

Biological reductionism of

The theory that self-harm is linked to the production of the body's natural painkiller, endorphins, is doing more harm than good, claim Louise Pembroke, Clare Shaw and Phil Thomas. Here they explain the dangers of over simplifying what is in reality a very complex behaviour

There is a worrying trend in psychiatric nursing. Support is growing for the theory that self-harm results from alleged neurotransmitter abnormalities in the brain, and that endorphins may play a role in this. Endorphins are complex molecules that are morphine-like in their effects. They are peptides (compounds formed by the union of two or more amino acids) produced in the pituitary gland, which is attached to the base of the brain. They have a pain-relieving action that resembles the pharmacological action of opiates such as morphine. For this reason, they are sometimes referred to as the body's 'natural painkiller'. The good feelings we get after physical exercise, or when we eat chocolate or have an orgasm may be partially attributed to the release of endorphins.

The pituitary gland releases beta-endorphins, one of three different types of these opioid peptides, into the blood. Beta-endorphins cannot re-cross the blood-brain barrier once released. For this reason, their levels in the blood correlate very poorly with levels in the brain. The measurement of endorphins in body fluids, which has been used in attempts to link endorphins to psychiatric conditions, is therefore problematic. Studies have failed to demonstrate consistent abnormalities in endorphin levels in the cerebral spinal fluid or the plasma of people diagnosed with schizophrenia. The same applies to depression.

In 1994, Elizabeth Klonoff, a psychologist at California State University in San Bernardino, examined endorphin levels and mood in 23 women over eight weeks while they embarked, from scratch, on an exercise programme. She found that while endorphin levels increased in some women, they were not necessarily the ones who experienced the biggest exercise highs.

The 'endorphin theory' of self-harm is based on two hypotheses. The first is that self-harm is an insensitivity to pain resulting from excessive activity of opioid peptides. The second is that self-harm stimulates the production and release of peptides. The conclusion is that self-harm is an addiction to endorphins or positive reinforcement provided by central release of endorphins (Deutsch 1986).

The theory also implies a 'treatment' for this alleged

abnormality: the administration of opiate antagonists such as naltrexone.

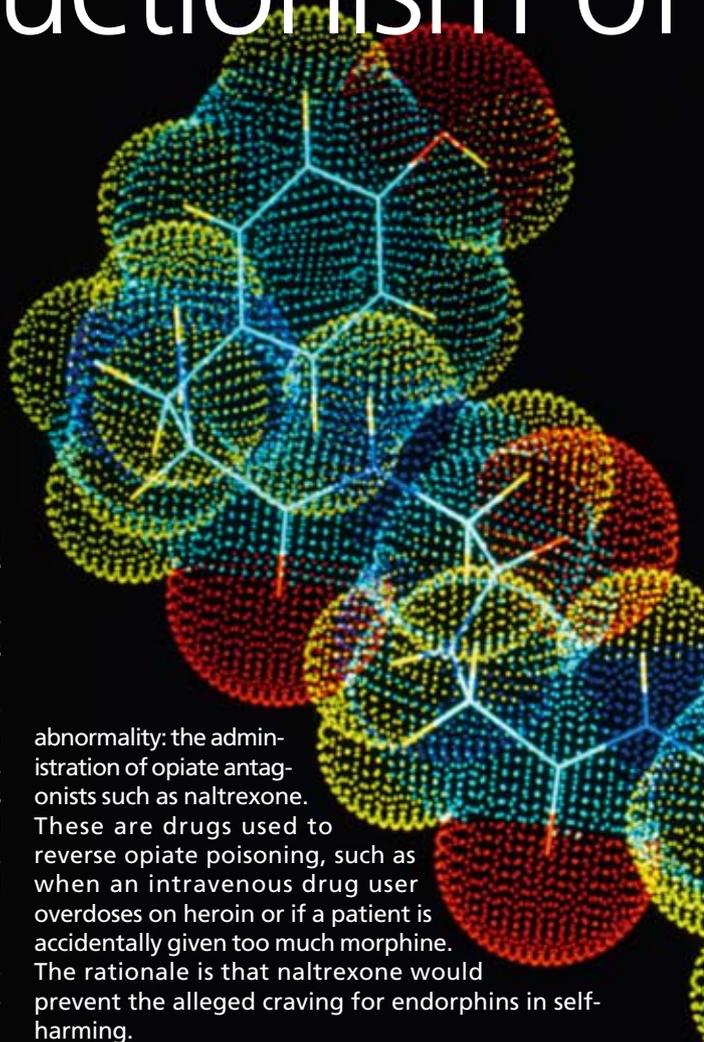
These are drugs used to reverse opiate poisoning, such as when an intravenous drug user overdoses on heroin or if a patient is accidentally given too much morphine. The rationale is that naltrexone would prevent the alleged craving for endorphins in self-harming.

