

## Main - AttentionDeficit

### FACTS:

- \* ADHD medications reduce random brain activity.
- \* ADHD, when untreated, means that a person finds it difficult to maintain the desire to continue doing things that they are doing. They feel an anxious need to do something else and then feel the same when they start doing that other something.
- \* A sleep deprived person (someone who goes without sleep or with only a little sleep) has a difficult time concentrating. They also feel a lack of desire to continue what they are doing, no matter what it is they are doing.
- \* People with ADHD have a harder time remembering things than people who are not diagnosed as ADHD. This is generally assumed to be because an ADHD brain gets distracted before the information moves from short to mid or long term memory.

### UNCERTAINTIES:

- \* When someone has ADHD and is not taking medication, presumably brain scans will show higher levels of seemingly random activity in the brain.
- \* Is the same true of someone who has had little or no sleep? Is there brain firing randomly in the same way that an ADHD brain is?
- \* No one really knows, but there seems to be a general assumption that the brain moves memories into long term memory while sleeping. I wonder if it's also possible that the brain is also refreshing old memories as well. I wonder if the long term memory of the brain is less like a book (which, once written in, is pretty durable and requires little or no upkeep) and more like those reels of film that movies are saved on (they're relatively stable, but they decay over time, so they need to be copied every once in a while to maintain the original information).
- \* The cells of every other part of the body (AFAIK) are constantly being replaced with new ones. It seems reasonable to believe that the same is true of neurons. Perhaps the brain regularly replaced dying neurons with new ones and then refreshes the connections so that no memory is lost. That's a pure guess on my part, but it seems like a possibility.
- \* Do people with untreated ADHD have a harder time waking up in the morning? (that might indicate that the brain needs more time to refresh memories)

### POSSIBLE CONCLUSIONS:

- \* Is it possible that an ADHD brain is always highly active because it has a harder time maintaining the memories it does have? Is it possible that brain cells of an ADHD brain are not as long lived or perhaps have a more difficult time saving information (by having a harder time forming permanent connections or however it is that brain cells save memory)? Is it possible that there's a feedback mechanism whereby the brain sees information come in but then doesn't see it saved, so it continues the high brain activity to try and save it?
- Any, none, or all of these ideas may be true. But, I think there's lots of interesting avenues of exploration that someone could look into.