#### Biopsychology



Caption of the Day...

'How are YOU doin'?" Good eye snipe.
My story is so good it could make a Spike Lee movie...
Eye for an Eye makes the whole world blind
Don't play with pointy objects.
I shot my eye out with a Red Ryder BB gun.
One Eyed Willy

Biopsychology Phineas Gage

- A railroad Ferengn Who Worked on Vermont rail line He Suffered a traumatic brain insury and this began biopsychology in America

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- his entire personality changes as are sult. He is now quick tempered, foul-mouthed and unpleasant to be around Drovides a clear connection between biology and personality.		
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Biopsychology has a lot of appeal because every though, behavior, emotion, or Feeling
that we have has a direct biological Connection.
Connections


### The Stress Response

- -A.K.A. "Fight or Flight" response.
- -The Stress Response describes the actions that the body takes when it is exposed to a sudden, unexpected threat. Once the body's Stress Response is triggered the nervous system responds in one of four ways.

	March 18,
The Four "F's" of the Stress Response	
- Humans and animals have four variations to the stress response. Fight, Flight,	<u> </u>
Freeze, or Faint.	
-Once the threat is perceived, the nervous	
system responds within 3/millionth of a second "turning up" systems that are	
needed for the response and "turning down" systems that are not immediately	
needed.	
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Brainstorm a list of systems in the	
body:	

Body Systems	
1. Cardiovascular System	
2. Digestive System	
3. Endocrine System	
4. Immune/Lymphatic System	
5. Muscular/Skeletal System	
6. Nervous System	
7. Renal/Urinary System	
8. Respiratory System	
Reproductive System	
10. Integumentary System	
10. megamentary cyclem	-
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The Stress Response in	
context:	
You ask to go to the bathroom	
in the middle of Psychology	
class. Mr. Dupuis give you	
permission and you head	
down the hallway. Everything	
is fine until you enter the	
bathroom and discovera	
liger!	

Don't	know	what	а	liger	is?
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# "Is that real?"



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Let the Stress Response begin!!!	
Energy is a finite entity. We only have	
so much, and if we ran out completely we would die.	
Not to mention the fact that the liger would catch	
you :-(	
Soour body works to conserve energy for systems that are not essential to the	
Stress Response when it has been	
triggered.	
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Sympathetic Nervous System:	-
Sympathetic Nervous System: -Turns up needed body systems. During the	
Stress Response, this includes: the	
cardiovascular system, the respiratory system,	
the muscular skeletal system and parts of the nervous system. (Think green lightgive the	
gas!)	
Parasympathetic System:	
-Turns down body systems which are not	
needed. During the Stress Response this	
includes: the digestive system, the	
reproductive system, immune system, and the integumentary system. (Think red	
lightslam on the brakes!)	

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Congratulations! You survived the KHS liger attack.

Once the threat has been resolved, your body will return your body systems back to their normal states by reversing the process.

<u>The Sympathetic Nervous System</u>: will turn your digestive, immune, reproductive and integumentary systems back on.

While the Parasympathetic Division of the nervous system turns down your cardiovascular, skeletal, and respiratory systems.

Good News

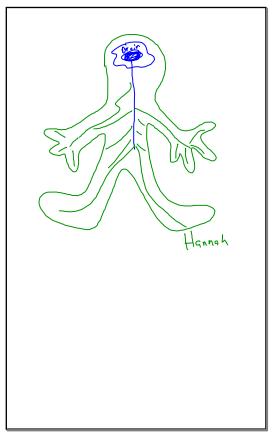
This system will Sare your life.

Bad News

- Your imagination can cause the same response.

- Imagined threats such as public speaking, competion (sports), performing school or work the next day.


10,000 years ago humans spent 25% of their time in this Slate.
Today  -most humans spend 50%  of their time in this state.  Ceneralized  People WI PTSD or Anxiety  Spend 90% here.  Disorder



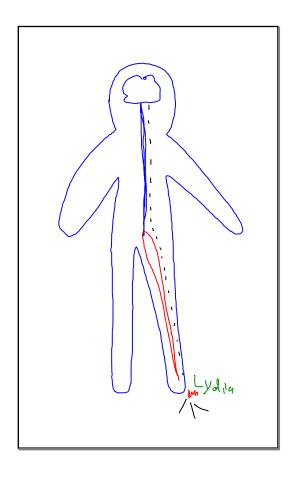
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I. Central	Nervous System
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- Made up of the brain and spinal Cord.

