

# Neurogenesis and Depression

Can we as adults grow new nerve cells (in the brain)?

New science tells us that we continue to produce new nerve cells throughout our lives and that by the age of 50 we have replaced all of the original nerve cells that we were born with.

Some patients that have been cured of cancer were found to be still suffering from the depression that was triggered because of the cancer, and the medication that was used to treat their cancer. It is believed that the cancer medicine stops the production of new nerve cells that produce the chemicals that positively affect mood.

Hippocampus: Learning and memory – mood and emotion. Also, this is a unique structure of the brain where new neurons are born. It is estimated that humans produce 700 new neurons per day.

Why are neurons important and what are their function? We know that if we block the production of new neurons that we impair memory and spatial recognition (example: how we navigate our way to and from work).

With depression, it appears that there is a lower level of neurogenesis, but when we give antidepressants it increases the production of the brain's nerve cells (neurogenesis), decreasing the symptoms of depression. This is evidence that has established a clear link between neurogenesis and depression. If you just block neurogenesis, for cancer treatment, it blocks the production of new nerve cells and increases symptoms of depression. New science says when we control neurogenesis, we can better control the negative symptoms of depression and memory loss with aging.

Can an average person positively affect their own production of new nerve cells?

**Quiz:** Behaviour and Activity. Will these activities increase or decrease neurogenesis?

Learning: increases neurogenesis in the hippocampus

Stress: decreases the production of neurogenesis in the hippocampus

Sleep deprivation: decreases

Sex: Increases

Getting older: decreases but neurogenesis does not cease

Exercise: increase

Food: Some food increases the production of neurogenesis. Summary go to 7 min 30 sec of the video for some kinds of food that promote and take away from production of neurogenesis.

Take good care of yourselves!



Serving Niagara families to support each other since 1996  
[dan@familyeducationgroup.com](mailto:dan@familyeducationgroup.com) 905.933.3406