

The "Fight or Flight" response

The peripheral or autonomic nervous system is essentially divided into two halves. One half (the sympathetic nervous system) tends to "charge up" the body and the other half (the parasympathetic nervous system) tends to calm it down. These two halves work together, charging up the body when necessary, then calming it down when there is no need for direct action. Most people experience anxiety when the sympathetic nervous system is activated. This causes the sensation of nervousness, ranging from mild jitteriness to full-blown panic. Activation of the sympathetic nervous system is often referred to as the "Fight or Flight" reaction—meaning that the body is preparing to either fight the threat or run away from it.

The "Possum response"

Others experience stress as an over-activation of the parasympathetic system. Sometimes referred to as the "Possum Response," the nervous system actually "shuts down" the body when under stress, leading to feelings of fatigue, difficulty concentrating, yawning, and an increased desire to eat or sleep.

One good definition of anxiety or stress is when the nervous swings in either direction at the wrong time, or stays imbalanced long after it is necessary. If you're feeling any of the effects listed below, you may be suffering from anxiety or excessive stress.

Symptoms of Anxiety

(Sympathetic)

"Fight or Flight"

Charges up the body

Increase

May lead to headaches,
irritability, and insomnia

Increase

Feeling like your heart is beating
out of your chest

Increase

Breathing rapidly and possibly
hyperventilating

Towards muscles

Leading to indigestion and nausea

Dilated

Racing thoughts leading to
difficulty concentrating

(preoccupation)

(Parasympathetic)

"Possum Response"

Calms the body down

Decrease

Blood pressure

May lead to light-headedness
and disorientation

Decrease

Heart rate

May also lead to light-
headedness and disorientation

Decrease

Respiration

May cause excessive yawning
and light-headedness

Towards intestines

Blood flow

Leading to lethargy and fatigue

Pupils

Constricted

Slowed thoughts leading to
difficulty concentrating

Thoughts

(spacing out)

"Self-Talks"

How the mind perpetuates stress and anxiety

Who is the person that you talk to the most? Your best friend? Your parents?
People you text or instant message on-line?

The correct answer is yourself. Most of our dialogue is actually internal. We continually send ourselves messages throughout the day as our brains think and interact with the world. Messages that we send ourselves are sometimes referred to as "self-talks." These self-talks can be positive or negative, and typically occur without us even realizing it. Identifying our self-talks can shed light on whether our views, attitudes, and beliefs are generally healthy or unhealthy.

Self-talks:

Denial	telling ourselves "I don't believe this" or "this can't be happening" actually prevents us from dealing with a situation in the present.
Demands	we get hung up on the way we wish things were as opposed to accepting the reality and dealing with it, and place unreasonable demands on others and the world in general. (The key word: "should")
Over-reaction	we use "catastrophic" words to describe situations that may not necessarily be catastrophic. This triggers an exaggerated stress reaction in the body.
Always/Never	we convince ourselves that bad things always happen, or good things never happen. This leads to pessimism, puts a negative spin on the past, and exaggerates fears of the future.
All/Nothing	we exaggerate how black and white things appear, which leads to pessimism and anxiety.
Mind-reading	we think we know what others are thinking, which is usually exaggerated and tends to undermine our self-esteem, relationships, and sense of safety and belonging.

Negative self-talks make us feel worse emotionally and physically, and often affect our behavior in ways that are unproductive. These feelings and behaviors can become habitual, as self-talks reinforce feelings and behaviors, while the behaviors and feelings reinforce negative self-talks

Below are some examples of positive and negative self-talks.* I've used the example of misplaced homework as an example, but any issue or situation can be substituted.

Example: You've completed your homework, but can't find it the next day when you get to school and assume you've left it at home.