Problems with the theory

Most of the research regarding self-harm and endorphins has been done on subjects with learning disabilities or autism, with far fewer carried out on people deemed to have a 'mental illness' or 'personality disorder'. There is a lack of long-term controlled studies in this field, none looking at durability or long-term side effects. There have been no placebo-controlled, double-blind studies with controls for episodic or repetitive self-harm as well as diagnosis. The literature has shown effectiveness and ineffectiveness, and there remains no conclusive evidence to support the use of opioid antagonists in people who self-harm.

Despite the current climate of evidence-based medicine, this unproven theory has 'currency'. Student nurses spout the theory as fact, despite there being no clear evidence for it, simply because it 'might be true'. The problem is that like so many other things in psychiatry, the experience of pain is a complicated issue, and it is very simplistic to reduce it to neurotransmitters alone.

When people self-harm there may well be a stress-induced analgesia (Hildgard 1976). Yet, soldiers can sustain the most painful injuries at the height of battle and continue fighting unaware of the pain. Why is this



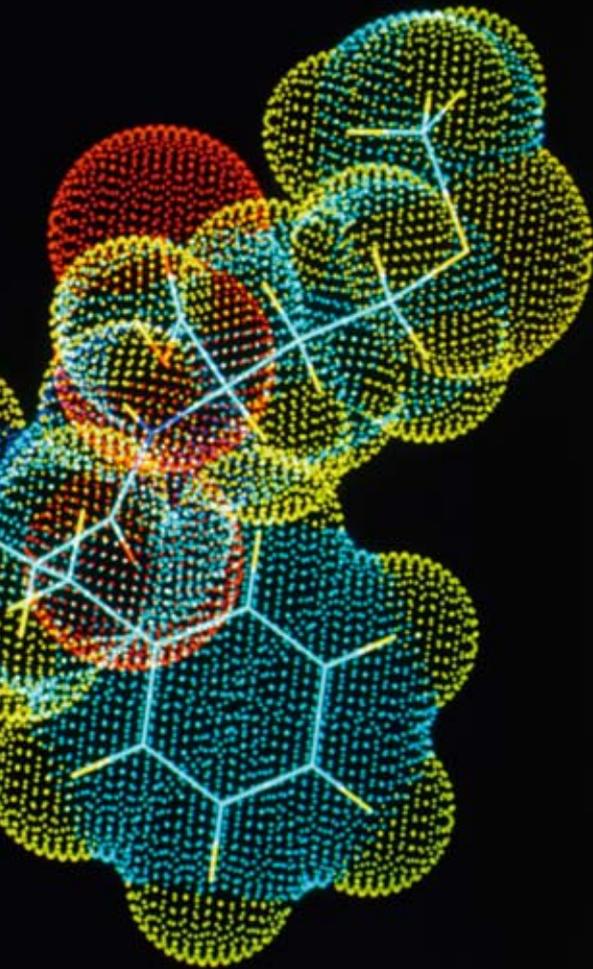
Pictured: molecular structure of enkephalin

keywords

- > wounds
- > pain and pain management
- > anaesthesia

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self-harm



analgesia pathologised in people who self-harm, and commended in soldiers in battle? Some people do indeed report a loss of sensation when they injure themselves but what is the significance of this loss of sensation? The endorphin theory fails to account for this.

