

Attention fellow Momma-tographers- Mom Brain Is REAL!

This is an open letter to those awesome moms out there suffering from...dun, dun, dun...MOM BRAIN!

Do you find yourself leaving sample vials in the bathroom?

Do you forget where you put your safety glasses when they are sitting on top of your head?

Did you lose the word for the “sample-measuring-droppy-thingy” again (aka the pipette)?

Don't worry about your sanity any longer! There is a viable excuse for that jumbled brain feeling some moms have after pregnancy. Its lovingly known as mom brain, and its real, thanks to the research below (which we're certain must have been released by some fabulous moms!).

This feeling has been coined “mom brain” and it isn't just you. A new study published in the journal Nature Neuroscience, has revealed that the structure of women's brain drastically changes during her first pregnancy and that the effects can last at least 2 years.

The study involved 25 women who became mothers for the first time and 20 women who have never given birth. Both groups underwent high resolution MRI brain scans at the same intervals. Through this comparison, researchers discovered that the gray matter volume responsible for social cognition, a form of emotional intelligence, reduced. It is believed that this reduction, like all amazing things women's bodies can do, is an adaptive advantage, making moms more efficient and able to perform specialized functions—like raising

awesome kids AND being accomplished scientists! The functions enhanced by the change of gray matter volume is sharper awareness of surrounding threats and a closer connection to the infant's needs. However, this loss of gray matter volume doesn't mean you will have a loss of brain activity.

"Loss of volume does not necessarily translate to loss of function," said Elseline Hoekzema, co-lead author of the study and a senior brain scientist at Leiden University in the Netherlands, "Sometimes less is more." Hoekzema explained in a press statement that the loss of gray matter could "represent a fine-tuning of synapses into more efficient neural networks."

The study continued with the participants taking cognitive tests during their MRI sessions. The results revealed that there didn't seem to be any significant changes, however following their pregnancies, the new mothers had fewer correct responses on the verbal word list learning task.



Other than the known influx of hormones that occur in a woman during pregnancy, there are several interpretations as to how and why the gray matter volume reduction occurs. David Van Essen, co-principle investigator of the NIH's Human Connectome Project, noted that the volume changes could be an increase of myelin, which could be masked as the volume change. Recent research has suggested that more myelin could speed conduction of nerve impulses in the brain.

This study is the first to provide evidence that pregnancy can result in long-lasting changes in a woman's brain.

To all you momma-tographers out there, you are conquering two amazing areas of life, science and motherhood. So keep it up, and feel free to pull the mom brain card whenever you need it.

Hope you are pampered as much as you deserve this Sunday!

Happy Mother's Day to all you great momma-tographers!

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