NEGATIVE self-talks:

Denial	Over-reaction	Always/Never	All/Nothing	Demands	Mind-reading	Result
I don't believe it! How could it not be here? I can't understand how I left it at home. This can't be!	This is terrible! I'm so dead! This is awful. This is killing me.	This always happens to me! I'll never get a good grade now. I'll never be a good student! I always make mistakes.	I'm a complete failure. Homework is totally stupid. This is the dumbest class ever. This is totally ridiculous. I can't take it anymore!	Teachers shouldn't assign so much homework! I have to be more careful. Mom shouldn't have rushed me this morning!	The teacher/other kids will think I'm: - irresponsible -stupid -not interested. My parents will think I don't care.	<u>Feelings:</u> Anger - 8 Disgust - 8 Anxiety - 9 <u>Physical:</u> Heart racing Nervous stomach <u>Behaviors:</u> Irritable Avoidance

Now consider more POSITIVE self-talks with the same situation

Denial	Over-reaction	Always/Never	All/Nothing	Demands	Mind-reading	Result
Did it happen? YES! So I must accept it and move on. How can I learn from this experience and improve.	This is unfortunate, but it's not the end of the world. I can survive this experience, and possibly grow and be better because of it. Either way, I'm in control of my reactions.	This doesn't ALWAYS happen. In fact, I'm usually pretty good with remembering my homework. One event (good or bad) does not define me. It's how I do over time.	I'm human, and make mistakes like everyone else. There's always more than one side of any issue. While this may be a setback, it doesn't mean I'm a complete failure.	Teachers assign what they think is appropriate. I would PREFER to have less homework but I just have to do my best when it's assigned. When I have a lot to do, I will keep everything in my binder so it's ready.	I'll never know for sure what other people are thinking, but if I really want to know, I can ask. Actually, I may even find that they are very sympathetic and understanding. Either way, it doesn't really matter because opinions always change.	<u>Feelings:</u> Anger - 2 Disgust - 1 Anxiety - 2 <u>Physical:</u> More calm, but still a little worried Lighter mood, not so stressed. <u>Behaviors:</u> More likely to organize my binder, set up a new system for homework, etc.

POSITIVE self-talks result in significantly improved physical and emotional well-being. And the more you practice, the better you get!

The Role of Breathing (and exercises that promote sleep)

The role of breathing in stress and anxiety

Breathing is the important link between the mind and the body. The breath can reflect what's going on in either the mind or body, but just as importantly, breathing exercises can be used to alter and improve our thoughts and emotions, and reduce anxiety.

Remember that the autonomic nervous system is broken down into two complementary halves that work together to keep the body in balance (homeostasis). One half charges up the body whenever a threat is perceived (or we've ingested caffeine or other drugs); the other half slows the body when no action is required.

The inhale "charges up" the body

There is evidence that every inhale has an effect on the sympathetic nervous system, subtly "charging up" the body, and every exhale subtly calms the body down. If someone sneaks up from behind and startles you, or you hear a loud bang, the body will initiate the "fight or flight" response. When people are startled, there is typically an initial gasp of air into the lungs. This helps activate the body for action. If you were to really exaggerate the inhale, you'll begin to feel like you're hyperventilating. Nobody would purposely want to start hyperventilating, but by *gently* exaggerating either the length or duration of the inhale, you will be able to increase your level of alertness.

The exhale calms it down

On the other hand, if you listen carefully to the way a very depressed person breathes, you'll notice a short shallow inhale and a long exaggerated exhale (a sigh). The exhale is thought to be related to the "possum response." Gently exaggerating the exhale (see 2:1 Breathing exercise below) will help calm the body—even to the point of inducing sleep.

Autonomic nervous system

<p>Sympathetic <i>"Fight or flight"</i> Charges up the body Inhale</p>	<p>Parasympathetic <i>"Possum Response"</i> Calms the body down Exhale</p>
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Harnessing the power of breathing

Based on the above, we can use breathing techniques to improve our physical and mental health in a number of ways such as:

Calming the body when we are tense or anxious

Calming our mind and focusing our thoughts, eliminating negative and obsessive thinking

see "The Power of Self Talks" by clicking **HERE**

Energizing the body when feeling lethargic and overwhelmed

Promoting sleep

Lowering blood pressure

Aiding the body's recuperative powers for better overall health and healing

The Exercises

Practicing the following exercises will provide immediate and long-term results

Even breathing (1:1) -- *For a relaxed but focused mind and energized body*

Imagine your breath as if it were a sine or radio wave.

Each incline represents the inhale. Each decline represents the exhale.

As you inhale, count to yourself throughout the entire length of the inhale. Then exhale smoothly and evenly for the same duration.

