

Hello, class.

So one of the major causes, or precipitating factors, in mental disorders is stress. When we talk about things like stress or anxiety disorders-- things like post traumatic stress disorder-- it can be one of the symptoms. And stress can also lead to things like psychotic breaks in schizophrenia. So today we're going to be talking about exactly how stress works.

When we talk about stress, we're referring to a person's reaction and adaptation to changes within their environment. When we think about people, humans are creatures of habit. They prefer things that are normal, and they expect certain kinds of interactions with their environments. So introducing a stressor-- which is something or some kind of event that causes stress in a person and disrupts a person's environment-- causes that person to react in certain kinds of ways.

For example, when you move to a new house. That's a normal kind of an event that you might have, which will cause stress within your life. And understandably so, because you're changing the normal environment, and the things that the person expects to occur within their previous home, or their previous environment.

Again, this is a normal reaction. It only causes problems either in excess-- when we have too much stress-- or when it's combined with other kinds of genetic predispositions, or other kinds of disorders. When this can cause a much larger effect within the person.

How a body reacts to stress is what we call a stress reaction. Stress within a person causes the activation of the person's autonomic nervous system, particularly the sympathetic nervous system. This is the part of the nervous system that excites the body, and it leads to the fight or flight response within a person. In other words, when a person feels like they're in danger, this is the kind of event that occurs.

For example, it leads to an increase in a person's heart rate. It leads to dilating of pupils, the release of adrenaline, which causes the person to get ready to move, or to run, or to increase their energy levels. It stops their digestion, and relaxes the bladder. It also excites the brain, particularly the limbic system of the person. This is the part of the system that sort of bridges the gap between the brain and the body.

A stress reaction is intended as a short-term response to something in the environment. As we said, it's a fight or flight response. It's not intended for extended periods of time.

Stress in the long term leads to other kinds of bodily reactions. They follow a general sort of pattern. This is what we call the General Adaptation Syndrome, which comes in three stages. So this is a three stage response that the

body has to long-term stress.

Remember, stress isn't just a response to danger. We do call it fight or flight, but that isn't the only thing that you might have stress towards. Rather, stress is any kind of changes within the environment, including danger, but it can also be things like perceived problems. Sort of mental events. Social or relational problems, or also mental or emotional stress on a person, as well. So we're talking about a wide range of things under this umbrella of stress.

The first stage in General Adaptation Syndrome is the Alarm stage. This is the body's initial reaction to the stressor in the short term. So all those things we talked about with the excitatory and the sympathetic nervous system. These are the things that are occurring at the alarm stage. This is good for avoiding danger, as we said, so it can be a positive thing in the short term. But it can also lead to things like headaches in a person, shortness of breath, a loss of appetite because your digestion stops during this time, and the person also feels tired, and low on energy. Because, again, they're expending a large amount of energy to build up this fight or flight response.

The second stage, after this initial stage of excitement, is the resistance stage. This is where, over time, the body begins to adapt to the stress, and to adapt to a more normal-looking state, while these excitatory things are going on within their body. In other words, the excitatory symptoms that we had, like the increased heart rate, and the nervousness, and things like that, they start to go down. However, this level of normal is achieved at a higher expenditure of energy. Because this person is still feeling stressed out, they have to expend more energy to get to that normal level in the person. So the body is essentially fighting an uphill battle at this point, and it begins to show negative symptoms of this kind of stress, and the effect it's having on the body, as the stress begins to wear on the person over time.

The final stage we have is exhaustion, and this is the point at which the body's resources are depleted, and it's just worn out from constantly responding to that stress within the environment. These autonomic nervous system reactions begin to reappear, because the body's no longer trying to attempt to be normal. They can't, because it doesn't have the energy for it. So the person might start sweating, they have an increased heart rate, again, a loss of appetite. All those things that appeared first in the alarm stage. Also, the person starts to show mental and emotional signs of stress. They might be very irritable. They might have a lot of anxiety, and they also might show mental fatigue, as well.

They can start to develop bodily reactions to this extended period of stress. Things like ulcers, or even diabetes, can result from long-term stress. And the person that is being stressed out in this kind of way, and can reach the exhaustion stage, also has a tendency to become sick more often. Stress can often affect a person's immune system, and make them more susceptible to illnesses.

This is in area of study that's really interesting for certain people. It's called psychoneuroimmunology, which is the

study of the brain and stress, and the effect that it can have on the body's immune system reaction, in the way that it fights off illnesses.

At this point, people in high stress jobs, things like police officers, social workers, teachers, things like that, can also experience what's called burnout during this exhaustion stage. This is when the person has physical, mental, and emotional exhaustion as a result of their high stress job and the extended affect that it's having on the person.