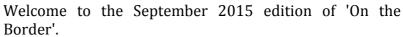
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ON THE BORDER

Info & insights from the interface between energy healing & science

September 2015



I've often wondered if pregnancy and having children changes the parents' brains. We don't have children ourselves, but witnessing many of our friends through the years who decided to go down the kiddie path I have been intrigued. What does pregnancy and the new life phase actually do to the brain? So I decided to go in search of some snippets of recent research....

For those of you new to 'On the Border', this is Jayne's monthly Ezine newsletter about the latest information and insights into energy fields, healing and science. Each month I share with you some of the latest research and how it applies to healing, energy work & (daily) life. There is also a Fascinating Facts section and a 'Freebie' where you get something for nothing, gratis.

How Being a New Parent Changes Your Brain

The arrival of a child brings big changes in the brains of the new mothers and fathers. Mothers experience a near immediate shift, thanks in part to the hormones involved in giving birth and nursing. Fathers' brains tend to change in different and more subtle ways.

Is 'Baby Brain' a Myth?

As many as four out of every five pregnant women say that they suffer from "pregnancy brain"—deficits in memory and cognitive ability that arise during pregnancy, making women more forgetful and slow-witted. Yet studies on the phenomenon have generally not supported these claims: although some have found evidence of problems on certain types of tasks, others, including a recent paper published by researchers in Utah, have found no signs of cognitive problems at all. Some experts believe that pregnancy brain and its postnatal cousin, "baby brain," could largely be a



product of confirmation bias: pregnant women and new mums expect to experience brain fog and therefore believe they are actually affected. Others argue that the mental symptoms might simply be too difficult to confirm in a laboratory setting.

In the most recent study, researchers at Brigham Young University gave cognitive and neuropsychological tests to 21 women in their third trimester of pregnancy and then tested them again six months after they gave birth. They administered the same tests at similar intervals to 21 women who had never been pregnant. They found no differences between the groups no matter when they were tested, including before and after giving birth. These findings mesh with those from a 2003 study, which found that pregnant women did not score differently from nonpregnant women on tests of verbal memory, divided attention and focused attention.

There is variety in the results, but overall most studies suggest there are few to no memory impairments associated with pregnancy. Researchers think the reason the myth persists may be that women selectively look for evidence that supports the cultural expectation. For example, when a pregnant woman loses her car keys, she might blame pregnancy brain—without recalling the times she lost her car keys before she was pregnant.

There is also another possibility, too. In a 2011 study, a team at the University of British Columbia found that although pregnant women did not display any problems on cognitive tests given in a lab, they were less likely than nonpregnant women to remember to call the lab when asked and to return a questionnaire on time. It is possible that lab-based measures do not reveal differences, because labs are typically quiet environments with minimal distractions, in contrast with everyday life.

Motherhood Can Be a Lonely Place

Entering motherhood is a rite of passage for most women. For many new mums, however, the first months and years can be a lonely place. A new study finds that several types of social support are crucial for staving off negative feelings.

Although only 10 to 15 percent of mothers from Western nations will develop a full-blown case of postpartum depression (PPD), many more will experience some serious symptoms of depression. Feelings of PPD are



on a continuum, with PPD at the end. Even if PPD can be diagnosed clinically, there is no standard for measuring where the remaining 85 to 90 percent of mothers land on the scale. Researchers estimate that most first-time mothers are overwhelmed.

Becoming a mother is a major transition. New mothers give up autonomy, sleep and relationships to tend to the relentless needs of a baby. On top of that, they are also expected to be in a constant state of bliss and fulfillment with their new role. There can be a lot of pressure to be the perfect mother, and women can be afraid to say they are not coping.

Making matters worse, research that demonstrates the importance of early childhood experiences in determining future success and happiness puts additional pressure on mums to get it right. Also, for working mothers, who are used to a productive mindset and established social routines, it can be difficult to adapt to the repetitive life of meeting the basic daily needs of a baby. Many women appear to go back to work because of the loneliness.

