



Solid Waste Survival Training

Training pertaining to the
brain and how it adapts to
survive.

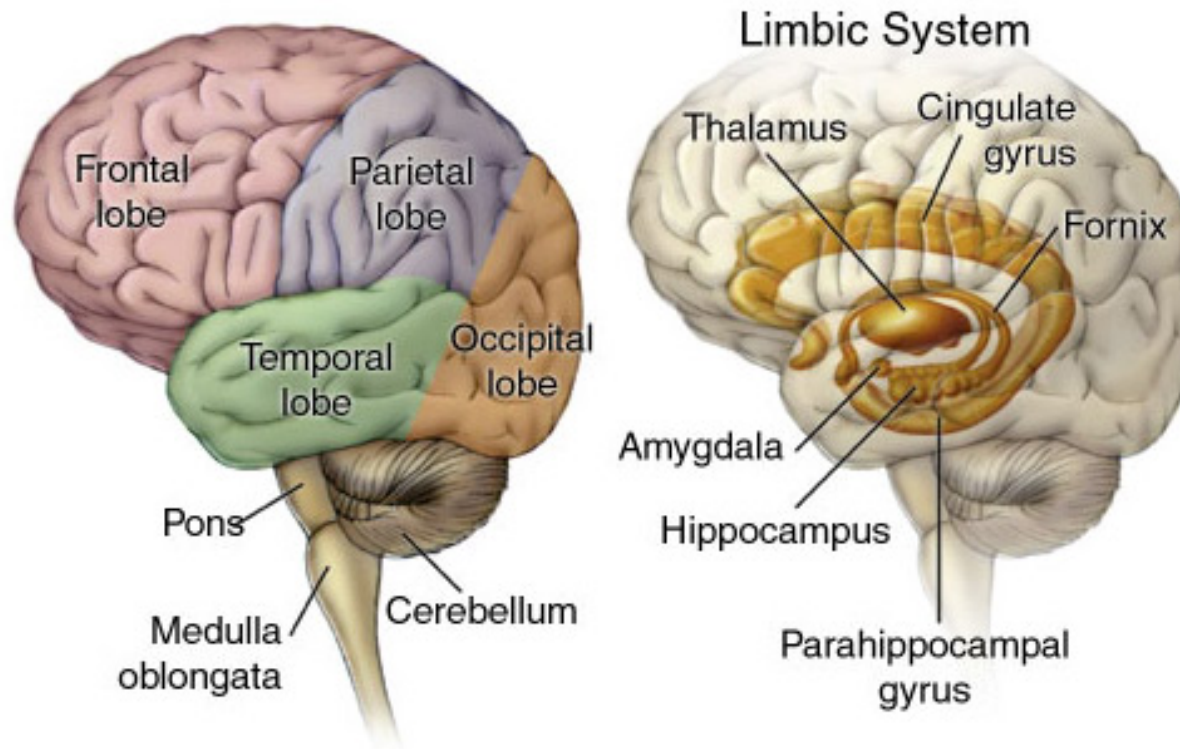
A stylized, dark teal silhouette of a mountain range is positioned in the bottom right corner of the slide, extending from the right edge towards the center.

Survival Training

- ◆ The Brain
 - ◆ How Memories are Formed
 - ◆ Processing the information
 - ◆ Emotion
 - ◆ Stress on the System
 - ◆ Accidental Theories/Self Organizing Systems
 - ◆ Rules to Remember
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- A stylized, layered mountain range graphic in shades of teal and blue, located in the bottom right corner of the slide.

The Brain

Anatomy of the Brain



How Memories are formed?




- ◆ Neurons and Axons are the building blocks of memory storage.
- ◆ Axons are the fiber that send the signals and Neurons store the information.
- ◆ Through adapting or learning axons send electrochemical transmissions strengthening and create new sights in which neurons can communicate.
- ◆ Creating memories.

Why is Memory Faulty?

- ◆ The area of the brain that does the remembering is not the area of the brain that formed the initial memory.
- ◆ In order for old memories to make sense in the current brain it has to be updated.
- ◆ This is why we need to be told things several times, re-read material or attend training courses to remember information for long term use.



Processing the Information

- ◆ The brain is large regulatory in nature.
 - ◆ It provides a continuously changing kaleidoscope of images concerning the state of the environment and the state of the body.
 - ◆ It uses images that can be smells, sights, sounds or feelings.
 - ◆ At the same time, the brain provides a stream of outputs that shapes the body's reaction to the environment.
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- A stylized, dark teal silhouette of a mountain range is positioned in the bottom right corner of the slide, partially overlapping the bottom edge of the text area.

Processing the Information



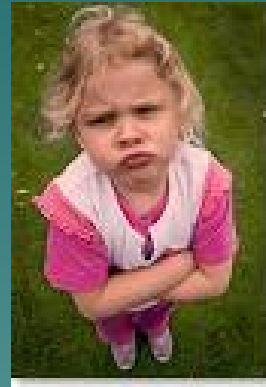
- ◆ The brain reads the state of the body to make fine adjustments.
- ◆ At the same time it reads the environment and directs the body in reacting to it.
- ◆ All of this is aimed at one thing only.
- ◆ Adaptation to Survive.

Processing the Information



Emotions

- ◆ Emotions are stimulated by the environment through sight, smell, sounds to initiate a chemical response in your brain quickly to motivate behavior.
- ◆ The Amygdala region of the brain can send signals to the brain to react innately to situations.
- ◆ Emotional responses can override the logical processes of the brain.
- ◆ These responses are sure, quick and unhesitating.



