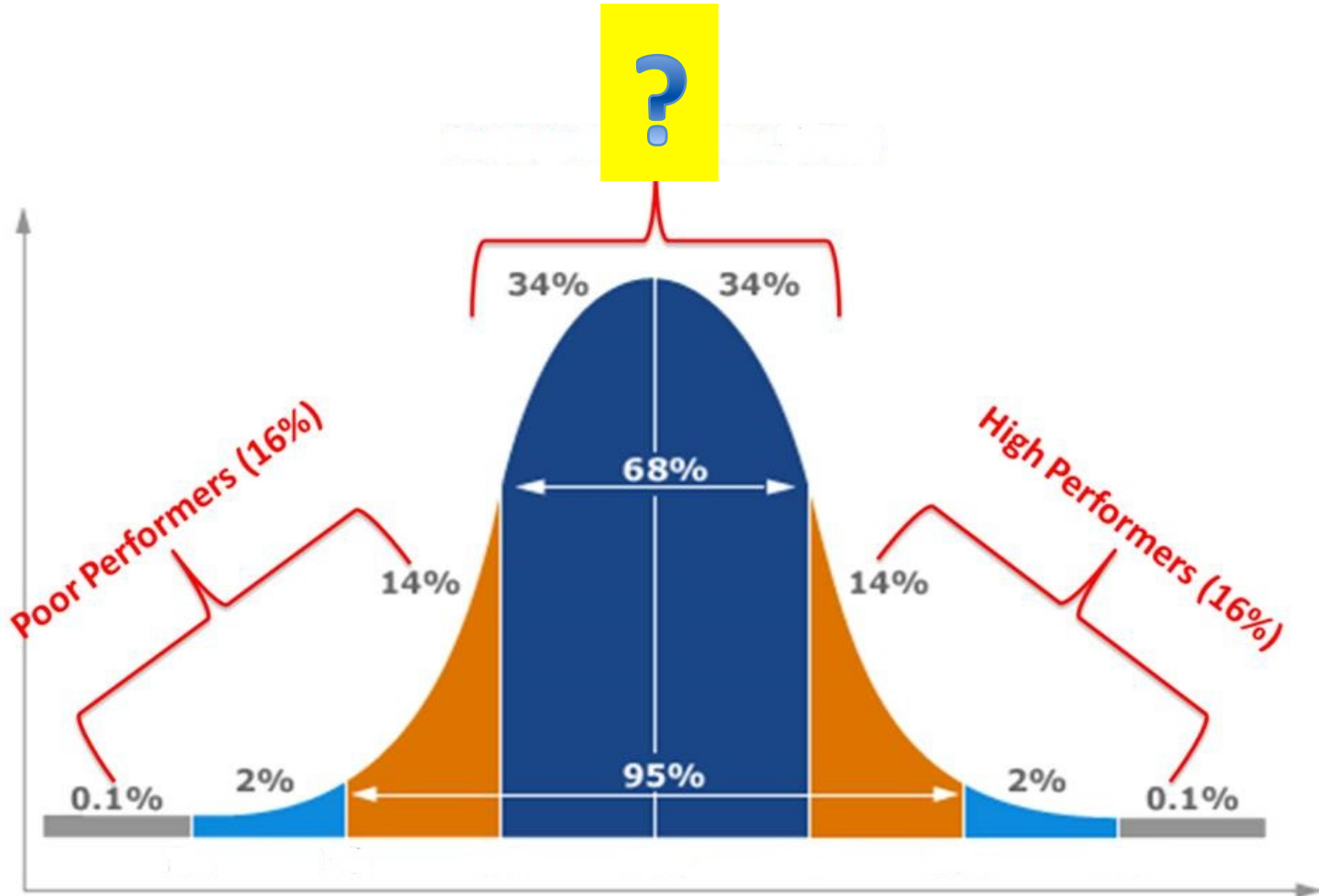


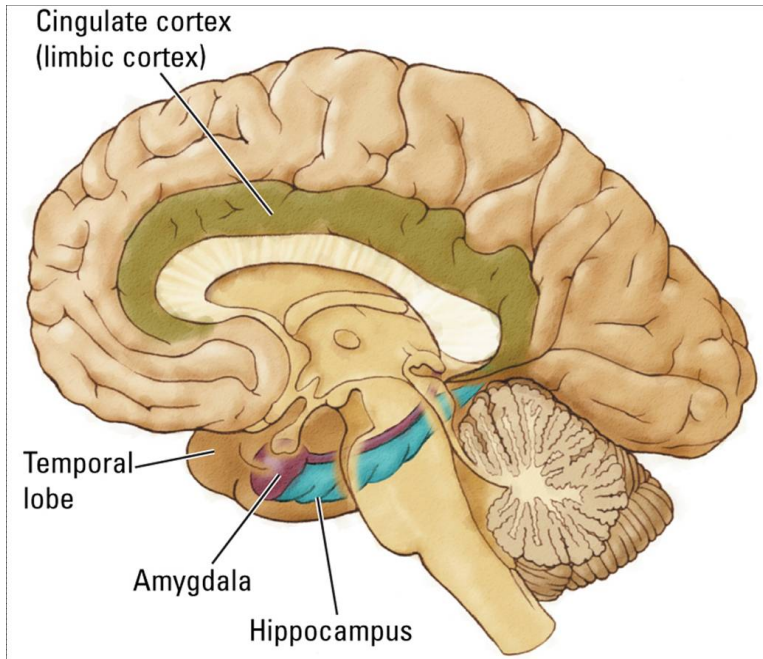
PERFORMING UNDER PRESSURE



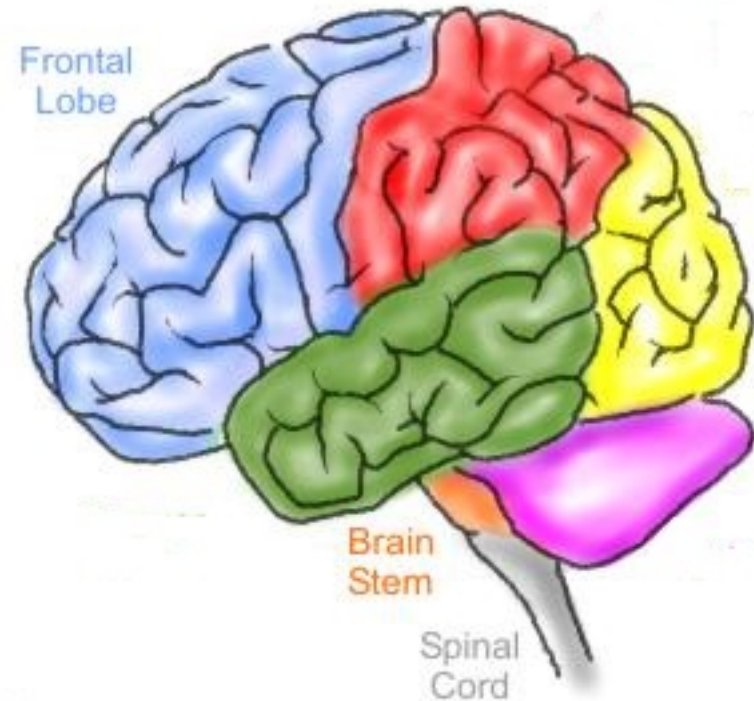
TYPICAL PERFORMANCE



OUR TWO BRAINS



LIMBIC SYSTEM:
SUB-CONSCIOUS
FEELINGS, OR GUT FEEL
REQUIRED FOR LIFE



PRE-FRONTAL CORTEX:
CONSCIOUS, THOUGHTS
LOGICAL, SPOCK-LIKE
NOT REQUIRED FOR LIFE

I want to live!

LIMBIC SYSTEM

I know
pleasure
pain
and fear



- Primitive.
- Super fast.
- Hyper-paranoid (**very fearful**): Collects as much data as possible and passes it along to pre-frontal cortex; constantly on-guard for things that might harm it.
- Responsible for urges (hunger, sleep, sex), **pleasure and pain**, controls heart rate and breathing rate.
- Good at “remembering.”
- Develops and works off of pattern recognition.

WHEN STRESSED, THE LIMBIC SYSTEM HAS TWO PRIMARY RESPONSES ...

RESPONSE ONE:



ADRENAL

pupil dilation,
increased pulse,
peripheral vaso-constriction,
blood to muscles,
enhance coagulation.

STARTLE

blinking,
symmetry,
fists close.

FIGHT OR FLIGHT

RESPONSE TWO:

If I pretend
I'm dead,
maybe he
won't eat me.



FREEZE OR FAINT



PRE-FRONTAL CORTEX

- Fancy, complex, fragile, temperamental
- Good at analyzing; provides critical thinking
- Represses urges; keeps limbic system under control
- Developed relatively recently; slow to mature
- Requires more time (than the limbic system)

WHEN STRESSED, THE PRE-FRONTAL CORTEX ...

