

Exercise as Medicine: The power of neuroplasticity in Parkinson's

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Passionate about Empowerment

Today's Journey....

- The influence of exercise on Parkinson's
- What YOU need to be specifically doing
- And covering some Whys?



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Gilly Davy - senior neurological physiotherapist



How often do you currently exercise?

**How confident are you
that you are exercising
specifically for your
Parkinson's?**

Do you get out of breath when exercising?



You produce magic in the brain when you exercise

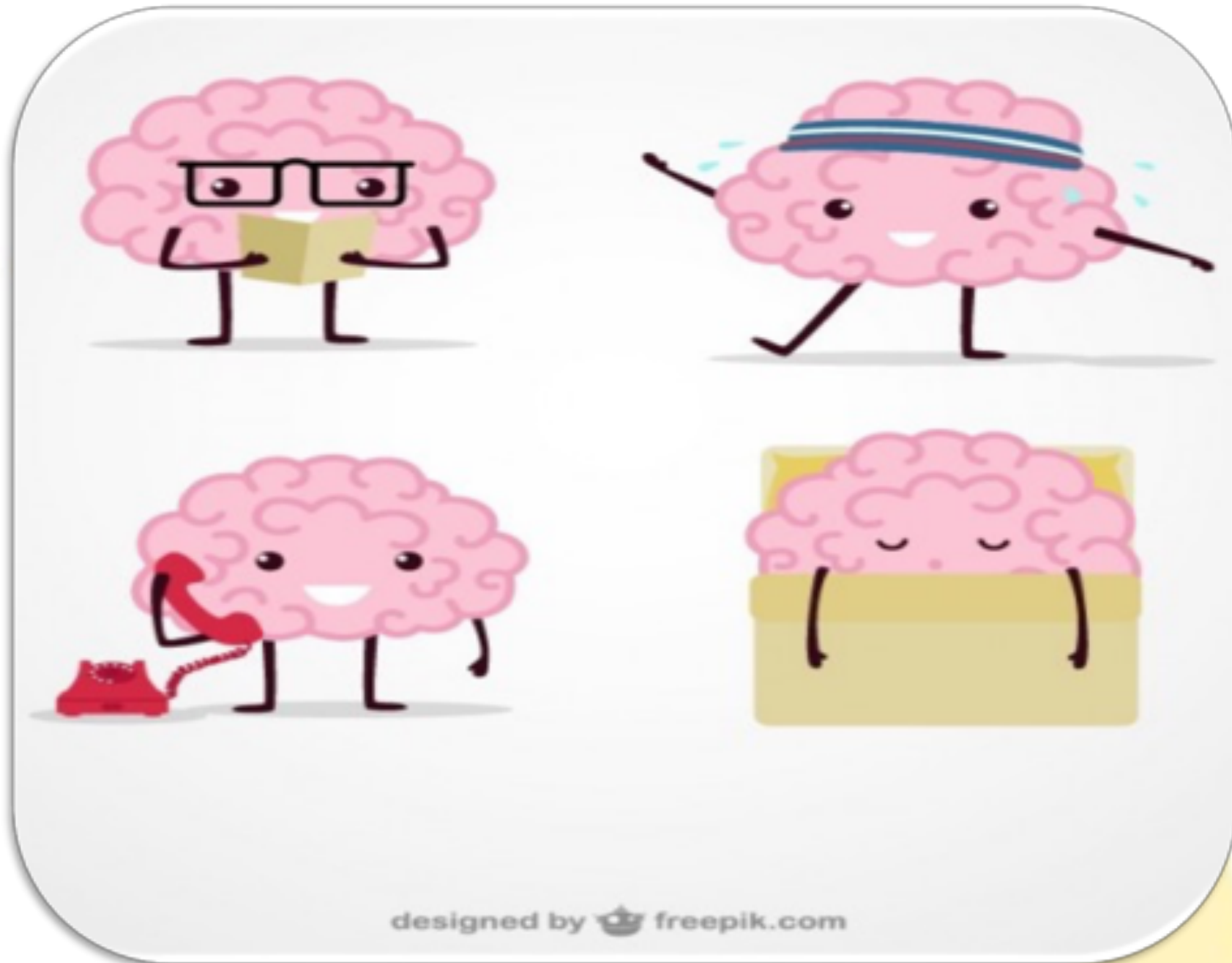
Houle and Cote 2013, Coelho et al 2013
Constans et al 2016

