process of substance use progressing to substance dependence and then even possibly addiction in some cases?



A well-known fact about tolerance: (Briefly review and discuss)

Tolerance is all about “more” – Most people are very familiar with the concept of tolerance. Tolerance is one of the key factors that contributes to addiction and dependence. With time, as an individual develops a tolerance, it can take more and more of a substance to achieve the desired effect or involve using stronger substances.

- **Jimmy:** “When my friends and I started smoking weed we didn’t spend more than 5 dollars a day each. Now I am easily spending over \$150/week on my own, using my bong or using high THC wax or oil
- **Mary:** I remember when I used to sniff one of my grandmothers painkillers and I would be good for several hours. Now I need at least 10 bags of heroin just to make it through the day
- **Pat:** “I remember when a six-pack was all I needed on a Saturday night. Nowadays I can drink a six pack before I even leave to go out to the bar on a Saturday, then I drink way more once I get there, which usually leads to me getting some coke later on to keep the night going”

Some lesser-known facts about tolerance:

Directions: Review each fact below about tolerance. As a group come up with your own examples for each tolerance fact similar to the ones provided above (Jimmy, Mary, Pat) You can use personal experience if you would like or else just come up with your own made up examples illustrating each tolerance fact.

- One way to do this is as a group together reviewing tolerance facts then discussing examples that group members volunteer
- Another way to do this is to divide up the group into smaller groups of 2 or 3 people and give each smaller group some of the tolerance facts below with the assignment to come up with an example. Then reconvene the larger group together and review each tolerance fact and the examples that the smaller groups came up with.

Tolerance Facts:

1. **Chronic Tolerance** (or longer term physiological tolerance) can take weeks or months to occur. Chronic tolerance happens physically when the body and brain adapts to regular exposure of the drug resulting in the need to use more. Larger doses of a drug is needed due to these physical adaptations
2. **Acute Tolerance** happens over the short term. A drug associated with acute tolerance is cocaine. In the beginning of the night, that first line of cocaine may have a strong effect. However, after doing cocaine for an extended period that same evening, that same line of cocaine later in the evening may not deliver the same high as it did earlier due to acute tolerance. This can result in “chasing the high”
3. **Psychological Tolerance** (also known as “learned tolerance”) happens when an individual behaviorally adapts to the effects of a drug. For example, a person with psychological tolerance may drink a significant amount of alcohol but not appear intoxicated to others due to “practice” keeping composure when intoxicated. Things that once were once challenging to do when high become much easier with time due to learned tolerance. This can happen with other substances as well
4. **Tolerance can be influenced by environment and context:** People will often talk about being able to drink more in a familiar environment such as at a bar but when not in that familiar environment, feeling more intoxicated. Some research has even shown that there may be increased overdose rates when someone uses opioids in a new environment due to tolerance levels being lowered outside of a familiar context. Simply put due to environmental tolerance individuals may be able to use more in settings which they have adapted to using in.



5. **Tolerance is inevitable** when there is regular use because **tolerance occurs at the cellular level.** Studies of the brain and nervous system show that when a drug is used repeatedly over time, the way the brain and nerve cells respond to a drug changes, thus causing the need for higher doses. (Therefore with regular use of most substances, tolerance is unavoidable)
6. **Tolerance doesn't just happen with illegal or "street" drugs:** Tolerance is a huge issue with prescription drugs that have abuse potential including painkillers, benzodiazepines, and stimulants. Tolerance is a common reason why people often ask their doctors for higher doses of these prescribed substances. This path of tolerance to a prescribed drug such as opiate painkillers can be a big factor in the progression of use from legal prescription opiates to use of stronger illegal drugs such as heroin
7. **Awareness of tolerance can be a factor in overdose risk** – Especially with opioids, a person is at high risk for overdose after a period of abstinence especially when that person attempts to use the same amount used before the period of abstinence because of knowledge of having a tolerance. Tolerance temporarily is reduced after a period of abstinence which can greatly increase overdose risk when using after a period of abstinence. The body simply is not ready for the old tolerated dose.
8. **The effects of "Tolerance Breaks" can be short-lived:** Because tolerance occurs at the cellular level, the brain has a memory for tolerance to most substances. For example, if someone smokes weed daily, they may take a tolerance break by stopping for a few weeks and then feel very high when returning to weed smoking, however, it often will not be long before the tolerance level is right back where it was especially when again using regularly. This occurs with others substances too
9. **Tolerance often does not reduce the adverse effects of a drug on the body** – Just because a person can drink large amounts of alcohol without feeling drunk, does not mean that the alcohol necessarily has less of an effect on the liver and other organs. Damage to the brain and body that may be caused by a drug is not automatically lowered just because a person develops a tolerance. Quite often due to tolerance, the damage to the body is being done without a person realizing it for many years
10. **Tolerance can lead to overconfidence which can lead to danger** – When an individual is aware of tolerance then overconfidence can lead to higher, more potentially dangerous doses of drugs, as well as increased combinations of drugs at the same time. Risk of harm is increased with larger amounts used and more drug combinations
11. **Not everyone experiences tolerance in the exact same way** – Many factors can influence an individual's tolerance level including the types of substances used as well as one's physical and mental health, genetic factors, and environment.
12. **Tolerance is not the same as addiction or dependence but it can be a significant risk factor-** An increased tolerance to a drug can lead to an increased need for more which can lead to dependence or even addiction. Not everyone who experiences tolerance to a substance will become addicted however just about everyone who becomes addicted first develops tolerance.

Closing Discussion:

Which of the facts about tolerance stood out to you? Do any of these apply in your personal example?

Regardless of whether or not you believe you have a problem: Do you understand how tolerance can be a factor in substance dependence and addiction?