

Can Knitting Give You a Runner's High?

Posted By [Tamara Grand](#) On July 9, 2012 @ 12:08 pm In [Fitness, Health & Wellness](#) | [14 Comments](#)



[1]

At first glance, [crafting and exercise](#) ^[2] would seem to have little in common. One involves moving your body to improve health and fitness, the other moving your hands to create with paper, needles, paint or yarn.

Yet both activities have important, complementary effects on mood and cognitive function.

They make you feel better and enhance your ability to learn new concepts and tasks. They help to ward off depression and delay the onset of age-related memory loss. And they mitigate stress and facilitate better sleep.

How? Via their immediate effects on neurotransmitters (the chemicals that allow your body and brain to communicate) and the longer-term changes they induce in brain structure and anatomy.

The brain uses neurotransmitters to tell your heart to beat, your lungs to breathe, and your stomach to digest. Neurotransmitters affect mood, sleep and concentration and can cause adverse symptoms when they are out of balance. Three of the most important mood-related neurotransmitters are serotonin, dopamine and the endorphins.

- **Serotonin** regulates mood, appetite and sleep. It has several cognitive functions; low levels of serotonin inhibit memory and learning and are associated with [depression](#) ^[3].
- **Dopamine** plays a major role in the brain system responsible for reward-driven learning. It encourages us to keep performing behaviors that make us feel good. Too little and memory, attention and problem-solving abilities suffer.
- **Endorphins** have an opiate-like effect. They mask feelings of pain and create a feeling of relaxation and overall well being.

Evidence suggests that all three are produced in response to both physical activity (exercise) and repetitive spatial-motor tasks (like knitting and other handicrafts).

Exercise for your brain

Runners frequently speak of the 'high' they experience while running — a feeling of elevated mood that allows them to run longer, despite discomfort or even pain. ['Runner's high'](#) ^[4] is thought to be caused by the brain's release of several 'feel good' hormones, including serotonin, dopamine, endorphins and even endocannabinoids (cannabis-like hormones produced naturally in the body).

And recent evidence demonstrates that [regular exercise](#) ^[5] can improve your ability to learn new tasks ("How do I program the DVR?"), reduce the short-term memory loss associated with aging ("Where did I put my keys?") and help with 'executive function' tasks including scheduling, planning and multi-tasking (Simultaneously packing lunches, signing permission forms and talking to the bank? No problem!).

How? By inducing your brain to lengthen its axons, create more dendrites and improve its internal networking pathways. That's right, over time, exercise can dramatically [change the structure of your brain](#) ^[6].

Craft for your health

Knitters and other crafters often describe the state they experience while engaged in their art as 'meditative' or deeply relaxing. Some even refer to knitting as "the new [yoga](#) ^[7]." Studies of the brain waves of people immersed in repetitive spatial-motor tasks show remarkable similarities to those engaged in deep meditation, an activity known to stimulate the production of dopamine and serotonin.

Like [meditation](#) ^[8], repetitive spatial-motor tasks not only stimulate the brain's reward system, they also promote relaxation and counter-act the negative health consequences of stress hormones.

How? By increasing activity and cerebral blood flow in the left prefrontal cortex of the brain, an area associated with positive mood and feelings of general well-being. Interestingly, research has shown that solving puzzles (crosswords, Sudoku) and participating in activities that require the translation of codes and symbols (lace and cable knitting; paint by numbers) can also activate the left prefrontal cortex.

Over time, elevated prefrontal cortex activity results in lowered anxiety and an improved response to environmental stressors.

So, while there's still lots of research to be done, the new prescription for improved [mood](#) ^[9] and [brain health](#) ^[10] would seem to include exercise and crafting.

One caveat? Don't try to do both simultaneously. It's difficult (and potentially dangerous) to operate an elliptical machine while knitting!

Sources:

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- [2] crafting and exercise: <http://fitknitchick.com/2011/04/24/all-i-need-to-know-about-exercise-i-learned-from-knitting/>
- [3] depression: <http://life.gaiam.com/article/beyond-antidepressants-advice-naturopath-treating-depression>
- [4] 'Runner's high': <http://blog.gaiam.com/blog/hate-exercise-get-hooked-on-the-feeling/>
- [5] regular exercise: http://www.gaiamtv.com/category/fitness-studio-videos?chan=GaiamLife&utm_source=GaiamLife&utm_medium=Web&utm_campaign=10day
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