

Jan 31, 2012

## [To Harness Neuroplasticity, Start with Enthusiasm](#)

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**We are the architects and builders of our own brains.**

For millennia, however, we were oblivious to our enormous creative capabilities. We had no idea that our brains were changing in response to our actions and attitudes, every day of our lives. So we unconsciously and randomly shaped our brains and our latter years because we believed we had an immutable brain that was at the mercy of our genes.

Nothing could be further from the truth.

The human brain is continually altering its structure, cell number, circuitry and chemistry as a direct result of everything we do, experience, think and believe. This is called “neuroplasticity”. Neuroplasticity comes from two words: neuron or nerve cell and plastic, meaning malleable or able to be molded.

The implications of neuroplasticity are enormous: we have the ability to keep our brains sharp, effective and capable of learning new skills well into our 90s, if we protect our brains from damaging habits and give them ongoing stimulation and appropriate fuel. One way to illustrate this is to think of the brain and mind as a large boat, complete with captain and crew, sailing the ocean blue.

The captain makes the decisions and gives the orders, which the loyal crew follow. Without a captain, the boat would be directionless. Without a crew, the day-to-day running of the boat would be impossible. The crew know their role and don’t need the captain to tell them how to do their job or to remind them of their job on a daily basis. They’re very well trained. The captain only notifies the crew if he or she wants something to change and takes charge whenever leadership is required. As for the boat, it needs to be kept in good nick and fuelled on a regular basis.

The captain, the crew and the boat form a single, interdependent unit, each party influencing the other two. If the captain and crew don’t do their job properly, the boat can get damaged and end up in disrepair. If the boat is damaged, the journey is more arduous; in particular, rough seas are more difficult to handle. If the captain is apathetic, incompetent or drunk, there is an absence of leadership. And if the captain and crew are in constant disagreement, they won’t get very far.

How does this relate to the brain and mind? The captain represents the conscious mind; the crew represent the subconscious mind; the boat is the brain; and the ocean is life.

The conscious mind is the thinking part of ourselves. It sets goals, makes decisions and interprets experiences. The subconscious mind is the part of ourselves beneath our conscious awareness that keeps us alive and running. It's what keeps our hearts pumping, our lungs expanding and our hair growing. We don't consciously say to ourselves, "Pump, breathe, grow!"—these things are handled subconsciously, through the autonomic nervous system. The number one priority of the subconscious mind is our survival: physical, emotional and psychological. This is why our subconscious plays a powerful role in dictating behaviour. It prioritises our emotional wellbeing over our conscious wants. It's why sometimes we consciously think we want one thing, but still end up doing another. One reason that diets don't work is they don't address subconscious issues that may be at play. We always sabotage our efforts if the subconscious pay-offs for not changing override the conscious desire to lose weight. Finally, the brain is the vessel through which our conscious and subconscious minds operate.

Based on the analogy of boat, captain and crew, the following is an overview of how we can boost our brains.

### **1. Don't damage the boat.**

On day one in medical school, I was taught *Primum non nocere*—"First do no harm". No boat owner would knowingly damage their boat, so it follows that no human would knowingly damage his brain. Apart from the obvious injury caused by falling off ladders and falling into illegal drugs, things which harm the brain and reduce our cognitive abilities include smoking, stress, sleep deprivation, soft drinks, sedentary lifestyles, excessive alcohol, junk food, high blood pressure, high cholesterol levels, obesity, loneliness, pessimism and negative self-talk. Goal number one is to avoid these damaging entities.

### **2. Dock the boat in stimulating surroundings.**

Our brain function improves in every measurable way when we find ourselves in environments that are mentally, physically and socially stimulating. Adventure prevents dementia!

### **3. Fuel it the finest.**

Our dietary choices affect not only the health of our bodies but also the health of our brains. In fact our brains consume one fifth of all the nutrients and kilojoules we ingest. What we eat has a significant impact on our neurotransmitters (chemicals that carry messages between neurons across synapses), our alertness, our mood and our cognitive functioning.

### **4. Keep the cargo light.**

Obesity is a major risk factor for dementia.

### **5. Run the motor.**

Without physical exercise our brains waste away as much as our muscles waste away. Exercise actually induces the growth of new brain cells.

## **6. Learn the ropes and keep on learning.**

Having a good education and engaging in lifelong, active learning help to protect us from dementia and contribute to our developing “cognitive reserve”. This reserve acts as a buffer against mental decline as we age.

## **7. Sail to new shores.**

Boredom and monotony are poisonous to our brains. We need to get out there, get exploring and get out of our comfort zones. We need to sail to new shores to find riches outside our usual boundaries. We need to change our routines, do things differently and give ourselves ongoing challenges.

## **8. Use it or lose it.**

This applies to every function of the brain and body, from studying to socialising to sex. In order to maintain our capacity for learning new skills, we need to engage in learning new skills on a regular basis. In order to become creative, inventive and re-sourceful, we need to give ourselves tasks that require creativity, inventiveness and resourcefulness. In order to have a good memory, we need to make a conscious effort to pay attention. In order to remain socially adept, we need to remain socially active.

## **9. Train it and regain it.**

If we lose a specific brain function, all is not lost. Progressive, persistent, goal-focused practice can help us regain the lost function.

## **10. Charge the battery.**

Stilling the mind is as important as stimulating the mind. Getting adequate sleep and pressing the pause button on our mind chatter are essential for peak performance on a day-to-day basis, as well as preservation of brain function as we age.

## **11. Connect with fellow travellers.**

Lifelong social interaction and meaningful connection with others is vital for a healthy brain.

## **12. Choose the destination.**

The brain is a teleological device—it is fed by having goals to strive for and aspirations to work towards. The clearer we are about where we want to go and what we want to achieve, the more effective the brain is in accomplishing the required tasks. This is analogous to the captain giving the crew clear instructions about where they’re going and what is expected of them.

## **13. Command the crew.**

Having decided on what we want, we need to direct our self-talk to support our goals. Our internal dialogue is a constant stream of instructions to the subconscious mind. Uplifting, solution-focused self-talk switches on brain cell activity; negative, discouraging self-talk dampens it.

## **14. Communicate gratitude.**

When we think about what we’re thankful for, we wire our brains to continue finding things to be thankful for. Our brains are designed so that we see whatever we’re looking for. We are never objective, even when we make a concerted effort to be so. Subjectivity always enters our percep-

tions. We don't see things as they are; we see things as we are. Therefore, by regularly reflecting on things that we're grateful for, we construct a filter through which we see the world and we create more experiences for which to feel grateful.

### **15. Practise perfectly.**

When we practise a skill in our imaginations, the same neurons are firing as if we were performing the skill in real life! If we see ourselves executing a task perfectly in the mind's eye, we become better at it in the real world because every mental rehearsal increases the efficiency of electrical transmissions between the involved nerve cells. Mental practice turbocharges our progress.

### **16. Bon voyage!**

Enjoy the journey! Get excited about where you're going. Passion, enthusiasm and excitement are the most powerful brain fuels of all. The word enthusiasm comes from the Greek *entheos*, meaning "to be divinely inspired or possessed by a god".

Ralph Waldo Emerson observed, "*Nothing great has ever been achieved without enthusiasm.*"



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→ To learn more about neuroplasticity, read these [15 FAQs on Neuroplasticity and Brain Fitness](#).

→ [How to Submit a Guest Post to SharpBrains.com](#).

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