

Great Things about Meditation (Research on Advanced Meditators)

Makes you happy

- Activates left prefrontal cortex in the area highly correlated with happiness.
- Enhances *neuroplasticity*, the brain's ability to assume new functions, even in parts that normally handle other functions (for example, the enhanced auditory perception of blind people, due to the visual cortex assuming auditory tasks). Neuroplasticity includes *neurogenesis* (the production of new neurons), *synaptogenesis* (production of new connections, or synapses, between neurons), and *myelinogenesis* (production of new "insulation" on neurons).
- Affects *epigenetics*, whether genes express themselves as physical traits.
- Experienced meditators evidenced a left shift, involving engagement of the left prefrontal cortex, associated, among other things, with engagement, connection, and curiosity. Participants described a sense of meaning and interconnection when this area lit up on the fmri. Researchers labeled this *eudaimonic happiness*, distinguishing it from hedonic happiness.
- High-amplitude gamma waves in synchrony throughout the brain. Subjects described a sense of "vastness" when they were producing this phenomenon.

More Compassionate

- *Anterior Insula* (represents all major organ systems) shows huge changes in response to aversive sounds (a baby crying, a woman screaming) associated with compassion meditation, indicative of a coupling of heart and brain.
- *Short-term compassion training* (2 weeks, 30 minutes a day), participants were more likely to commit their own money to a worthy cause, and there was increased connectivity of the insula and amygdala during negative vs. neutral presentation of pictures. It suggested that negative emotions were subdued and the participants were becoming more altruistic.

More attentive

- Information flows quicker. *Attentional blink* is improved.

Structural Brain Changes

- Thickening of brain in key areas (rejuvenation and enhancement)

Healthy

- Improved immunity
- Lower stress
- Resilience in the face of obstacles (to depression, anxiety, trauma).

Belief System Challenges

- Attention is trainable
- Happiness (lasting) is trainable
- Compassion is trainable
- Brain structure is modifiable
- Brain rejuvenation is possible
- Aging retardation is likely (including telomerase expression).

Resource:

www.investigatinghealthyminds.org