- ✓ Becomes bogged down; critical thinking significantly affected
- ✓ Isn't able to remember details (such as steps of an EAP)
- ✓ Isn't able to screen data from limbic system as effectively; loses situational awareness; tunnel vision
- ✓ Is poor at multi-tasking (specifically with complex problems)
- ✓ Can get stuck in the search mode if/when faced with a new or unfamiliar situation

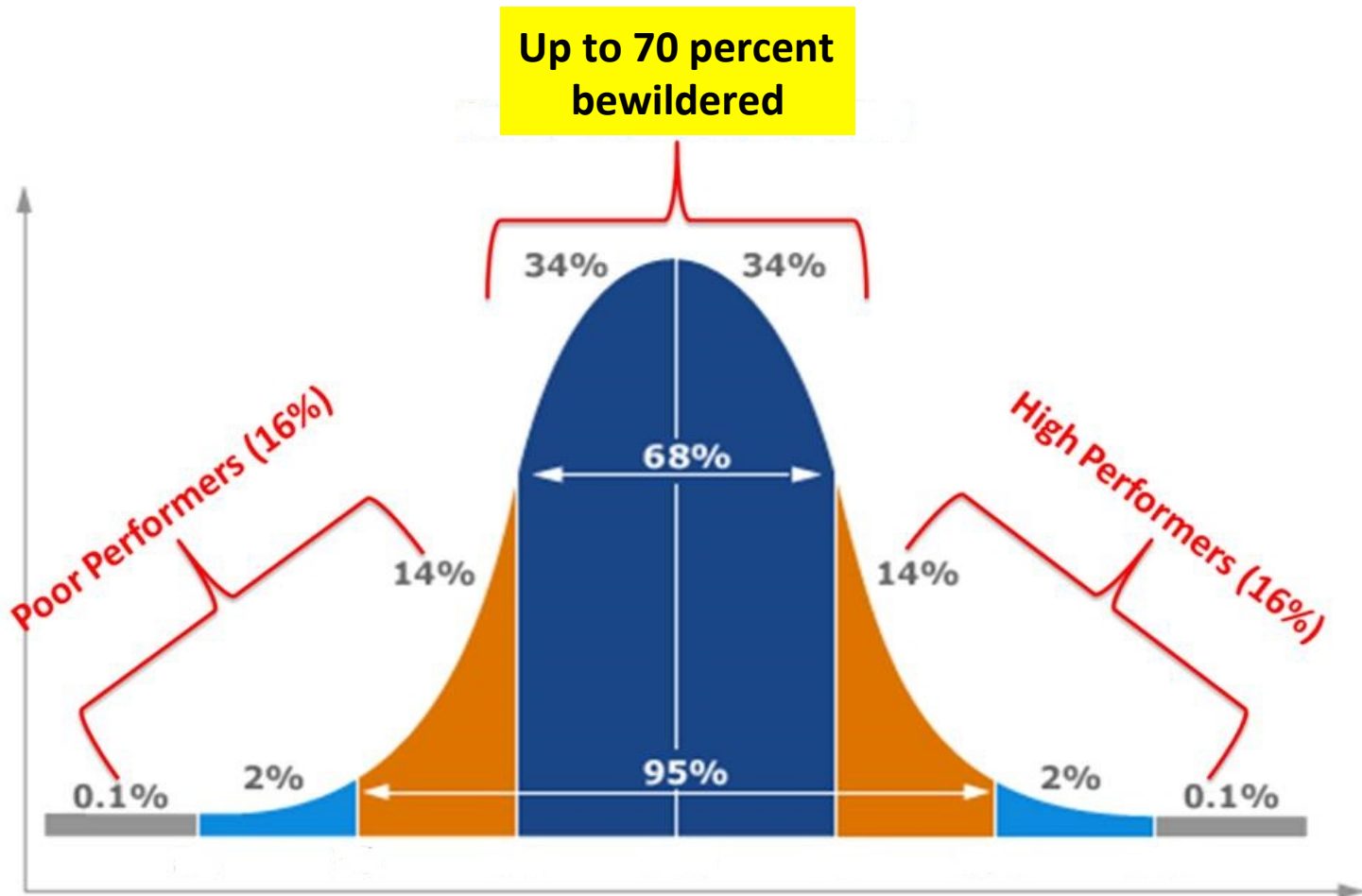


PERFORMING UNDER PRESSURE

HOW WOULD YOU DO?



TYPICAL PERFORMANCE



During unexpected high-stress situations

- People gather “stuff.”
- People have a need to be with others.
- People mill, touch, check in with those around them.
- People seek information; if they don’t get it, they check in with others, start rumors, etc.

During unexpected high-stress situations

- People choose low stress behaviors, such as
 - Primary language
 - Habitual behaviors
- People are resistant to try new or unfamiliar behaviors (more on this later)
- People are vulnerable and are open to suggestions



WHY DOES THIS MATTER?

