



## HEALTH TIPS FOR PERFORMING ARTISTS

### SHEET 6: Understanding PAIN –

### What is your body telling you?

---

The physical and psychological demands on performers can be considerable both during rehearsal and performance. Unfortunately, pain is sometimes the result. Like the rest of the community performers and teachers can sometimes hold outdated or unhelpful beliefs about pain. For example:-

1. Pain is a normal part of the job.
2. No pain, no gain
3. Pain is a signal I need to practice more often or harder

These beliefs can lead to unnecessary injury and adverse effects on performance. We now know that gaining an understanding of pain mechanisms can help reduce pain and aid recovery from injury. This tip sheet will help demystify how pain works and help you interpret what your body is telling you both for new (acute) and persistent (chronic) pains

Pain is defined by the IASP as “An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage” (Merskey 1986).

#### **What is the function of pain?**

Pain is unpleasant for a reason. It alerts you to danger and can cause you to take protective action. Pain is your bodies alarm system to a perceived threat and is vital for survival. In fact, the inability to feel pain can be deadly. Imagine what could happen if you couldn't feel a burn occurring!

#### **How does pain arise?**

Acute pain begins when specialised nerve cells (nociceptors) are stimulated. These are found in every part of the body and respond to noxious stimuli (heat/cold, pressure, stretch, trauma, inflammation, infection) that are damaging or potentially damaging to normal tissue.



The nociceptors send an impulse via relay centres in the spinal chord to the brain.

The brain processes the information and produces :-

1. the conscious perception of pain.
2. an emotional response (how we feel about the pain)
3. a behavioural response (what we do about it) .

This process is extremely rapid and often out of conscious control (think how quickly you move if you step on a tack!).

## **Pain perception – it's in the brain**

How much pain we feel is determined by many factors and is not a simple formula!. The degree of tissue damage is important but equally important is our perception of the threat the injury causes. The greater the perceived threat, the greater the emotional and behavioural response and the greater the perceived pain. For example, two individuals with an identical injury can experience a different degree of pain. Consider the difference in how much pain would be felt by a professional violinist versus a dancer if they both sustained a lacerated (L) index finger! Other factors like fatigue and anxiety can heighten the pain we perceive. Equally, relaxation and positive thinking can dampen down pain

## **How pain spreads**

Normally pain will recede as tissue is given time to heal but if tissue damage is severe or ongoing the nociceptors continue to fire off impulses to the spinal chord and brain. This process can become more and more efficient as time goes by. The nerves become sensitised and relay points in the spinal chord and brain are almost "locked open". Ultimately less and less stimulus is required to register a painful signal. In fact they may start to interpret normal stimuli (for example, light touch) as painful.

## **So, what does it all mean?**

For performers, the clear take-home message is that continuing to push through pain while rehearsing or performing is likely to be harmful. It may worsen damage and contribute to the development of ongoing pain. So, hear the messages your body is sending you and take steps to change things! Refer to Tip Sheet 2 on Acute Injury management for advice on what to do with a new pain.



## What about chronic pain?

If pain is still present between six weeks and three months after an acute injury it can be labelled as “chronic”. It may be that the tissue damage is being repeated by re-injury (see Tip Sheet 3 Overuse injuries). However, if there is persistent pain, once the expected healing time for an injury has elapsed and injured tissue has repaired, the pain may at least in part be coming from the brain. It is quite possible for the brain to generate severe pain in the absence of any actual injury. A good example of “phantom limb” pain is where pain persists after amputation of a limb. In this instance, the ongoing stimulation of the nociceptors has actually produced a lasting structural change in neural networks leading to the brain and in the area of the brain representing the injured part. Essentially, the brain has rewired itself to continue feeling pain even after the trauma has healed.

## How does treatment for chronic pain differ?

The treatment for persistent pain is multidimensional involving physical, emotional and medical aspects and aims to retrain the brain and nervous system .

Often people with persistent pain will have been prescribed strong pain killers for their pain that can have a range of side effects. Gradual reduction or “tapering” of medication use and using more active methods of pain management is commonly recommended for people with persistent pain. This can be very empowering and restore a sense of independence and self efficacy.

One very effective active method is “pacing”. A safe exercise (for example, walking or swimming) is gradually introduced at a comfortable level without increasing pain or the sense of threat. This improves the condition of the injured part (and the rest of the body!) and helps normalise and “wind down” the function of the brain and nerves, reducing pain .

It is well established that the emotional state has a key role in driving persistent pain. Hormones released when the body is stressed sensitise nerve tissue and heighten the pain experience. For example, chronic pain sufferers will often find their pain is worse when they are anxious or depressed. Poor sleep also stresses the body and thus can aggravate pain. There may be a vicious cycle of pain producing anxiety and sleeplessness that further aggravate the pain. So learning to effectively manage stress and restore emotional balance will improve emotional wellbeing and likewise can reduce chronic pain.



Lifestyle choices can also make a difference to persistent pain. For example, poor diet, excessive alcohol use and smoking can all contribute to sensitising the brain and nervous system. Modifying these factors can therefore really help with reducing chronic pain.

## Where is help available?

With any ongoing or severe pain, the first port of call should be your doctor who may refer you to a range of health care practitioners to help you with overcoming and managing your problem (See Tip Sheet 4 Who can help?).

## Where to find more information

Physiopedia <http://www.physio-pedia.com/Pain>

PainConcern <http://www.painconcern.org.uk>

Butler, Mosely and Sunyata (2003). *Explain Pain*.

## References

International Association for the Study of Pain. <http://www.iasp-pain.org/Content/NavigationMenu/GeneralResourceLinks/PainDefinitions/default.htm>

Understanding Pain – What to do about it in less than 5 minutes.  
<http://www.youtube.com/watch?v=4b8oB757DKc>

NSW Govt, Hunter Local Health, GP access