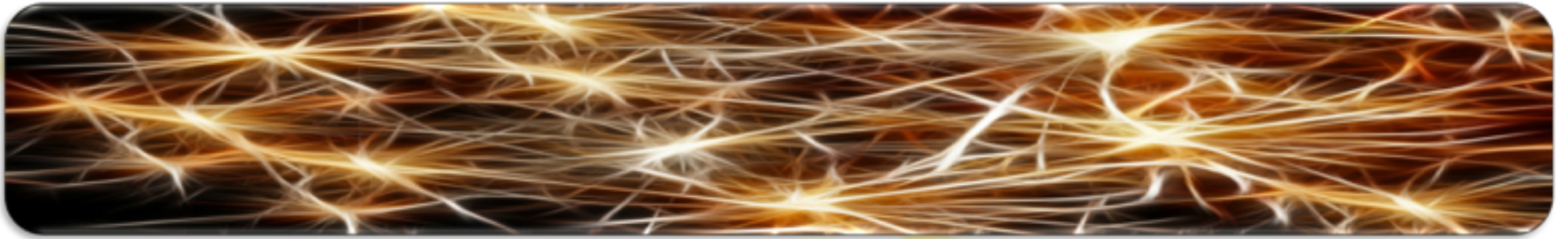
Arterial Blood Supply of the Brain



Dr D Sunil Kumar

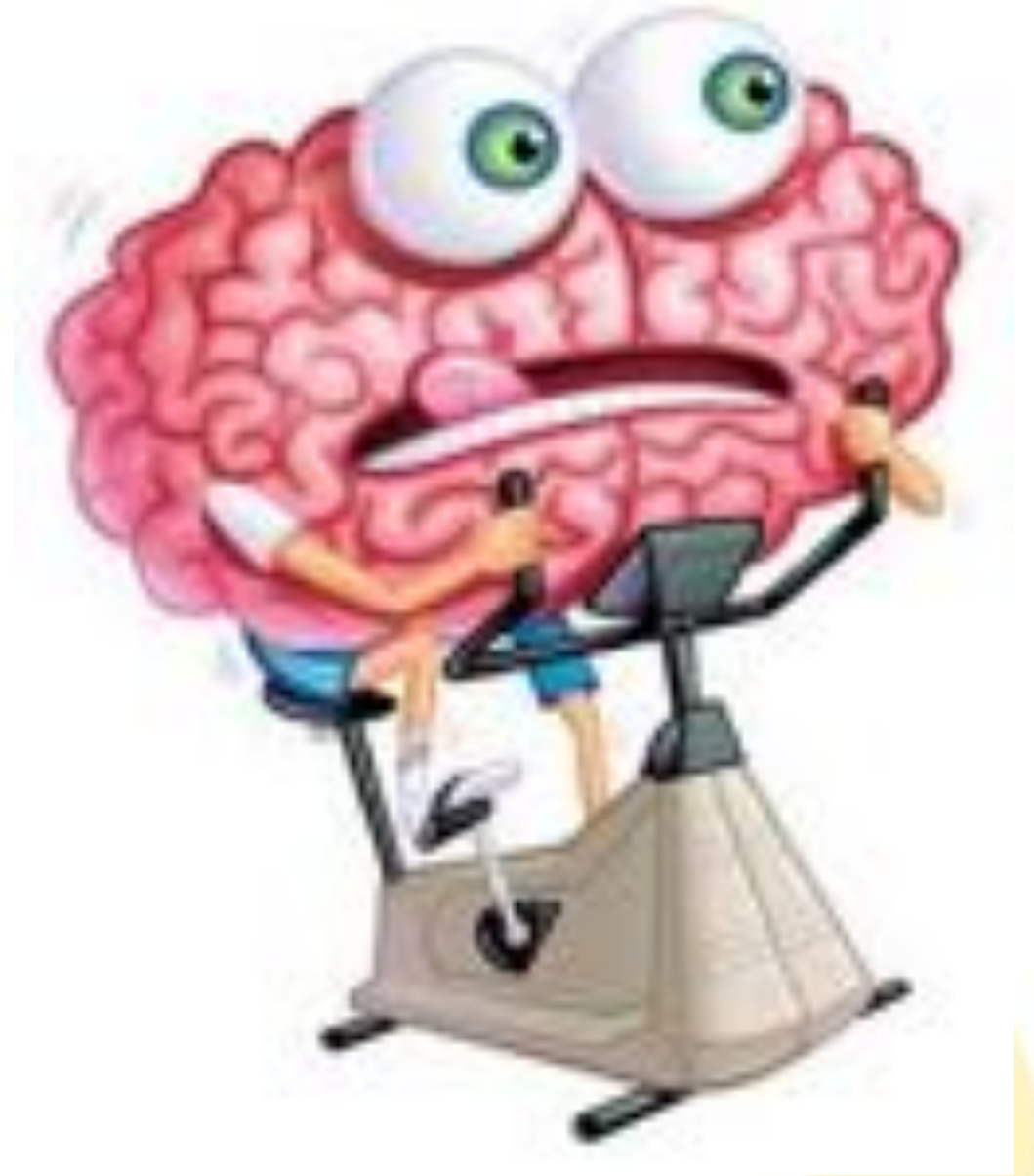
4 pillars of brain health





70%-80% Loss of Dopamine
Your Brain has already started
changing
Its there 24 hours a day

Exercise is Non Negotiable



Symptom Presentation

Motor Symptoms

- Bradykinesia
- Tremor
- Rigidity
- Postural instability
- Freezing
- Dyskinesia
- Dystonia

Non Motor Symptoms

- Depression
- Anxiety
- Apathy
- Fatigue
- Restlessness
- Cognitive impairment
- Sleep disturbances – insomnia
- Constipation
- Loss of smell

