



Electrochemical Soup

All the thoughts you have are electrical signals in the brain; signals or messages, travelling down neural pathways your brain has built, amongst a vast network of billions of connections you are constantly making, remaking, strengthening - or rerouting, or abandoning. Messages of all kinds are zipping around your whole body all the time. Countless electrical, chemical, biological, electrochemical and biochemical signals and messages.

In the brain, some of this traffic is just incoming data.

Some is made up of the interpretations you make of that data.

Then there are your responses to the interpreted data.

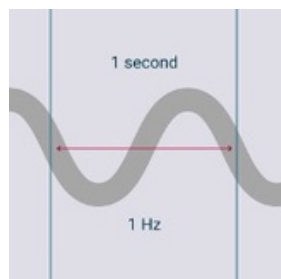
And calculations.

There are directions you give yourself and your body.

And some thoughts form your beliefs, and your beliefs will determine most of your options.

A huge proportion of brain activity goes on below your level of awareness, which is merciful in many ways. There's more about this in the Energy Budget audio clip. But it's fascinating to think of these many billions of electrical signals zinging all over the place; way more miraculously and adaptably than any computer.

Returning to the electrical side of thinking, different kinds of thought signals generate brain waves with different frequencies of electrical charge, measurable in degrees Hertz or cycles per second.



Brain waves during meditation are far slower, with a much lower frequency than the panic response designed to work at lightning speed for survival. You've probably had the frustrating experience of trying to sleep or meditate while your brain is still madly busy.

It's just doing its best for you as it always is, which is why fighting against that and trying to wrestle your mind into submission rarely works.

Anyway, these different frequencies activate different neurotransmitters, or electrochemical messengers...

which in turn activate different hormones, or chemicals...

which in turn act on the body in different electrical, chemical and biological ways.

You're probably familiar with adrenalin and cortisol; the hormones that rush through the body priming you to act fast. They're part of an ingenious emergency energy-boost system; but they're not designed to be at work all the time. Too much adrenalin and cortisol in the body can become toxic.

Then there are sleep-promoting hormones, like serotonin; sex hormones like testosterone or oestrogen, which help our species survive by reproduction; and oxytocin, known as the 'cuddle' or 'happiness' hormone because it's released when you reach out to others and feel more closely connected to them. We're a social species who all need each other to survive. But oxytocin doesn't just trigger your social instincts and strengthen your relationships; it also benefits the cardiovascular system, because it keeps blood vessels relaxed and open, protecting the heart from stress-induced damage.

So, if you think about it, all the time you're alive, whether consciously or unconsciously, you're affecting your internal environment - the electro-chemical, biochemical soup, if you like - by the way you think.

If you ever get stuck in a cycle of anxiety and become too-easily disposed to panic, as so many do, it can be hard to get out of again, and here's one reason why:

All the cells in your body have various little receptors on their surfaces, each designed to look out for and receive a particular hormone, so the body can act accordingly. These receptors may become more receptive and open to hormones that are flushed through the body more frequently. And when cells divide and replicate themselves, as they all do, the new clone cells' receptors are also more receptive to that hormone. This may be how some people become adrenalin junkies, or competitive in sports, or partial to fighting, or magnets for drama, or indeed building a life that includes regular self-calming.

It doesn't help in any way to beat yourself up for not doing better. Stress isn't always a choice, and life wouldn't be life without at least some stress and challenge and conflict.

But if you're in ongoing, relentless stress, and decide that you want to do something about it, and you're absolutely going to be calm from now on, and refuse to react to the stressors anymore, your cells may have other ideas. You could sit down to meditate, for example, and they'll be shouting, "Oi, where's our cortisol today?" And it will feel so unsettling and uncomfortable and wrong, that meditating will be pretty much impossible, and so you'll probably give up for today and think, "I'll try again tomorrow," or you'll give up altogether.

This isn't to say that you're doomed to be stressed forever. But don't demand too much of yourself too quickly if you notice backfire like this. Take time to figure out a variety of strategies that will help you. Try other people's suggestions too by all means, but it doesn't make you a failure if they don't work for you; they just don't work for you. When you use your own range of emotion-calming practices regularly, you're stirring in the ingredients that will improve the quality of the soup.

Use the practices in the Practice Box; eat well, sleep well, exercise, be with friends, find creative outlets that nourish you, and so on. Be kind to yourself and others. Deliberately or not, social media and the celebrity culture create the idea that there are people out there who have it all sorted out. There's no such thing as 'having it all sorted out'. Life is an ongoing process.

To exhaust the metaphor, if something cooking is getting too bitter, soft ingredients and seasoning are brilliant for making it palatable again.

So, keep putting good stuff in to balance the soup.