

Brain awareness week – it's also Science week

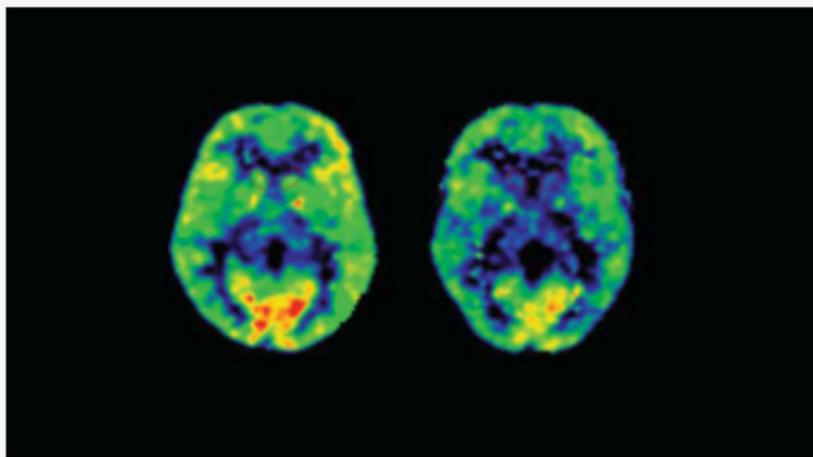
Have you considered a career in
medicine, nursing or psychology?
How can this link to our work on
internet safety and bullying?

Let's look at the side-effects of KINDNESS

Bullying and the Brain

Source: Society for Neuroscience

Brain research is revealing that bullying is more than just an unfortunate part of growing up. It can cause long-term changes to the brain that leads to cognitive and emotional deficits as serious as the harm done by child abuse.



[+ Enlarge](#)

The stress caused by bullying can negatively affect the developing brain. Stressed animals can show increased levels of corticosterone in the regions of the brain where reward stimuli are processed, increasing the risk for substance abuse.

Courtesy, with permission: National Institutes of Mental Health.

affect brain function.

Being bullied is a stressful experience. Victims of bullying often struggle with anxiety, depression, poor self-esteem, and drug abuse — during the bullying and well into adulthood.

It turns out that long-term changes to the brain may be behind these behavioral issues. Bullying can leave a lasting mark on the developing brain, and brain science is starting to show how devastating and persistent the scars of bullying can be.

Stressed Out

Bullying can alter levels of stress hormones, and research in animals and people shows how this can

Kindness and its affect on the brain

- The 5 Side Effects of Kindness
- *Published on [May 30, 2011](#) by [David R. Hamilton PhD](#)*
- When we think of side effects the first thing that springs to mind are the side effects of drugs. But who'd have thought that kindness could have side effects too?
- Well, it does! And positive ones at that.

- **1) Kindness Makes us Happier**

When we do something kind for someone else, **we feel good**. Many people feel that this is because **it is the right thing to do** and so we're tapping into something deep and profound inside of us that says, *'This is who I am'* and **feeling good about ourselves**.

The science bit:

On a biochemical level, it is believed that the good feeling we get is due to elevated levels of the brain's natural versions of morphine and heroin, which we know as endogenous opioids. They cause elevated levels of dopamine in the brain and so we get a natural high, often referred to as 'Helper's High'.

- **2) Kindness Is Good for the Heart**

Acts of kindness are often accompanied by **emotional warmth**. Emotional warmth produces **the hormone, oxytocin**, in the brain and throughout the body which **has a positive chemical impact on our hearts, circulation and blood pressure**.

The science bit:

Oxytocin causes the release of a chemical called nitric oxide in blood vessels, which dilates (expands) the blood vessels. This reduces blood pressure and therefore oxytocin is known as a 'cardioprotective' hormone because it protects the heart (by lowering blood pressure). The key is that acts kindness can produce oxytocin and therefore kindness can be said to be cardioprotective.

- **3) Kindness Slows Ageing**

Ageing is a combination of many things, but two culprits that speed the process are 'free radicals' and 'inflammation', both of which result from making unhealthy lifestyle choices. Remarkable **research now shows that oxytocin (that we produce through emotional warmth)** reduces levels of free radicals and inflammation in the cardiovascular system and so slows ageing at source.

The science bit:

Scientific journals also suggest the strong link between compassion and the activity of the vagus nerve. The vagus nerve, as well as regulating heart rate, also controls inflammation levels in the body. One study found that kindness and compassion did, in fact, reduce inflammation in the body, mostly likely due to its effects on the vagus nerve.

- **4) Kindness Improves Relationships**

This is one of the most obvious points. We all know that **we like people who show us kindness**. This is because kindness reduces the emotional distance between two people and so we feel more 'bonded'. It's something that is so strong in us that it's actually a genetic thing. **We are wired for kindness.**

The science bit:

Our evolutionary ancestors had to learn to cooperate with one another. The stronger the emotional bonds within groups, the greater were the chances of survival and so 'kindness genes' were etched into the human genome. So today when we are kind to each other we feel a connection and new relationships are forged, or existing ones strengthened.

- **5) Kindness is Contagious**

When we're kind **we inspire others to be kind** and studies show that it actually creates a ripple effect that spreads outwards to our friends' friends' friends – to 3-degrees of separation. Just as a pebble creates waves when it is dropped in a pond, so **acts of kindness ripple outwards touching others' lives and inspiring kindness everywhere the wave goes.**

The science bit:

A study reported that an anonymous 28-year-old person walked into a clinic and donated a kidney. It set off a 'pay it forward' type ripple effect where the spouses or other family members of recipients of a kidney donated one of theirs to someone else in need. The 'domino effect', as it was called, led to 10 people receiving a new kidney as a direct consequence of that anonymous donor.

Are you inspired?

- **Could you be someone** who will contribute in the future to our understanding of the brain?
- **Could you be someone** who will make caring and kindness part of your professional career?
- **Could you be someone** who saves a life with kindness by supporting others in your career?
- **Could you be someone** that changes lives by sharing these messages?