According to a recent study from Patricia Leahy-Warren at University College Cork in Ireland published in the *Journal of Clinical Nursing*, mothers with strong social support who have confidence in their ability to parent were 75 percent less likely to be depressed than mothers who had neither advantage. There are four parts to social support: hands-on, emotional, informational and appraisal, meaning affirmation that a mother is doing a good job.

Mums require a network of people to meet these four types of social needs. Generally they lean most on their partner, then their own mother, then sisters. Health professionals, other family and friends can be an important part of a mother's community. Good social support will also boost a mother's confidence and ability to parent, Leahy-Warren says, which has a significant positive influence on her mental well-being.



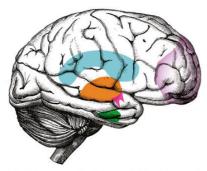
Father's brain shifts are different

Most investigations of brain changes have focused on mothers, but scientists have recently begun looking more closely at fathers. Neural circuits that support parental behaviours appear more robust in mums a few weeks after the baby is born, whereas in dads the growth can take several months.

A study in *Social Neuroscience* analysed 16 dads several weeks after their baby's birth and again a few months later. At each check, the researchers administered

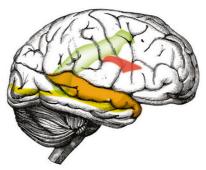
a multiple-choice test to check for signs of depression and used MRI to image the brain. Compared with the earlier scans, MRI at three to four months postpartum showed growth in the hypothalamus, amygdala and other regions that regulate emotion, motivation and decision making. Furthermore, dads with more growth in these brain areas were less likely to show depressive.

Although some physiological brain changes are similar in new mums and dads, other changes seem different and could relate to the roles of each parent, as shownn in the brain diagrams below.).



Areas That Increase in Volume in Both Parents

- Hypothalamus: Regulates the production of hormones, such as dopamine and oxytocin, involved in attachment
- Amygdala: Processes emotions; may drive parental motivation
- Striatum: Part of reward system; also involved in parental motivation
- Thalamus: Involved in sensory perception; may help parents understand their infants' movements and sounds
- Prefrontal cortex: Governs conscious decision making and higher-order behaviors



Sex-Specific Changes

- Insula: Processes threats and stress; in fathers, the volume decreases, perhaps reflecting an increased focus on family matters; in mothers, the volume increases, possibly reflecting heightened protectiveness
- Superior temporal gyrus: Important for perceiving emotions in faces and for auditory processing; the volume increases in fathers
- Posterior cingulate cortex: Related to our sense of self and self-related thinking; the volume decreases in fathers
- Fusiform gyrus: Involved in visual recognition; the volume decreases in fathers, and the change is linked to lower levels of depression, both for unknown reasons

A 2014 behavioral study of expectant fathers showed that midpregnancy ultrasound imaging was a "magic moment" in the dads' emerging connection with their baby. Yet the emotional bond was different than it is in expectant moms. Instead of thinking about cuddling or feeding the baby, dads-to-be focused on the future: they imagined saving money for higher education or walking down the aisle at their daughter's wedding.

It is interesting how little dads' images centred on an infant, instead of what we might assume they would focus on such as putting the baby down for a sleep or changing nappies.

Fascinating Facts

This month, in terms of pregnacy, did you know that......

* Postpartum depression: A group of studies that looked at the best data available from more than 40 countries across the globe found that the incidence of postpartum depression in mothers ranges from 3 to 63 percent, with Malaysia and Pakistan at the bottom and top, respectively. The rate for U.S. mothers is 10 to 15 percent. Although mothers in all corners of the world agree that lack of social support or an unhelpful partner can make them feel depressed, there are also many factors they do not agree on. One mother's blessing is truly another's curse.

*Weight loss: In places where thin equals beautiful, such as France and the U.S., the struggle to return to prepregnancy weight is often a source of distress. Not so in Uganda, where weight loss and food scarcity are a cause for concern, and the weight gain is welcomed.

