

"Fight or Flight" (SYMPATHETIC) vs "Rest and Digest" (PARASYMPATHETIC).

The organs (the "viscera") of our body, such as the heart, stomach and intestines, are regulated by a part of the nervous system called the autonomic nervous system (ANS). The ANS is part of the peripheral nervous system and it controls many organs and muscles within the body. In most situations, we are unaware of the workings of the ANS because it functions in an involuntary, reflexive manner. For example, we do not notice when blood vessels change size or when our heart beats faster. However, some people can be trained to control some functions of the ANS such as heart rate or blood pressure.

The ANS is most important in two situations:

1. In emergencies that cause stress and require us to "fight" or take "flight" (run away) and
2. In non-emergencies that allow us to "rest" and "digest"

It is a nice, sunny day...you are taking a nice walk in the park. Suddenly, an angry bear appears in your path. Do you stay and fight OR do you turn and run away? These are "Fight or Flight" responses. In these types of situations, your sympathetic nervous system is called into action - it uses energy - your blood pressure increases, your heart beats faster, and digestion slows down.

Organ	Sympathetic Function (FIGHT OR FLIGHT)	Parasympathetic Function (REST AND DIGEST)
Eye	Dilates pupil	Contracts pupil
Heart	Increases rate and force of contraction	Decreases rate and force of contraction
Lungs	Dilates bronchioles	Constricts bronchioles
GI Sphincters	Contracts	Relaxes
Digestive tract	Inhibits peristalsis	Stimulates motility and secretion
Kidney	Decreases urine secretion	Increases urine secretion
Oral/Nasal Mucosa	Mucus production reduced	Mucus production increased
Sex Organs	Ejaculation	Erection
Adrenal medulla	Norepinephrine and epinephrine secreted	

