YOUR MOST HEALTHY BRAIN

What We’ll Cover

- What we used to believe
- What we’re learning and know now
- How the brain works
- Qualities we can change
  - mood
  - mental clarity
  - creativity
  - attention
  - memory
  - addiction
  - IQ
  - EQ
- Ways to improve the brain
What we used to believe

What we know now
How the brain works

Information flow through neurons

Dendrites Collect electrical signals
Cell body Integrates incoming signals and generates outgoing signal to axon
Axon Passes electrical signals to dendrites of another cell or to an effector cell

https://www.youtube.com/watch?v=XSzsI5aGcK4
How the brain works

Information flow through neurons

- Dendrites: Collect electrical signals
- Cell body: Integrates incoming signals and generates outgoing signal to axon
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Qualities we can change

mood
attention

memory
addiction

The addicted brain shows distinct changes which do improve with continued cessation of drug use.

IQ

GeNiUS
At
WORk
Ways to improve the brain

- mindfulness
- neurobics
- nutrition
- exercise
- divergent thinking
- learning
- brain games
- do things the hard way
- sleep
mindfulness helps attention, focus, mood, memory, addiction, pain, EQ, chronic pain

...a mental practice of focusing one's awareness on the present moment, while calmly acknowledging and accepting one's feelings, thoughts, and bodily sensations, used as a therapeutic technique.

neurobics memory

- Get dressed for work or take a shower with your eyes closed.
- Listen to a specific piece of music with eyes closed while smelling a particular aroma like vanilla, chocolate, or lavender and think about a vacation you liked.
- Wake up to a new scent everyday for a week, switch
- Read aloud
- Eat a meal with your family in silence. Use only visual cues
- Use your non-dominate hand
- Use one hand for 2 handed activities
- Use feet to do laundry
- Change morning routine
- Reorganize your desktop
nutrition

helps mood, emotional regulation, addiction recovery, mental clarity, creativity, attention, memory
**nutrition**

helps mood, emotional regulation, addiction recovery, mental clarity, creativity, attention, memory

- Avocado
- Beets
- Blueberries
- Carrots
- Elderberry
- Leafy greens
- Oranges
- Pomegranates
- Red grapes
- Spinach
- Sweet potatoes
- Tomatoes

- Poultry
- Fish
- Eggs
- Dry beans and peas
- Chickpeas
- Quinoa
- Flax-seed
- Whole grains
- Pistachios
- Walnuts
- Green tea
- Spice-Turmeric + pepper
exercise
aids memory, mood, energy, attention, learning, addiction, sleep

BRAIN AFTER SITTING QUIETLY  BRAIN AFTER 20 MINUTE WALK

Homemade brain scan courtesy of Dr. Glinch, Illinois University of Illinois
exercise

Big body. Little brain. Become extinct.

Go Big
• do a 30-40 minute workout each day

or

start small—lifestyle changes:
• takes stairs
• after lunch and dinner walk around the block
• when you’re on the phone for a bit, use earpiece and walk or at least stand
• watching tv walk during commercials
• use standup desk or alternate sitting on chair or ball at work
• park far away
• get a dog to walk

divergent thinking

improves creativity

• Think of four new uses for common items that you see every day (toothbrush, toaster, stapler, rubber band, etc.)
• Think of three new ways to ask your kids (or someone else) what they did at school or work.
• Find a new use for items you would typically recycle.
• Find a new way to get to work.
• Create a crossword puzzle out of three words, then add more
• Create something good to eat using only what you have on hand
learning
grows more neurons, increases IQ, EQ and creativity

Excellent learning condition =
Novel Activity -> triggers dopamine -> creates a higher motivational state -> which fuels engagement and primes neurons -> neurogenesis can take place + increase in synaptic plasticity (creation of new neural connections, or learning).

- learn a second language
- learn a musical instrument
- read and study
- increase exposure to other cultures
- volunteer

brain games
improves working memory and fluid intelligence

- Difficult level sudoku
- Memorize a deck of cards
- Strategy games (ex. Chess)
- N-back task
do things the hard way
working memory, IQ and fluid intelligence

- Stop using GPS, Tipster, calculator, spell check

sleep
aids memory, learning, attention, mood

- Increase omega 3
- Talk to doctor about time-released melatonin
- Rethink your lighting (Open the blinds in the morning. Take a morning walk outside on break and after you eat lunch to increase sunlight exposure.)
- Unplug at least 1 hr. before bed- no tv in bedroom
- Set room temperature to 66-68. Take shower before bed warm water relaxes and body temp dips
Why is this important at work?

References

- Carmona, Richard. 30 Days to a Better Brain. 2014
- Dow, Mike. The Brain Fog Fix: Reclaim your Focus, Memory and Joy in just 3 Weeks. 2015
- Small, Gary. The Alzheimer’s Prevention Program. 2011
- Suzuki, Wendy. Healthy Brain, Happy Life. 2015
Resources @ the State Library

Internet Resources

- Administration for Community Living
  What is Brain Health?
  https://brainhealth.acl.gov/

- AARP Brain Health and Wellness
  http://www.aarp.org/health/brain-health/
Books about the Brain

DVD Titles
Downloadable Titles

KDLA WorldCat Discovery Catalog
https://kdla.on.worldcat.org/discovery

Kentucky Libraries Unbound (KLU)
http://kdla.ky.gov/employees/downloadingmedia/Pages/default.aspx

How do I find materials?
Kentucky Libraries Unbound
More KDLA services

- **Ask a Librarian**
  - Ask a question, get help with research, etc.

- **Interlibrary Loan**
  - Get materials we don’t have in our collection
Remember!

- State Government Employees Training Calendar
  http://kdla.ky.gov/employees/Pages/TrainingEventsCalendar.aspx

- Follow-up email with
  - Training certificate
  - Evaluation survey link

Final Words

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