



Brain Rules: 12  
Principles for Surviving  
and Thriving at Work,  
Home, and School  
by John Medina

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Reviewed by  
Trevor Eddolls

Dr John J Medina is a developmental molecular biologist focused on the genes involved in human brain development and the genetics of psychiatric disorders. He's organised the most up-to-date information on how the brain works and how people use it into 12 rules and one of the most unputdownable and quotable books I've ever read. You find yourself having a conversation with someone and one of Medina's rules or explanations just leaps back into your mind and helps explain whatever it is you're talking about.

He's taken what could be a dry and dusty fact-laden tome and filled it with humour and numerous examples that illustrate whatever point he's trying to make.

So what are the 12 rules? Medina summarises them as:

- ◆ Exercise boosts brain power
- ◆ Sleep well, think well
- ◆ The human brain evolved too
- ◆ Stressed brains don't learn the same way
- ◆ Every brain is wired differently
- ◆ Stimulate more of the senses
- ◆ We don't pay attention to boring things
- ◆ Vision trumps all other senses
- ◆ Repeat to remember
- ◆ Male and female brains are different
- ◆ Remember to repeat
- ◆ We are powerful and natural explorers.

What did I take away from the book? That the prefrontal cortex governs executive functions such as problem solving, maintaining attention, and inhibiting emotional impulses. That the primitive

brain's functions are the four Fs: fighting, fleeing, feeding, and reproductive behaviour. That the amygdala allows you to feel rage, fear, or pleasure. Or memories of past experiences of rage, fear, or pleasure.

I liked Posner's model of attention:

- ◆ The arousal or alerting network monitors the environment (intrinsic alertness).
- ◆ The orienting network is where you focus your attention on a threat (phasic alertness).
- ◆ The executive network decides what to do about the threat.

Emotions get our attention. We get the meaning before we remember the details. The brain cannot multitask. The brain needs a break.

Kim and Diamond's three-part definition of stress:

- 1 There must be an aroused physiological response
- 2 The stressor must be perceived as aversive.
- 3 The person must not feel in control of the stressor.

The brain fills in the gaps that the blind spot in the eye cannot see. People with Charles Bonnet syndrome see lots of things that aren't there. Under stress, men fire up the amygdala in the right hemisphere, women use the left side. Men remember the gist of things, women remember the emotional details.

There are 280 brilliant pages in the book. And when you've finished it, you can go on to enjoy Brain rules for babies ■