-It Controls automatic involuntary responses which are called reflexes.

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The Peripheral Nervous System

- branches out From the

Drain and the spinal

Cord to the extremities.

I. Somatic Division

- Controls voluntary

Movements.

R. Autonomic Division

- controls portions of your

body that Kepp you alive. Ex: Heart beat, blood ressel dialation/constriction, etc.
A. Sympathetic Division
- Turns your systems  On. Repares you for  FFF F. (Increases adinty  of organs.)
S. Parasympathetic Division
-Turns systems down. Calms you a fter FFF. Decreases activity of organs)

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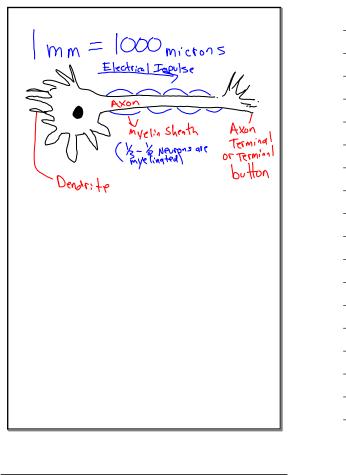
Specialized cells that
Make up the nervous
System.

- You have as many as

150 billion in your brain.
Each one connects to
thousands of others.

- Range in Size
From 2 Microns to
3 feet.

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Electrical impulse always travels away from the cell body and at the same speed.

It is the structure of the neuron which determines this speed.

Neurons involved in reflexes may travel at speeds up up to 225 mph. Neurons in your brain travel at approximately 2 mph.

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- Neurons will either Fire or not Fire. There is no partial discharge.

Neurons Connect
in a Small space
Called the synapse.
They don't actually
touch synapse
Axon Dendrite
terminal neurotransmitters

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Excitatory Mossages
- When one neuron Encourages The next neuron to Sige.
Inhibitory Messages
- When one neuron tells the next neuron in line to Stop Firing.

After Firing
Neurotransmitters are
removed from synapse
by a process known
as:
1. reuptake-Neurotransmitters
are reabsorbed by the neuron.
2. Enzyme deactivation
3. Autoroptosia homeostatic
device.)

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Imbalances of Neurotransmites
are responsible for lor
associated w/ many mental
illness Suchas

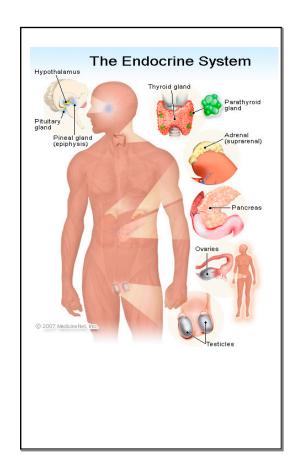
- addiction
- depression
- bipolar disorder
- Schrophenia and more.

The Endocrine Syste
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A set of glands that Secrete Substances called hormones into your blood Stream.

EX: hormones Stimulate growth, and stimulate emotions and have a big impact on behavior.

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The	P: toitary	Gland
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"Master gland" which is about the size of a per in is located next to the hypothalamus.

hypothalamus.
- Excretes many different hormones. Many of these impact other glands.

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Thyroid Gland
-Lorated in the neck. Releases Thyroxin which Controls your metabolism.
hypothyroidism  - Can be over weight. Can  Cause cretinismuhichtesultsin  Mental retardation of  Stumted growth.

1 1/1		
hypothyroidism  - Can be over weight. Can  - Cause cretinismunicatesults in  Mental retardation t  Stunted growth.		
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The major; ty of overweight People in America have <u>NO</u> Problem wy their thyroid.		
Hyperthyroidism		
Hypo-low Hyper-high		
La excitability, weight loss, inability to sleap.		
1/196, 11TY to 2 Mp.		
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Adrenal Glands
- Relesse adrenaline.
Clocated above you kidneys.
Sand noradienaline.
Also
Ovaries in women
Los Estrogen and testosterone
Testicular gland in Men testosterone and estrogen.
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Test next time.

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## March 18, 2016