The inhale and exhale should BOTH be through the nose (never the mouth).

Allow the inhale to gently turn into the exhale (and vice-versa) so there are no pauses in between the breaths.

2:1 Breathing -- *For increased sense of calm and promoting sleep*

Begin by regulating the breathing as in 1:1 Breathing (above).

Slowly extend the length of the exhale so that it becomes (almost) twice as long as the inhale. For example, if you inhale to the count of 3, control the exhale so that it lasts to the count of 4, 5 or even 6 if comfortable.

Maintain smooth breaths without pauses in between the inhales and exhales.

Make sure that the inhale is natural (never forced or delayed). Only change the exhale based on the length of the inhale.

Breathe-Yourself-to-Sleep Exercise

Begin with the above two exercises for several breaths each.

Once you are comfortable doing 2:1 Breathing (exhale is longer than the inhale):

(Very few people complete this exercise before falling asleep)

Complete 8 full breaths (inhale and exhale) lying on your **back**

Complete 16 breaths lying on your **right** side

Complete 32 breaths lying on your **left** side

Why does smoking cigarettes calm people down?

How can it be that smoking cigarettes can calm people down? With every drag, you're taking a potent and extremely fast-acting stimulant drug that affects the brain within seconds. One would expect that smoking would trigger a "*fight or flight*" reaction in the nervous system, increasing pulse, blood pressure, and other bodily reactions to stress. And it does! But one thing that smoking also does is (paradoxically) mimic proper breathing. A typical drag from a cigarette is characterized by a smooth inhale followed by a long exaggerated exhale. This is the type of breathing associated with relaxation (see 2:1 breathing above).

So it's not the cigarette or the nicotine that calms people down. It's the **breathing**. Proper breathing is so powerful that it can even calm you down *despite* ingesting a fairly powerful stimulant drug.

So if you smoke, the next time you're feeling stressed, try one of the breathing exercises above. It's free. And you'll live a lot longer.

<i>Increase</i> May lead to headaches, irritability, and insomnia	Blood pressure	<i>Decrease</i> May lead to light-headedness and disorientation
<i>Increase</i> Feeling like your heart is beating out of your chest	Heartrate	<i>Decrease</i> May also lead to light-headedness and disorientation
<i>Increase</i> Breathing rapidly and possibly hyperventilating	Respiration	<i>Decrease</i> May cause excessive yawning and light-headedness
<i>Towards muscles</i> Leading to indigestion and nausea	Blood flow	<i>Towards intestines</i> Leading to lethargy and fatigue
<i>Dilated</i> Racing thoughts leading to difficulty concentrating (preoccupation)	Pupils	<i>Constricted</i> Slowed thoughts leading to difficulty concentrating (spacing out)
	Thoughts	

Anxiety can be addressed in 3 basic ways:

Psychologically	Physically	Socially
Counseling is one of the best ways to identify the source of stress and anxiety, and develop coping strategies	Research shows that a healthy diet, regular exercise, and sufficient sleep are highly effective antidotes to stress and anxiety See below for the most common anxiety-producing drugs, as well as strategies for sleep better	Spending quality time with friends and family are effective ways to minimize feelings of isolation, loneliness, and anxiety

5 easy and healthy steps to anxiety reduction

1. Talk to a counselor - to address fearful, irrational and/or obsessive thoughts
2. Eliminate caffeine and other drugs (see below) and minimize sugar intake
3. Exercise (run, walk, lift weights, do yoga, etc.)
4. Practice breathing exercises (see below)
5. Get sufficient sleep (see below)

The following can create mild to extreme **ANXIETY**

DANGER

Caffeine -- usually in coffee, teas and sodas. Caffeine has been shown to raise anxiety levels *significantly*. Some people with panic and anxiety issues have experienced drastic changes simply by eliminating caffeinated drinks

Drugs -- particularly

tranquilizers (e.g. *Xanax, Valium, Ativan*)

opiate-derivatives (e.g. *Percodan, Percoset, Oxycontin*)

marijuana.

All of these drugs have been shown to boost anxiety - sometimes days after using. These drugs have a depressant effect on the central nervous system and as the body metabolizes the drug the nervous system rebounds past "normal" and creates a "fight or flight" reaction.