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Pregnancy and the female brain



According to a study published by *Current Directions in Psychological Science* a woman's brains change in a positive way during maternity. But the "pregnancy brain" remains one of science's most fascinating mysteries *By Sara Ficocelli*

Nietzsche once said that "Everything in woman is a riddle, and everything in woman hath one solution -- it is called pregnancy". And he wasn't wrong. If there is an unfathomable relationship it is that between a mother and her foetus. But if we have some knowledge about the situation of the latter (who via the mother, for example, drinks alcohol or smokes, changes mood or appreciates classical music), when it comes to analyzing the maternal brain we are still groping in the dark.

A beam of light emerges from a study published in *Current Directions in Psychological Science*, according to which, apart from fluctuations in humour and hormones, pregnancy is good for the female brain. Expecting women can therefore be reassured and the same goes for those who don't yet feel ready to become mothers because, according to psychologists at the Chapman University in California, the changes the brain undergoes

during those 9 months are there to prepare the difficult task that awaits them in the future.

In English they refer to it as “pregnancy brain” or “mommy brain” to indicate that the mental condition of a pregnant woman is characterised by a general “fogginess” when it comes to the most basic skills (finding your house keys before you set off from home or remembering where you left your mobile phone), according to scientists provoked by a rise in the level of sex hormones. “Motherhood is a critical period for the central nervous system”, explains Laura Glynn, the psychologist who led the study, “even if we still know very little about the profound mental condition of a pregnant woman.”

We know something more about rodent’s brains, since most studies that have been carried out on the topic, as is often the case, are on laboratory animals. According to latest research pregnancy will enhance the functionality of olfactory neurons and the most interesting thing is that these changes persist after childbirth. They found that in mice multiple pregnancies actually bring about multiple changes that, accumulated, contribute to a real “metamorphosis” of the female in question.

If the same thing happens to women or not is still a mystery. Humans, Glynn rightly points out, are different from rats but, according to the scholar, it is “extremely likely that pregnancy may alter the functions of the female brain in an enduring way.” The hormonal flux that invades the body of a pregnant woman is in fact greater than what occurs during adolescence. “And just like hormones affect the psyche during the growing phase”, continues the researcher, “the same happens during pregnancy.”

“I think it likely”, explains Flavia Coffari, psychotherapist, sexologist and president of the Italian Centre for Health Promotion (CIPSal) in Rome, “that the gestation period, through hormonal action, changes the brain of the future mother in some way. And it is a common experience to develop auditory acuity that makes the mother wake up at the slightest cry of her baby while her partner, sleeping beside her, can go on resting in order to carry out a normal working day without feeling that he had an almost sleepless night. But it is not only this. Hearing the experiences of some women, there appears to be something more: they develop a sort of ‘telepathy’ that alerts them and wakes them up minutes before the baby actually starts crying because it’s hungry or because it has a sore tummy. It is a very interesting field of research in my opinion and one that will certainly give surprising results”.

“Pregnancy”, explains Adelia Lucattini, president of SIPSleS, the International Society for Integrative Psychiatry and Health Genesi in Rome, “is a psychologically rich and complex period for a woman. Except for rare exceptions, hormone levels typical of this phase of life affect the mood and mind of those who experience it. And if the chorionic gonadotropin, the hormone that allows the diagnosis of pregnancy – the double blue line that appears on the test – can cause mood swings and nervousness especially during the first month, it is progesterone, which maintains the pregnancy, that on the other hand has a very positive effect on mood”.

Therefore, except in cases of specific or precedent depressive disorders or disease, the period when a woman is expecting can be very good for her. So much so that some have defined it as a “honeymoon”, despite the natural physiological tiredness they are going through. “Queen Maria Theresa of Austria”, continues Lucattini, “had 16 children in twenty years and the winters she passed when she wasn’t pregnant she described as ‘the saddest of her life’. In addition to the desire for children, we can hypothesize that there was a real psychological well being of the queen’s state of mind springing from pregnancy itself”.

The expert continues, “the body and the mind of a woman are prepared for the best possible maternity. Fears, anxieties and concerns that are also part of this process, are typically psychological and cultural, not ‘natural’”. Lucattini concludes, “The transformations of the body, like weight gain, skin marks, and minor and more important ailments, test the woman and make her in need of support and understanding. The problem, except in specific cases, is not biological but psychological, social and relational”.

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