Greater complexity

The problem with the endorphin theory is that it divorces self-harm from its context, just as biochemical theories about 'psychosis' ignore social, cultural and political context. Self-harm occurs in times of great emotional distress, depression, and in response to circumstances and events. These are not biological incidents. It often has a particularly complex set of meanings in the life story of the person who self-harms.

If self-harm was simply caused by an addiction to endorphins, then it is difficult to see how people could go for months or years without injuring themselves. In addition, many people harm themselves by taking overdoses, and it is difficult to see how endorphins could have a role here.

Some people now claim that the reason they self-harm is to do with their endorphins. This is because that's what they've heard health professionals say. They need take no

Louise Pembroke writes:

When I injure myself I feel all of the pain, every bit. Even when I have injured myself over two hours, removing skin in a surgical manner, I will feel every single cut unless the skin is completely excised. The only times I experienced any temporary loss of sensation is when I injured myself rapidly, cutting to the bone of my arm in a couple of minutes. Hacking away at the same part did result in some short-lived loss of sensation, but that's about the speed and pressure. The sensation returned immediately afterwards, and I experience the pain of suturing the same as anyone else would.

There have been times when I have been able to dissociate myself from pain when others have deliberately inflicted it. For example, there was one particular A&E doctor who used to inject just one side of the wound; he was well aware of the pain he was causing me. If I made any complaint or showed any expression of pain, he would yell, 'But you know it hurts, so why do it?' and such like, at me. If I expressed pain, he would use that to put me down further.

So I learnt not to express or show pain. I would separate my mind from my body as I lay on the trolley and would almost see myself from across the other side of the room. I would remain motionless, speechless, and he could do anything he wanted to me and I would not respond. This was the only power and control I had at that moment in time. Each time I saw him, I did this, to the point that I became so good at it then even when I saw a

very decent and caring doctor who took great trouble to ensure I wasn't in pain, I was unable to indicate if I was. He would ask me, 'Why can't you tell me if you're in pain?' I was unable to tell him because I had had to learn to not express it. Others may have observed me and assumed I really didn't feel the pain.

I did, though. I felt every single needle prick of the suture going through my flesh not anaesthetised. I could psychologically distance myself from it, but not physiologically.

Many people who self-harm with whom I communicate also feel all their harm. Where do we fit in with the endorphin hypothesis?

Of those who do experience temporary loss of sensation, how much of that is psychological? Why do we all feel the pain of accidents such as stubbing our toes? Why are we not awash with endorphins all the time? Why can't we switch on this rush of endorphins when we are sutured or go to the dentist?

Much has been made of the high some people experience after harming, but this can be viewed in many different ways. Very depressed people can perk up after a general anaesthetic. Perhaps they've had respite from their circumstances. People can feel high after a near-death experience or a serious, life-threatening illness. Are they all experiencing the great endorphin rush too?

Feeling high can also be about feeling relieved. People can feel relief as acutely as grief; it can appear or feel so pronounced that it looks or feels like a high.

responsibility for their self-harm; the health worker may then not bother to explore the meanings of self-harm: what's the point if it's just an addiction to endorphins? This, along with diagnostic tags such as 'Borderline Personality Disorder', leads to therapeutic nihilism and despair for the person who self-harms.

The endorphin theory of self-harm is an unhelpful idea being peddled by psychiatry and psychiatric nursing. It strips self-harm of its complex meanings, it doesn't explore the distress behind it, and it fails to account for how self-harm changes over time. It adds nothing to our understanding of self-harm. It demeans its significance ■

Louise Pembroke, survivor activist;
Clare Shaw, 'harm-ed' self-harm training and consultancy;

Philip Thomas, professor of philosophy, Diversity and Mental Health, Institute for Philosophy, Diversity and Mental Health, Centre for Ethnicity and Health, University of Central Lancashire

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