

Friday May 3, 2013

### **Mind over morphine – how placebos can help cheating in sport**

The placebo effect is so powerful in competitive sport that its legal and ethical use in athletes must be regulated, a Melbourne [conference](#) of anaesthetists and pain specialists will hear tomorrow, **Saturday May 4**.

Fabrizio Benedetti, a professor of neurophysiology and human physiology at the University of Turin in Italy says placebos – a medical treatment which is simulated or ineffective, although the person taking it is unaware of that fact - were so potent that their use to boost performance among elite athletes posed an important dilemma for competitive sport.

Professor Benedetti, internationally renowned as a pioneer of the science of placebo, will tell the first day of the Australian and New Zealand College of Anaesthetists' annual scientific meeting that studies in a broad range of settings and sports have all shown significantly improved results in athletes who were taking an inactive substance that they believed to be performance-enhancing.

"In many of these studies, in which athletes are asked to perform at their limit, placebo treatments apparently act by pushing this limit forward: This suggests that placebos could affect a central governor of fatigue ... which has been proposed as a brain centre regulating exercise performance," Professor Benedetti says.

He says the response to drugs is twofold: the specific (pharmacodynamic) effect of the drug itself, and the psychological effect. The placebo response has to do with the second component.

"There is today compelling evidence that, if we eliminate the psychological therapeutic ritual, the overall effect of the drug is reduced."

But, he says, although the substance is inactive it is open to exploitation and cheating and believes the placebo effect gives an unfair advantage tantamount to cheating:

"If you give morphine several days in a row and then replace it with a placebo, a huge placebo response occurs," he says.

"Therefore, it is possible to give morphine to the athletes during training and then replace morphine with a placebo on the day of competition. An anti-doping test on the competition day could not detect anything with this procedure, for the placebo is nothing but fresh water. But is this procedure ethical? Is it legal?"

## **The agony and the empathy: the people who feel your pain, literally**

The phenomenon known as “somatic contagion” - or absorbing pain that is not your own just by witnessing it – may affect up to 30 per cent of the population, new research reveals.

Most people are familiar with the experience of emotional discomfort when they witness pain in another person and neuroimaging studies have shown that this resonance is linked to activation in the parts of the brain that are also involved in the personal experience of pain.

But Dr Melita Giummarra from Monash University will tell the Australian and New Zealand College of Anaesthetists’ annual scientific meeting in Melbourne tomorrow that for some people this occurs to such a degree that they suffer painful sensations – sometimes severe – in response to another person’s pain.

Dr Giummarra says there are two groups of people she has identified that are prone to this response and together they account for up to almost one-third of the population: those who acquire it following trauma, injury (such as amputation) or chronic pain, and those who are born with it (the congenital variant).

“My research is now beginning to differentiate between at least these two unique profiles of somatic contagion,” she says.

“While the congenital variant appears to involve a blurring of the boundary between self and other, with heightened empathy, acquired somatic contagion involves reduced empathic concern for others but increased personal distress, suggesting that the pain triggered corresponds to a focus on their own pain experience rather than that of others.”

She says for some people the pain they “absorb” mirrors the location and site of the pain in another they are witnessing and is generally localised.

“We know that the same regions of the brain are activated for these groups of people as when they experience their own pain. First in emotional regions but then there is also sensory activation. It is vicarious – it literally stimulates their pain.”

Dr Giummarra has developed a new tool to characterise the reactions people have to pain in others that is also sensitive to somatic contagion – the Empathy for Pain Scale, which she will discuss today.

Leading clinicians and other experts will examine topics including:

- The complexities of anaesthesia in obese patients
- New approaches to improving patient safety.
- The ageing population and anaesthesia.
- The patient experience and quality of recovery.
- “Futile” surgery – is it always right to operate?

- Anaesthesia and the environment.

#### **Superstition Dogma & Science**

<b>Who:</b>	Australian and New Zealand College of Anaesthetists (ANZCA) and the Faculty of Pain Medicine (FPM)
<b>What:</b>	Annual scientific meeting
<b>Where:</b>	Melbourne Convention and Exhibition Centre
<b>When:</b>	<b>May 4-8, 2013</b> (Faculty of Pain Medicine meeting <b>Friday May 3</b> at Sofitel Hotel Melbourne)
<b>Twitter:</b>	@ANZCA
<b>Highlights:</b>	Media alerts will be issued daily and interviews with speakers can be arranged on request

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