Central Nervous System

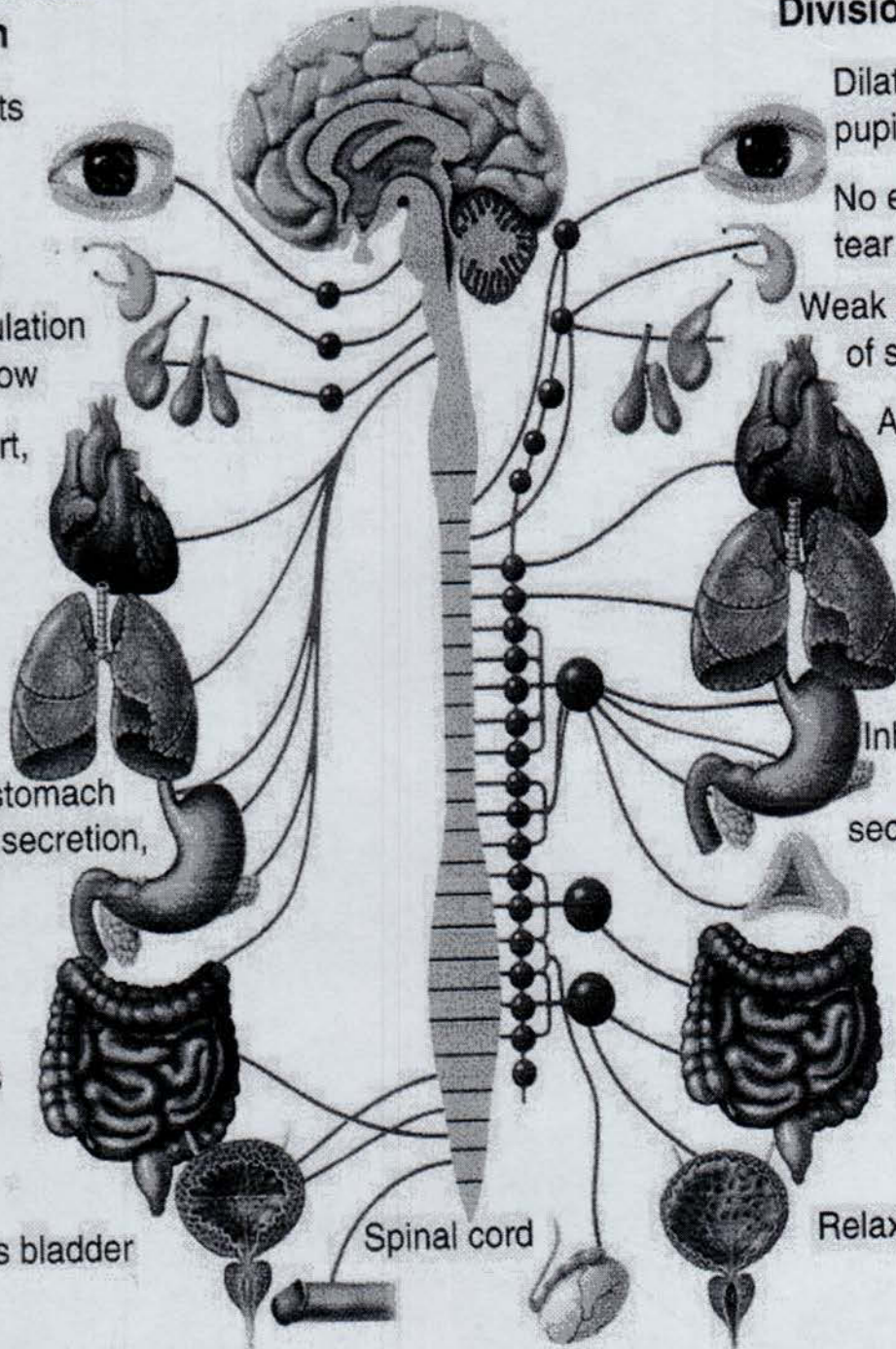
Brain

Parasympathetic Division

- Constricts pupil
- Stimulates tear glands
- Strong stimulation of salivary flow
- Inhibits heart, dilates arterioles
- Constricts bronchi
- Stimulates stomach motility and secretion, stimulates pancreas
- Stimulates intestinal motility
- Contracts bladder

Sympathetic Division

- Dilates pupil
- No effect on tear glands
- Weak stimulation of salivary flow
- Accelerates heart, constricts arterioles
- Dilates bronchi
- Inhibits stomach motility and secretion, inhibits pancreas and adrenals
- Inhibits intestinal motility
- Relaxes bladder



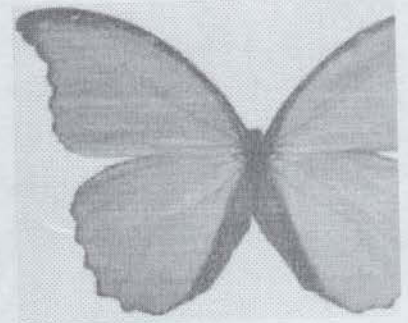
Stimulates erection

Stimulates ejaculation

Spinal cord

POTS Treatment Program

7515 Greenville Ave. #1005
Dallas, TX 75231
Telephone (214) 369-8717



AUTONOMIC NERVOUS SYSTEM TRAINING

The autonomic nervous system (ANS) is the part of the nervous system that controls the body's visceral functions, including action of the heart, movement of the gastrointestinal tract and secretion by different glands, among many other vital activities. Many of IHM's research studies have examined the ANS utilizing the analysis of heart rate variability, or heart rhythms, which serves as a dynamic window into autonomic function and balance.

BIOFEEDBACK

Applied biofeedback consists of a group of therapeutic procedures that utilize electronic instruments to measure, process and "feed back" to individual's information about their neuromuscular and autonomic activity. Thus, biofeedback can be like a mirror for individuals to help them become aware of their psychophysiological processes, such as muscle tension, skin surface temperature, blood flow, brain wave activity, galvanic skin response, blood pressure and heart rate. Combined with relaxation techniques and step by step instructions, the patient can regulate the ANS to accomplish balance and allow normal functioning of the ANS.

HEART RATE VARIABILITY

Heart rate variability (HRV) is a measurement of naturally occurring, beat-to-beat changes in heart rate. Systems-oriented models propose that HRV is an important indicator of both physiological resiliency and behavioral flexibility, reflecting the individual's capacity to adapt effectively to stress whether its due to a medical condition or environmental demands. Heart rate variability is a powerful, objective and noninvasive tool to explore the dynamic interactions between an individual's processes.

HEALTH & WELLNESS PROCEDURES

The Health and Wellness Assessment Procedures are assigned to the **Medicine** section and are **not** considered mental health intervention services. These procedures modify the cognitive and social factors identified as important to or directly affecting the patient's physiological functioning, disease status, health and well being. The focus is to improve the patient's health and well-being via psychophysiological procedures designed to ameliorate specific disease related problems.

An example of this may include, but not limited to, sessions focusing on educational factors impacting the patient's awareness and knowledge about his/her disease process, and the use of relaxation and guided imagery techniques that directly impact blood pressure and heart rate. Cognitive and behavioral approaches for initiation of an appropriate physician-prescribed diet and exercise regimen are also included in this code.

NUTRITION

Nutrition is included within this program. The patient is supported in his/her nutrition journey, educating on the importance of maintaining a healthy lifestyle. This program is an effective support system in terms of providing motivation for proper nutrition, changing lifestyle and eating habits permanently. The patient is able to develop self-control that becomes second nature.

ALTERNATE HEALTH & WELLNESS SKILLS

- Coping Skills
- Lifestyle Management
- Relaxation Training

CONDITIONS FOR WHICH HEALTH AND WELLNESS PROCEDURES

HAVE SHOWN TO BE EFFECTIVE

- Headaches: Cluster, Migraine or Tension
- P.O.T.S. (Postural Orthostatic Tachycardia Syndrome) / Dysautonomia
- Anxiety—Depression
- Infertility, stress related
- Cervicalgia (Neck Pain)
- Acute Stress Reaction
- Low Back Pain
- Agoraphobia
- Essential Hypertension (High Blood Pressure)
- Myofacial Pain/TMJ
- Raynaud's Disease
- Irritable Bowel Syndrome
- Asthma/Respiratory Distress
- Arthritis
- Insomnia
- Attention Deficit Disorder (ADD)
- Trigeminal Neuralgia