*The Mother-in-Law: Mothers in all nations studied identified their mother-inlaw as a source of friction, except in Sweden. This friction was more acute in Asian countries, where there is a strong tradition of postnatal rituals that may be imposed by the mother-in-law.

*Breast feeding: In countries such as Ireland and the U.S., where there is a perception that "good" mums breast-feed, many are anxious about nursing. In countries such as Uganda and Botswana, where it is the norm, mothers do not consider it an issue.

*Hormones: It can take months or years for a woman's hormones to return to prepregnancy levels. One survey found that this was not a source of distress for moms in Japan or Uganda. In Europe, however, mothers felt a hormone imbalance contributed to sadness.

*Depression treatment: In one study that asked mothers from four continents what would help relieve their depression, all responded that hands-on help, emotional support and a confidant would help. Only in the U.S. did mothers mention antidepressants.

September Freebie

In this section you get the chance to get something for nothing. Helemaal gratis. Always a pleasure!

Mindfulness teaches us that staying in the the moment is the best way go through life, cope with fears and embrace change.

This month's Freebie consists of three (humorous) lectures from Buddhist teachers from a recent retreat at the Omega Institute in New York. **This link is only available until 29th September.**

My favourite from these is a very sassy & wise Sylvia Boorstein, but the other two are well-worth listening to as well.

Omega Institute Retreat: Waking up in every moment

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Back Issues

If you have missed any of the previous issues, then the main articles and full newsletter pdf links can be found at www.jaynejubb.com/backissues.htm The

Freebies each month are only valid for that month....

Subscription Management

On The Border is a monthly Ezine/Newsletter published the second Tuesday of each month. This Email was sent to you because you are on my mailing list and/or have subscribed directly to it. If you no longer wish to receive this then please unsubscribe by clicking either clicking on the link at the end of the original Newsletter Email, or send me directly an Email – and I'll unsubscribe you immediately.

If you have received this Ezine Newsletter from a friend because you are not on my list, but would like to be, then please send me an Email and I can get you signed up immediately.

1 FAUX QUOTE

An imaginary quote from Napoleon is coiled in the grid below. To spell it out, start with an "I" and move to an adjacent letter in any direction. Two letters will not be used. All the others will be used exactly once.

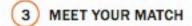
(Hint: The enumeration is 1'1, 5, 2, 6, 8, 5.)

0	S	R	0	M	1
E	н	A	T	G	0
S	V	E	L	E	1
X	٧	E	N	T	N
X	N		0	T	G

2 INTERLETTERED

Find the names of three countries intermixed below. The letters are in the correct order.

A L U H R U X N G E M E B N O U T R I G N G A R A Y



Arrange the nine matchsticks below to make "ten."



4 WORD SQUARE

Complete the word square by inserting the nine letters below into the grid, one per square, to create the same English words reading across and down.

C	0	M	E
0			
M	7/	2.3	
E	1 %	- 8	
	0 M	0 M	0 M

5) FILL IN THE BLANKS

All the following words contain the letters JUN. Using the definitions, fill in the word

A lower professorial rank, also an addition to: _ _ J U N _ _

A person not legally an adult: J U _ _ N _ _ _

A kind of berry or shrub: J U N ____

A diary, a record of daily events: J _ U _ N _ _

6 WORD WHEELS

Find the eight-letter word spelled out in each box below by beginning with the correct letter and moving clockwise or counterclockwise around the box, using each letter only once. The question mark represents a letter that you must supply, which is the same for both words.





7 DO YOU KNOW DICE?

There are three dice shown below. One of them is not a genuine die. Which one is it?

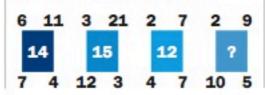






8 PUZZLING PATTERN

The center number in each square is the result of following a mathematical formula involving the numbers on the outside of that square. Figure out the formula to determine the number that should be in the center of the last square.





Use only four straight lines to divide the petri dish below into nine segments such that one area has one microbe in it, another area has two microbes, another has three, and so on, up to nine.