Emotions



- ◆ Emotional responses can be good and bad to one's survival.
- ◆ The environment that one survives or dies in is full of stimuli; food, riding a motorcycle, skiing, driving fast, wild animals, mating, working environments or tornadoes.
- ◆ Humans can receive strong signals from the Amygdala on innate reactions to any of these stimuli.
- ◆ Good or bad life or death, how one survives by these stimulations is directly related to how one responds and interacts with the environment.

Stress on the System

- ◆ Stress from internal or external forces release cortisol into the blood.
- ◆ Cortisol enters into the hippocampus and begins to interfere with its work.
- ◆ The Amygdala, which is also affected, has powerful connections to the sensory functions in the brain.
- ◆ The entire memory system both input and output are affected.
- ◆ As a result of these stressful situations, most people are incapable of performing any but the simplest of tasks.



Stress on the System




- ◆ Cortisol and other hormones released under stress interfere with the prefrontal cortex.
- ◆ This is the area that perceptions are received and decisions are made.
- ◆ You see less, hear less and miss vital cues to your environment and mistakes are made.
- ◆ Stress causes most people to focus narrowly on things that they consider most important.
- ◆ When an individual reaches a extremely stressful situations they react on an emotional level instead of a cognition.
- ◆ The limbic brain immerses the winner and begins to react in a survival mode.

Laughing at Fear!

- ◆ Humor even if grotesque can lighten moods and relax the state of individuals.
- ◆ Moods are contagious and the emotional state involved with smiling and laughter are among the most contagious of all.
- ◆ There is evidence that laughter simulates the left prefrontal cortex. An area that helps you feel good.
- ◆ There is evidence that laughter can send chemical signals to actively inhibit the firing of nerves in the Amygdala, thereby dampening fear.

Managing Fear

- ◆ It is not a lack of fear that separates the elite survivor from the rest of us.
 - ◆ True survivors manage fear.
 - ◆ Everyone begins with the same machinery or basic organism.
 - ◆ When its threatened the organism will react in predictable ways.
 - ◆ By managing and working with those predictable and inborn reactions one can survive; whether it be superstition, knowledge, illusion, or confidence on ones self.
 - ◆ Know yourself.
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Accidental Theories/Self Organizing Systems

- ◆ Accidents are alike in fundamental ways.
- ◆ Conditions
- ◆ Judgments
- ◆ Acts or Events
- ◆ By themselves inconsequential but coupled together disastrous results can happen.



Accidental Theories/Self Organizing Systems

- ◆ Most of the time nothing serious happens.
- ◆ This makes it difficult for the individuals in these systems because they become accustomed to the orderly behavior of a possible chaotic system.
- ◆ The word “experienced” often refers to someone doing the wrong thing more frequently than you have.



Accidental Theories/Self Organizing Systems



- ◆ Many incidents occur in our industry are Self Organizing by nature.
- ◆ The incidents or accidents are minor collapses in the system.
- ◆ Such as hydraulic hoses that break, sprained ankles, tires that go flat or debris that flies out of the hopper when the blade is cycling.

Accidental Theories/Self Organizing Systems



- ◆ Like tremors in a earthquake zone it is inevitable that a larger collapse will happen.
- ◆ Although large accidents are rare in occurrence the efforts to control them will always fail.
- ◆ At best we can be prepared for inevitability that incidents large or small will happen and be ready to act when they do.

Risk Homeostasis



- ◆ Individuals will accept a given level of risk.
- ◆ If one perceives that there is less risk, you are more apt to take more chances.
- ◆ If conditions have signs of danger you take less risk.
- ◆ Technology advances are intended to improve safety but may have the opposite affect.
- ◆ Experience is nothing more than engine to drive adaptation to a given environment.
- ◆ When the environment change's the individual needs to be aware that their experience may be inappropriate to make the correct choice.

Rules to Remember



- ◆ **Know Yourself...**As we move through our days and our lives remember that we are all stars in our own personal plays. Very few understand their shortcomings.
- ◆ Reminding people that knowing their shortcomings is a good thing. Whether, short tempered, short sighted or short on common sense. If you know this going into a certain situation your survival rate can greatly improve.
- ◆ A strong dose of humility can go along way!

Rules to Remember

- ◆ **Perceive then Act** ...avoiding accidents is all about being smart about your environment.
- ◆ Perceive your surroundings or environment for what it is, not what you believe it is.
- ◆ Act on current perceptions to keep yourself relevant to the situation.
- ◆ Training is an attempt to make predictions about a given environment.
- ◆ As the environment changes be versatile and adapt to it.



AP / Hadi Mizban

Rules to Remember

- ◆ **Avoid Impulse Behavior...**making a decision is easy for most when situations are calm.
- ◆ Add the anxiety of a stressful problem, environment and the big release of cortisol into the blood stream and situations can quickly go out of control.
- ◆ Remember that humans are an emotional creature with a logical brain trying to survive in a non-linear world.
- ◆ Controlling ones innate or impulsive behaviors can help ensure your survival.



Rules to Remember



- ◆ **When In doubt...Get Out!**
- ◆ Even the best laid plans, programs or situations can go bad.
- ◆ When this happens step back and regroup.
- ◆ A closed attitude to changing situations causes you to miss vital clues.
- ◆ Adaptation to a changing environment is how you can survive.

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Questions and Answers

