Pregnancy Brain: The Expectant Mom's Guide

My friend recently asked me, "Why have I become so forgetful since I became pregnant?" I told her I didn't know, but that I'd **look into it** and write a post for her. She then followed with, "I was going to ask you to explain something else to me, but I totally forgot what it was."

Does "pregnancy brain" exist? There's no doubt that many changes are happening to a woman's body during pregnancy, but how do these changes affect (or originate in) the brain? To answer my friend's question - and in an **effort** to address whatever else she was forgetting at the time - here is my expectant mom's guide to the neuroscience of pregnancy.

Why did I become so forgetful?

While a number of women - like my friend - complain that pregnancy has made them more forgetful than usual, the research on this topic is mixed. Like most changes that occur during pregnancy, hormonal fluctuations are an obvious possible reason. Some women report no cognitive changes whatsoever during pregnancy.

A 2008 meta-analysis reported that pregnant women, compared to non-pregnant and postpartum women, are significantly **impaired** on some, but not all, measures of memory. Pregnant women were particularly affected in domains associated with high cognitive demand, such as working (short-term) memory and free recall.

In a study published last year, Diane Farrar and colleagues administered a spatial recognition memory task to non-pregnant women, as well as in women during each trimester of their pregnancy. Compared to their first trimester, pregnant women scored, on average, 11.7 percent lower on the memory tasks with each subsequent trimester. When the researchers compared memory test scores to levels of six different hormones measured from blood plasma, however, there was no association.

Interestingly, a 2008 study reported a decrease in neurogenesis, or the birth of new neurons, in the hippocampus of mice during pregnancy. The hippocampus is involved in the consolidation of short-term to long-term memory, as well as spatial navigation, such as remembering where you parked your car. Similarly, an earlier study showed no differences in brain sizes between pregnant and non-pregnant rats except for the hippocampus. The hippocampus was smaller in pregnant rats and was also related to deficits in spatial memory. No studies have imaged the brains of pregnant women to examine potential changes in the human hippocampus, though.

Some have postulated that sleep **deprivation** or the newfound stress of dealing with a major life change as possible contributors to absentmindedness during pregnancy. Some research suggests that there's a cultural expectation at play, as the popular concept of "pregnancy brain" may simply make women more aware of their everyday **slip-ups**. A change in daily routine with a new pregnancy might disrupt memory abilities, too.

Although there's a lot we don't know about all the crazy changes that happen during pregnancy, one thing is clear: babies do a great job of making their presence known well before they come kicking and screaming into the world.

1. **look into it**	( ) physical or mental activity needed to achieve something
2. **effort**	( ) a mistake
3. **impaired**	( ) the state of being kept from having, enjoying, or using something
4. **deprivation**	( ) having a disability of a specified kind
5. **slip-ups**	( ) investigate