HAPPY NEW YEAR!!!
Welcome to the January 2018 edition of 'On the Border'.

I know that we are now well into January but since this is the first On the Border of the New Year I didn’t want to let the opportunity slip by to wish you all the very best of everything for 2018.

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 'Freebie' section where you get something for nothing, gratis.

How are you keeping up with your New Year’s Resolutions? Did you make any? This year I decided not to make traditional resolutions. Mostly that involves giving something up – but since I don’t eat meat, drink alcohol, don’t smoke, don’t do drugs then I don’t have (m)any choices or vices to actually give up ;=) Instead I decided to make a list of ‘what I want to do this year’. Not what I want to achieve but rather what I want to do - or try to do. That has been so much more inspiring and motivating than the more punishing ‘giving something up’! So if you have already given up on your giving up then maybe you could try making a list of what you want to do this year.

To share with you a few of the things that are on my list....

*Learn Danish* (I do so love the sound of all that ‘hurdigur’ on Scandinavian detective series – it immediately makes me want to laugh)

*Modernise our kitchen* here at home (it is 25 years old and saying that it is ‘dated’ is being very kind to it), and

*Update/revamp my website and this newsletter*.

Regarding my website and On the Border, I am currently playing with ideas for what and how to do this duo-revamp...so this is just to make you aware that good change is coming, even though I don’t yet know what form it will take!! Happy New Year to you all.
Could Acidity be a Cause of Mental Health Issues?

There is a growing body of research that suggests that for some people, even slight changes in the acid balance in their brain may be linked with panic disorder and other psychiatric conditions. Recent findings provide further evidence that such links are real - and suggest they may extend to schizophrenia and bipolar disorder.

The human brain frequently undergoes changes in acidity, with spikes from time to time. One main cause of these temporary surges is carbon dioxide gas, which is constantly released as the brain breaks down sugar to generate energy. Yet the overall chemistry in a healthy brain remains relatively neutral because processes such as respiration—which expels carbon dioxide—help to maintain the status quo. As a result, fleeting acid-base fluctuations usually go unnoticed.

There were earlier hints of the acid-disorder link: studies that directly measured pH—a metric of how acidic or basic something is—in dozens of postmortem human brains revealed lower pH (higher acidity) in patients with schizophrenia and bipolar disorder. Multiple studies in the past few decades have found that when people with panic disorder are exposed to air with a higher than normal concentration of carbon dioxide - which can combine with water in the body to form carbonic acid - they are more likely to experience panic attacks than healthy individuals are. Other research has revealed that the brains of people with panic disorder produce elevated levels of lactate, an acidic source of fuel that is constantly generated and consumed in the energy-hungry brain.

Yet researchers have continued to puzzle over whether this acidity is truly disorder-related or stems from other factors, such as antipsychotic drug use or a person's physical condition just before death. For example, if a person is dying slowly, there is a longer period for which there is a greater chance that their oxygen levels would be low, and that will have an affect on the person's metabolism. In this situation, the body and brain begin to rely more heavily on an oxygen-independent pathway to produce energy. This can lead to higher than normal lactate levels that subsequently decrease pH (i.e become more acidic).
Such questions prompted Tsuyoshi Miyakawa, a neuroscientist at Fujita Health University in Japan, and his colleagues to scour 10 existing data sets from the postmortem brains of more than 400 patients with either schizophrenia or bipolar disorder. Their aim was to test each of the leading theories about the acid-disorder connection.

First, the researchers controlled for potential confounding factors such as a history of antipsychotic medication use and age at death. As they had suspected, brain pH levels in people with schizophrenia and bipolar disorder were significantly lower (i.e. more acidic) than in healthy individuals. The team also examined five mouse models—rodents with mutations in genes associated with these conditions—and found similar results: The pH levels in the brains of about two dozen drug-free mice were consistently lower, and their lactate levels higher, than those in comparable healthy animals. What is more, the researchers had euthanised all the mice in the same way—which suggests the pH differences cannot all be explained by how long it takes to die.

**pH Problems**

Researchers analyzed results from 10 studies comparing postmortem brain acidity of schizophrenic and bipolar patients with that of control subjects. Overall, the midrange of pH values tended to be lower among those with one of the psychiatric disorders, meaning the chemical composition of their brain was relatively acidic.
These findings, published last autumn in *Neuropsychopharmacology*, collectively provide the most convincing evidence to date that the link between brain acidity and psychiatric disorders is real.

Although the postmortem findings are intriguing, it is hard to know if they are related to the pH changes in the living brain. Live brain-imaging studies of people with bipolar disorder, schizophrenia and panic disorder provide much more direct evidence for the acidity hypothesis. Using magnetic resonance spectroscopy, a method that can detect biochemical changes in tissue, scientists have consistently found elevated levels of lactate in these individuals’ brains.

Even as it becomes clearer that brain acidity may be a key characteristic of schizophrenia and bipolar disorder, whether this could be a cause or effect remains an open question. According to Miyakawa, one possibility is that the increased acidity results from higher than normal neuronal activity in the brains of people with these disorders. Another popular theory is that the greater acidity could be the result of impairments in mitochondria, the powerhouses of cells. These two hypotheses may not be mutually exclusive.

The next big question will be whether low pH in the brain can lead to the cognitive or behavioural changes associated with these disorders. There are suggestions that this is the case. It is known that receptors that are activated by acid have prominent effects on behaviour in animals. That implies that there may be changes in brain pH in the awake and functioning brain that scientists have not appreciated – yet!

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

To get 2018 off to a healthy start, Deepak Chopra has just released a free series of 4 videos about Healthy Aging. Available until 31st January these videos are designed to transform the way you approach your health and wellbeing. To sign up, just click on the link below:

[https://chopra.com/healthy-aging-workshop/register](https://chopra.com/healthy-aging-workshop/register)

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**Contact Details**
Email: [jayne@jaynejubb.com](mailto:jayne@jaynejubb.com)
Website: [www.jaynejubb.com](http://www.jaynejubb.com)
Telephone: 020-6206680, or from outside The Netherlands ++31 20 6206680.

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