The Cardinal Signs



Change in sensory calibration

- Altered perception of movement
- What you see is not what you feel

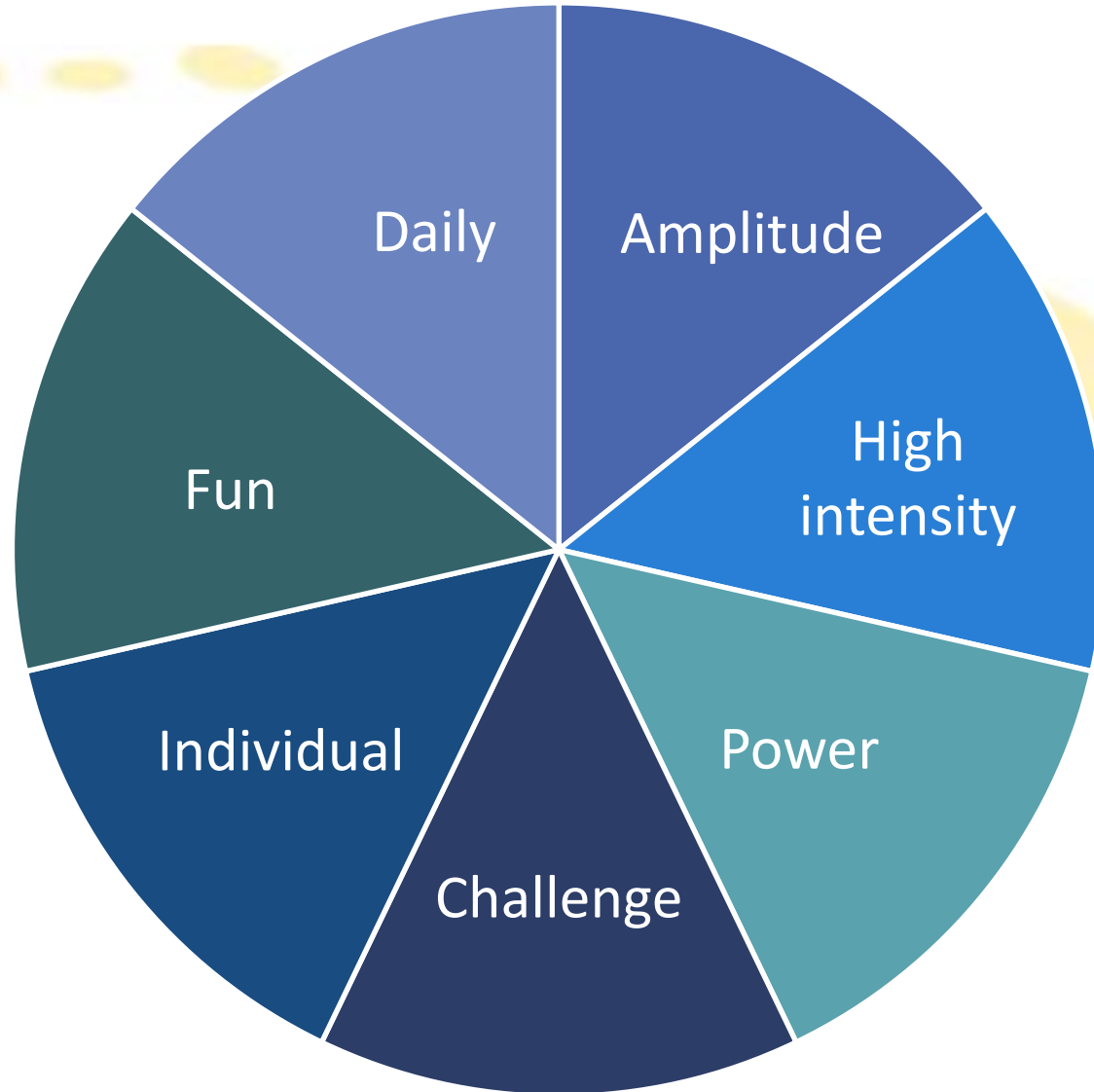


Historical Approach to Rehabilitation



Allen 2010-11, Morris 2010,
Ahlskog 2011

Principles Instead of Methods



High Intensity

- Brain derived neurotropic factors
- Neurological protection
- Forced use
- Assists in re calibration

Ridgel 2009

Perceived Level of Exertion Borg Scale 1-10	
0	Rest
1	Really easy
2	Easy
3	Moderate
4	Sort of hard
5	Hard
6	
7	Really hard
8	
9	Really, really hard
10	Maximal

**You need to be
out of breath
3 to 4 times a
week**



Amplitude

“Think BIG”

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Power

- Decline in speed of muscle recruitment
- Explosive
- Need Feedback



Challenge

- Dual tasking = loss of motor output
- Learning new novel tasks
- Out of your comfort zone