1. Most of us are not adequately prepared for highly stressful emergencies. We have EAPs in place, but EAPs often are not enough.
2. Most of us rely too heavily on pre-frontal cortex; we assume our response-under-stress behaviors will mirror our response-while-calm behaviors.

Don't gamble that
all will go well.



Problems with most emergency plans

You will perform
as you train/practice.

- 1) We never really practice them.
- 2) Training doesn't include stress and/or isn't realistic enough.
- 3) We're often expecting too much of people.
 - Young brains not fully developed.
 - People expected to multi-task under pressure: e.g., deal with injured parties, bystanders, families; coordinate evacuation; arrange transport, etc.

WE CAN CHANGE THE ODDS

HOW?

1. Quality of training matters
2. Practice with intention
3. Use of imagery
4. Quality feedback is essential



QUALITY TRAINING: Make it Real!

- Research has shown ...
talking is ineffective;
showing is marginally effective;
“doing” preps the limbic system.
- Train under similar conditions . That is, make your trainings as realistic as possible (E.g. Stress exposure training).
- Quality trainings take time and coordination.



If you want people to be able to perform under stress,
include ***Optimal Arousal***



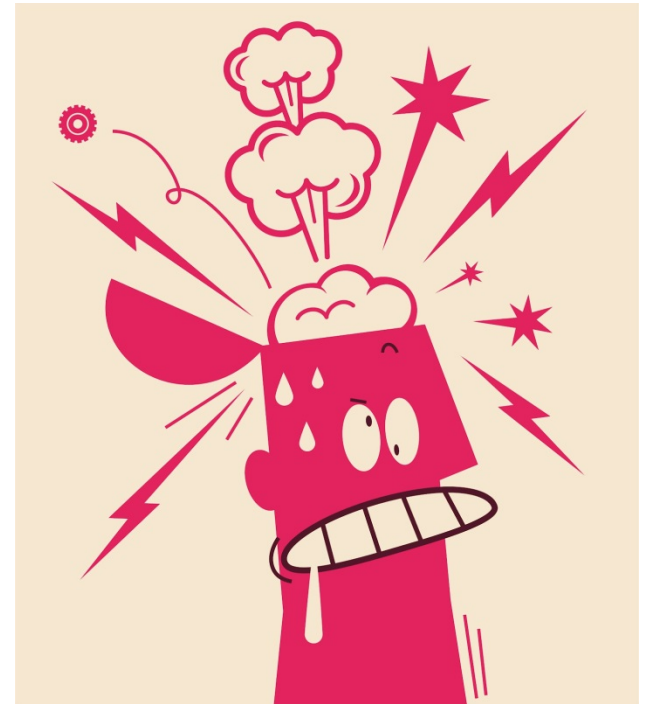
Too little stress leads to poor assimilation and poor retention.

Too much stress leads to poor assimilation, poor recall, and poor performance (amygdala takes over; pre-frontal cortex gets bogged down)

Optimal learning occurs when there is
“just the right amount” of stress.

Add stressors when appropriate

- Performing new skill
- Performing in front of others
- Being evaluated
- Surprises
- Gaps in knowledge
- Lack of familiarity
- Noise
- Overstimulation (task saturation)
- Working alone
- Time pressures
- Limited resources



Reduce stress when necessary

- Knowledge
- Familiarity
- Routine
- Checklists
- Quality leadership
- Working with a partner
- Quiet, soothing voice
- Breathing
- Laughter



PRACTICE WITH INTENTION

Practice does not mean “talking about” what to do.

(Recognize that performance will go down before it goes up.)

There is no such thing as too much practice. Because we are loathe to try unfamiliar behaviors under stress, we must practice ideal behaviors to the point that they are highly familiar.

Use mental imagery while practicing; visualize yourself doing a skill—or following a routine—under pressure.

THE BENEFITS OF IMAGERY

- **Meditative-type imagery** seems to connect the pre-frontal cortex with the limbic system. (Think through each step to the point that your body performs behaviors.)
- Technique is commonly **used by elite performers**.
- Use of case studies and close calls can familiarize brain with “surprises”; allows you to **imagine what you might do** in the situation.

THE IMPORTANCE OF FEEDBACK

Research backs the effectiveness of quality feedback.

Quality feedback includes a TOAST. It is ...

- Timely
- Objective
- Aimed at the right person
- Specific, and
- Tactful



Make sure you provide an opportunity to “re-do.”

REFERENCES

Survival Psychology by John Leach, 1994.

The Unthinkable: Who Survives When Disaster Strikes ... and Why by Amanda Ripley, 2009.

Thinking Fast and Slow by Daniel Kahneman, 2011.

Nerve: Poise Under Pressure, Serenity Under Stress, and the Brave New Science of Fear and Cool by Taylor Clark, 2011.