

Essentials for Learning  
Kim Bevill, Gray Matters  
[www.kimbevill.com](http://www.kimbevill.com)  
303-386-3628

Schools Must Address:

Stress Inventory

Neurological Properties

When neurotransmitters enter the synapse...we feel it.

The “Feel Good” Neurotransmitters

Executive Function:

Planning, cognitive manipulation of language memory learning reasoning, abstract thinking, rule acquisition, initiating appropriate actions, inhibiting inappropriate actions, selecting relevant sensory information

Dopamine

Dopamine fuels the part of the brain...the frontal cortex

Endorphins

Serotonin

The learning structures in the brain are time restricted

Young children require more breaks from seat work

When stress neurotransmitters are released...we feel it

The stress neurotransmitters

What will damage/ age the brain?

Neuroplasticity: allowing for the brain to grow...connections of one cell to another

Exercise makes new nerve cells

Organisms are meant to move

Prerequisite for a brain?

However when it matures:

How do we stop digesting our own brain? New neural growth!

Demands on the brain brings a recovery period

...and it happens quickly!

How exercise reduces stress:

And increases BDNF (miracle grow for the brain)

And increases norepinephrine

It is IMPERATIVE that we have methods to fight our stress

Our memory-maker—the Hippocampus is vulnerable to stress

It is responsible for our learning and memory

Structural Damage

Neural Transmission

Immune System

Without sleep there is no relief

Diabetes and Obesity

Obesity and Children

To stop the damage...

These “Feel Good” Neurotransmitters  
Make you feel good!

Aid the Immune System

Allow for quick responses

Another Method....Present Moment

Mindfulness and physical ailments

## Mindfulness Based Stress Reduction

Method Three...

Method Four...

Method Five...

Implication to the most powerful learning:

Method Six

Method Seven

Method Eight:

“Eat” antioxidants

Drink a cup of tea

Method nine:

Method Ten