Parasympathetic & Sympathetic Nervous Systems (PSN and ANS)

The **parasympathetic nervous system** controls the body's **homeostasis** of balance. Homeostasis refers to metabolic balance within the body from several processes:

1. Acid Balance
2. Body Temperature
3. Fluid Volume
4. Calcium Balance
5. Glucose Concentration

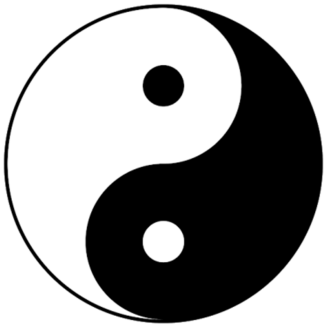
The **parasympathetic nervous system** is one of three divisions of the autonomic nervous system. Sometimes called the "**rest and digest system**", the **parasympathetic system** conserves energy as it slows the heart rate, increases intestinal and gland activity, and relaxes sphincter muscles in the gastrointestinal tract.

The **ANS** or **Autonomic Nervous System** is responsible for involuntary functions in the human body.

The **sympathetic nervous system** or **SNS** is responsible for the body's "fight or flight" response. This is the action or reflex you feel in times of extreme panic, anger, or defense. The body speeds up or tenses and becomes more alert. This is your survival mode.

	(PSN) Parasympathetic	**(SNS) Sympathetic**
Cardiovascular System	Decreases heart rate	Bronchial tubes dilate
Pulmonary (lungs)	Bronchial tubes constrict	Bronchial tubes dilate
Muscles	Muscles relax	Muscles constrict
Pupils	Constrict sphincter muscle	Dilate dilator muscle
Gastrointestinal	Increase stomach movement/ Secretions	Decrease movement/secretion
Salivary glands	Production increases	Production decreases
Adrenal glands	No involvement	Reduces adrenaline
Glucose conversion	No involvement	Converts glycogen for muscle energy

When the body is in a state of tension and stress to the point the sympathetic system is activated more often than not the adrenal glands will be activated over time and can affect many functions of the body to include high blood pressure, sexual dysfunction, and immune weakness.



Explanation:

One relaxes while the other increases.

Sympathetic Nervous System: Prior to rest and digest. (increases)
Parasympathetic Nervous System: Rest and Digest (relaxes)

Easy explanation:
Sympathetic – body's response to something
Parasympathetic – Body calming itself down

Exercise then relaxing afterwards. Sympathetic then becomes Parasympathetic.

Think of figure 8:
Body is always trying to get into balance/seeking balance: homeostasis. Yin/Yang, Flow, ebb, tide, life back and forth. Nature does it. Back and forth balance. Good and bad.

Sympathetic Examples:
- Someone who is angry, pissed off, in a mad state all the time lives in a sympathetic state. They are excited, heart rate is increased, might have hot flashes, mood swings. After they can be bloated and gassy.
- Example is a febrile eye with a lot of inflammation, pain, hot flashes, anger issues.
- Example: car driving in 1st gear all the time. Will burn out the engine
- Example: high blood pressure: inflammation, tightness and constriction.
- Example: exercising. While exercising you are in sympathetic state. Heart rate is up, sweating, working hard, breathing hard. Once done you relax and move into the parasympathetic state of rest.
- Example: testing: nervous, increased heart rate, talking fast
- Example: when you are angry/mad – you are in the sympathetic mode and can't relax

Use calming herbs and adaptogenic herbs to bring balance and bring back into parasympathetic.

Parasympathetic Examples:
Someone who smokes pot. Heart rate goes down, pupils dilate, they want to stay in this state. When stoned they feel relaxed. When the feeling wears off they go back into the sympathetic state and have to deal with the real world. Some use drugs to go in the parasympathetic state. They self medicate. Alcoholics use alcohol to go into the parasympathetic state to escape from the real world.