Brain science meets public safety:

What have we learned?

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Root cause analysis of first responder casualties
First responders... appear to be doing some pretty dumb things.
Dumb:

Lacking intelligence;
Inability to reason through a situation;
Thinking or behaving irrationally.
Momma always said: “Stupid is ______.”

Do first responders do dumb things at emergency scenes?
Do responders do dumb things on emergency scenes on purpose?

Can a responder do dumb things accidentally?
Unconscious Incompetence:
When it comes to understanding how the brain works...
This program is designed to...

You
16 things we know about the brain & how it can impact the thinking and actions of first responders.
The brain acts different under stress.

Stressed brains don’t function like non-stressed brains.
Here’s why...
The brain is adapted for survival (in a hostile environment).

There are “trip wires” that alert the brain to impending danger.
Under stress, behavior may not appear rational.

That’s because it’s not!
Stressed brains are NOT very good at figuring out solutions to complex problems.

Stressed brains use shortcuts, rules of thumb & estimates. (guesswork)

Confusion stresses the brain. And the brain doesn’t like confusion. So it gets to work... making sense of things.
Working memory (short-term memory) has a very limited capacity.

Volumes of information can become the enemy.
The brain prioritizes incoming information
(Based more on emotional cues than rational logic.)

And you may not be able to control what information is remembered or forgotten.
The conscious brain cannot multitask. This includes paying attention in a dynamically changing environment.
The Multitasking Myth
The subconscious brain can multitask... and it’s REALLY good at it.
Emotions compel behavior.

And the two biggie emotions are...
The brain processes audible messages as visual images.

Human’s listen with the “Mind’s Eye”

This can cause overload in dynamically changing environments and then...
The brain can be fooled into learning.

Brains are not very good at distinguishing FACTS from vividly imagined FICTION.
Brains can be stubborn.

Once locked on to doing something (like a plan of action) it can very difficult to change the mind or to see an alternate solution.
The judging brain cannot learn.

Avoid being quick to judge the performance of others.

Learn to ask the right questions.
Humans are a...

Stress induces automatic habitual performance.
Training and experience develops habits (memory).

Cognitive Memory (information)

Kinesthetic (muscle movement)
Muscles learn their habits from muscle movement.

Muscles don’t learn habits from verbal instructions.
Not understanding how the brain works can have some strange consequences

The patient care drill...
Not understanding how the brain works can have some strange consequences.

Scene Safe

BSI

The patient care drill...
Thank you to the members of our military... past and present.
Pay it forward

I have a favor to ask...
Helping you see the bad things coming... in time to change the outcome.

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