



Are You Ready to Respond?

How Will You React When an Emergency Occurs?

August 6, 2018

Heidi Harden

*Safety and Occupational Health Specialist
Kennedy Space Center, Florida*

PREPARED



Introduction

- There have been times at Kennedy Space Center when employees have experienced personal medical emergencies while at work
- This message is not about THEM:
 - This is about the men and women who were near them and saved their lives




Introduction


At any moment, **YOU** could become one of the people who has the opportunity to save a life.

Do you really know what you would do in that moment?






***“I heard a sound
that I will never
forget.”***

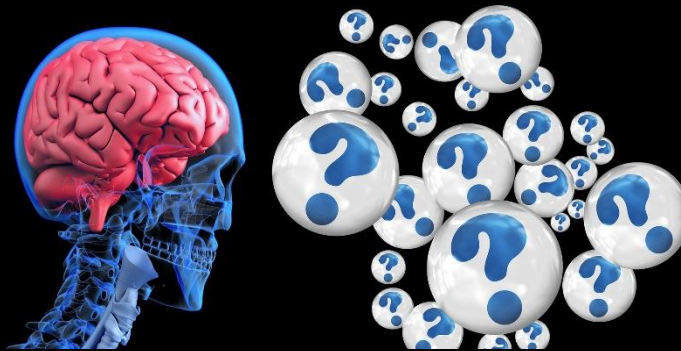


“I was not sure what happened to her, she didn’t look well.”



***“My mind was
racing on what to
do first.”***

**Your body and your
mind may respond
differently than you
are expecting.**



What's Going on in Your Mind and Body?

When faced with a stressful situation, the Sympathetic Nervous System (SNS) stimulates responses in systems all over the body.

There are multiple physiological changes that may occur when the SNS is triggered.



What's Going on in Your Mind and Body?

- Potential positive effects include:
 - Additional strength
 - Heightened awareness
 - Higher tolerance for pain
 - Improvement of gross motor skills under extreme stress due to adrenaline and other hormones



Motor Skill Performance

- Deterioration of fine and gross motor skills

***“My hands just
would not pick up
the scissors.”***

Cognitive Processing

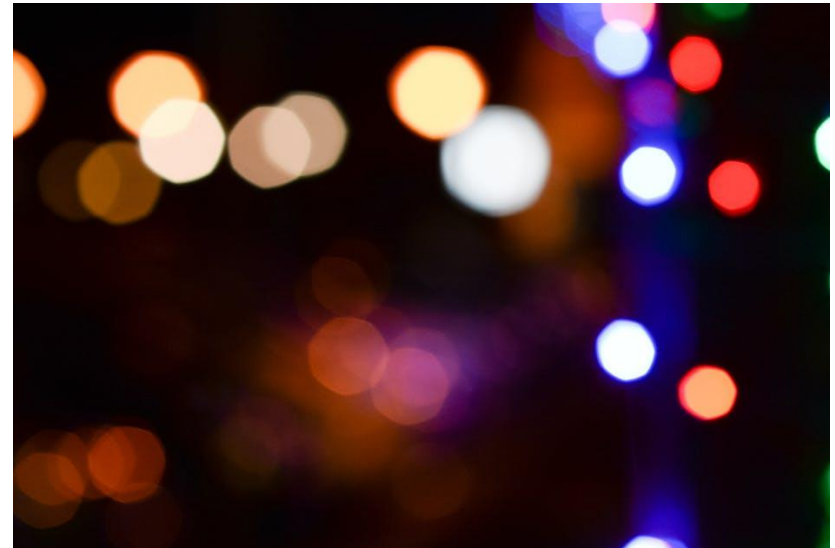


- Lack of clarity
- Loss of cognitive (rational) thought

“I could not remember which number to call.”

Perceptual Distortions

- Visual processing:
 - Night vision degradation
 - Inability to distinguish colors
 - Loss of depth perception
 - Loss of near vision
- Tunnel vision:
 - Target fixation



Auditory Exclusion

Your body screens out the senses that it considers irrelevant in that moment.

“I do not remember hearing the paramedics come in.”

Autopilot



Training and experience kick in.



***“During training, you’re in a sterile environment.”
“Everyone is calm in that situation.”***

The First Few Minutes Are Critical



For serious injuries, such as those involving stopped breathing, cardiac arrest, or uncontrolled bleeding, **first aid must be provided within the first few minutes** to avoid permanent medical impairment or death.

“Call 911...Get the AED!”



“Where are the first responders?”



EMS Is on the Way

- Emergency Medical Services (EMS) personnel in the United States respond to an estimated **37 million** emergency calls every year
- The average time for the arrival of EMS personnel to an emergency scene from the time of a 911 call is **7 minutes**
- This time increases to more than **14 minutes** in rural settings
- Nearly 1 in 10 encounters wait up to **30 minutes** for EMS personnel to arrive
- In Florida, the EMS at patient response time average is **10 minutes, 40 seconds**



**YOU
are
the first
responder.**

YOU Are the First Responder


- CHECK the scene:
 - Make sure it's safe for you
- CALL for help:
 - Call or have someone call 911
 - Stay on the line with the dispatcher until they tell you to hang up
 - Send someone to meet the emergency responders
- Provide CARE:
 - Who knows CPR?
 - Do you have an AED and where is it?
 - Do no further harm (including to yourself)
 - Keep providing care until EMS arrives or you are in danger



**Have tools in
your toolbox.**

Be Ready to Respond

- Consider designating roles
- Be familiar with basic life-saving equipment
- Test emergency equipment
- Review and test Emergency Response Plans
- Hold training (classroom, exercises, drills, videos)
- Be prepared at home:
 - Walk through, talk through
 - Run a mock drill
 - Discuss what would be different in various locations and with other family members involved
 - Identify closest hospital and primary and backup access routes
 - Ensure family members know how to administer first aid



***“Everyone came
together to make it
work.”***

Resources



- [American Red Cross](#)
- [American Heart Association](#)
- [Hands Only CPR](#)
- [CPR & Emergency Cardiovascular Care Guidelines](#)
- [Philips AED Demonstration Video](#)
- [National Safety Council First Aid Training](#)
- NASA Protective Services Training Academy (2017). Sympathetic Nervous System/Post-Traumatic Stress Disorder [Lesson Plan].