



# SANTA MARIA MEDICINE

## UNDERSTANDING DYSAUTONOMIA

As you may know, the prefix “dys” or “dis” in English refers to abnormality of or simply indicates “not” or the negative of the word it is attached to. If you are “dis”-interested you just don’t want to hear about it. If you have a “dis”-ease you can’t get comfortable. So when something is said to dysfunction it just isn’t going the way that it is supposed to go.

Autonomia or the autonomic nervous system is a largely involuntary controller of internal functions such as heart beating, rhythmic breathing, smooth and regular contractions of the bowels and many other things that we normally take for granted. A standard division of the autonomic system into “sympathetic” and “parasympathetic” is often made. The sympathetic nervous system is considered to be stimulating and excitatory and the parasympathetic to be damping or slowing or inhibitory – a classic example of the principles of yin and yang in the everyday world. We know now that the distinctions between sympathetic and parasympathetic functions are not sharp and clearly defined but rather subtle and shaded as their overlapping influence will often result in a range or spectrum of effects on any target end-organ, which in turn will have ripple effects on the whole of the body from moment to moment.

An abnormally functioning autonomic nervous system (“dysautonomia”) can be something that a person is born with and is thus hereditary or something that can occur spontaneously anytime during a person’s lifetime. The result can be racing heart beats, fluctuating blood pressure, bowels that alternate between going too much and not going at all and blood vessels that contract and dilate in the brain giving rise to painful migraine headaches. Many other symptoms of dysautonomia can occur depending upon which organ system is affected on any given day. Volume dysregulation or dehydration is a frequent and difficult feature of the syndrome as well.

Patients diagnosed with or suspected to have POTS present with many chronic symptoms that are not directly related to orthostatic stress and can cause a great deal of discomfort even when the person is lying horizontal.

## WHAT IS POTS?

**Postural** - Dependent on posture.

**Orthostatic**- Referring to the upright or vertical.

**Tachycardia**- Accelerated heart rate (fast heartbeat.)  
Syndrome.

### Other symptoms can include

Lightheadedness	Disorientation
Exercise intolerance	Joint/Muscle Pain
Chest pain	Headaches/Migraines
Syncope	Blood pooling

**POTS** is an acronym which refers to a syndrome characterized by an increase in heart rate by 20-30 beats per minute or more when the person stands up. This fast heart rate is abnormal and can lead to dizziness, weakness or even fainting.

The normal person will respond to standing up with NO noticeable change in heart rate. The heart and blood vessel system has an automatic compensation system which seems to fail for some unknown reason in the person who develops POTS.

The increase in heart rate can be associated with a drop in blood pressure, no change in blood pressure or an increase in blood pressure, depending on the patient.