Try something new

- Boxing
- Dancing
- Tai Chi
- Badminton
- Bowls



Daily



- 10 minutes of PD specific exercise
- 30 minutes of activity daily

Individual

- Specific to you
- Mild/Moderate/Severe

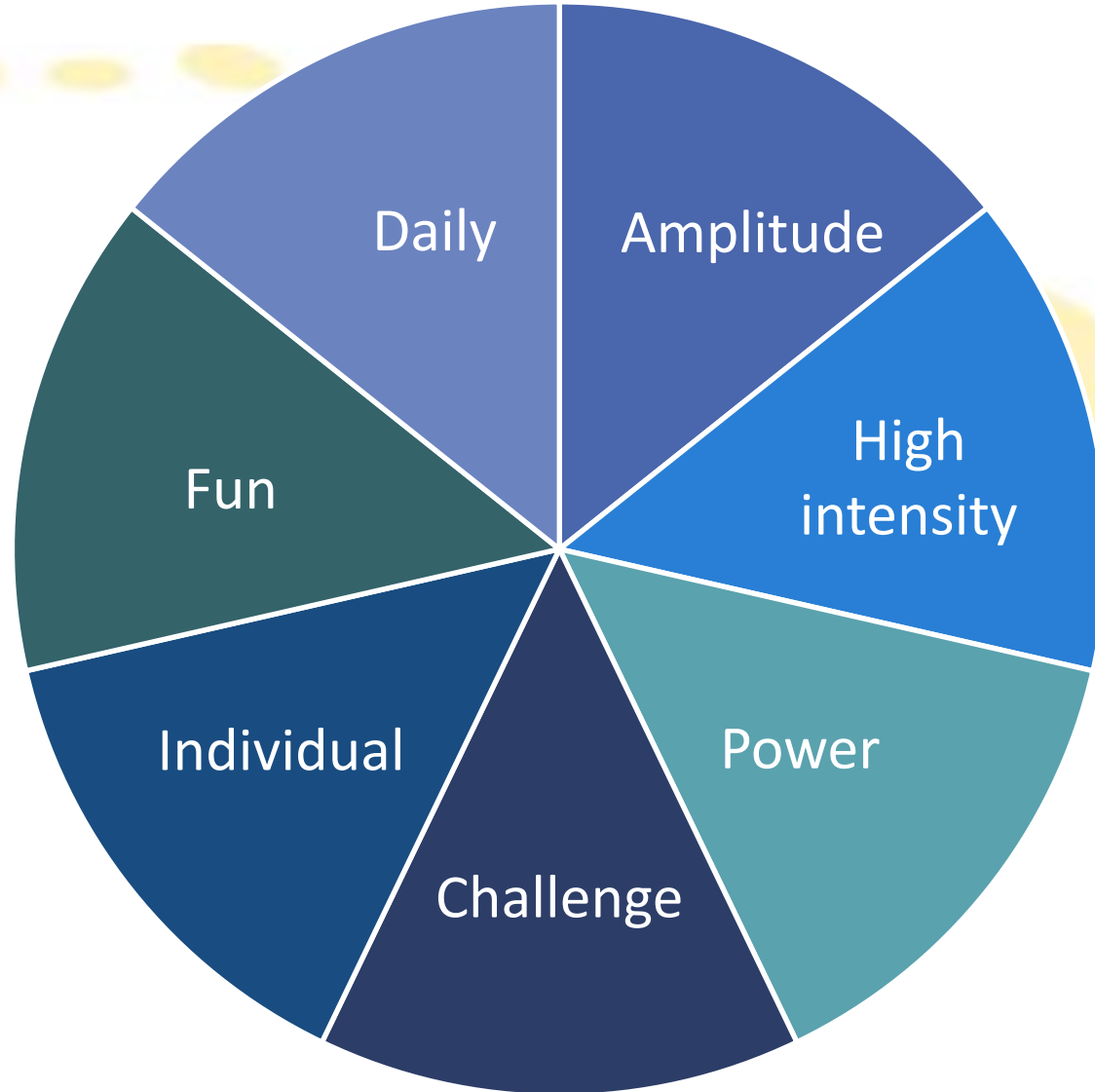


Fun



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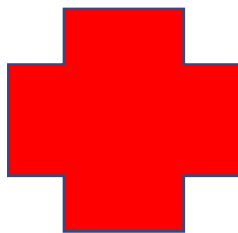
Principles Instead of Methods



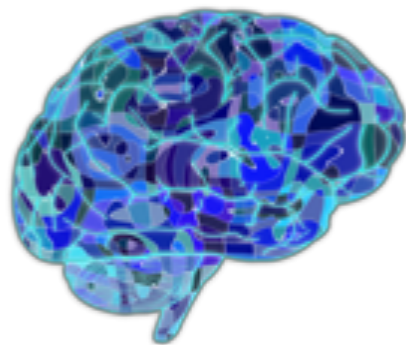
**Where the
magic
happens**



**Your comfort
zone**



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Take Home Messages

- You have the power to protect;
 - Work intensively
 - Think BIG always
- Principles are more important than methods



When to start - NOW!!!



Thank You

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