



Pain management in sports training

How sports medicine practitioners can reduce and resolve the effects of pain.

Our founders

- **Dr. Ted Price**

- Eugene McDermott Professor, The University of Texas at Dallas
- Director and founding member, Center for Advanced Pain Management Studies.

- **Dr. Greg Dussor**

- Fellow, Eugene McDermott Professor, The University of Texas at Dallas
- Founding member, Center for Advanced Pain Studies.

Over 100 publications and 10,000 citations in pain research.

Price and Dussor: Research summary

- Identify mechanisms that
 - Profoundly reduce nociceptor excitability
 - Profoundly reduce injury-induced pain.

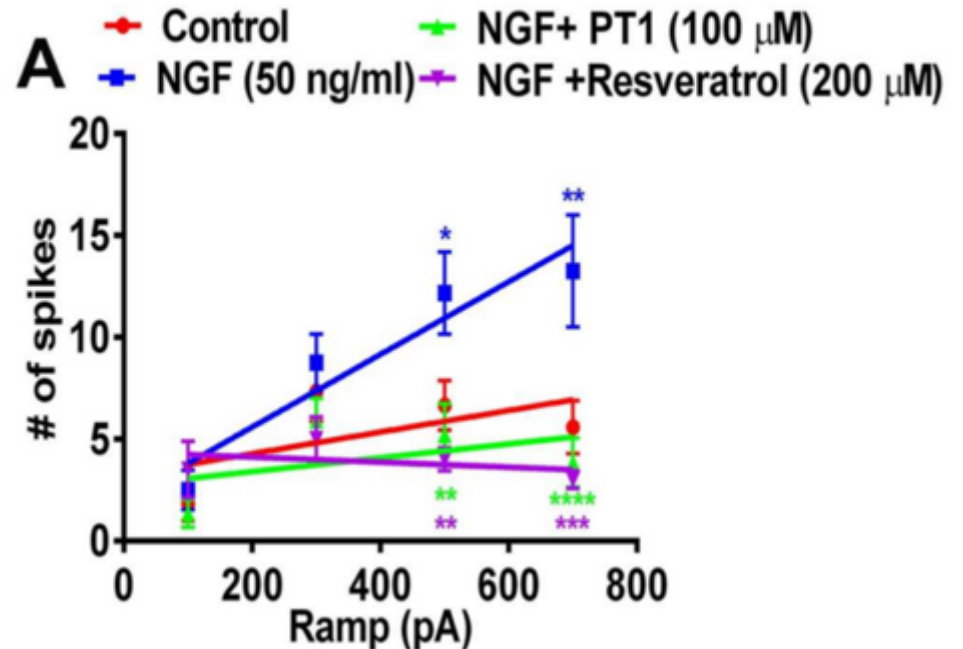
***Research focus: Resveratrol and
the control mechanisms that cause persistent pain.***

Price and Dussor: Leading researchers in the search for pain relief

RESEARCH ARTICLE

The AMPK Activator A769662 Blocks Voltage-Gated Sodium Channels: Discovery of a Novel Pharmacophore with Potential Utility for Analgesic Development

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***Product development focus:
Resveratrol-based products that relieve persistent pain.***

Pain: Defined

- Pain is a sensation, an emotion
 - An integration of the sensory system with an emotional experience.

“an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.”*

*International Association for the Study of Pain

Pain is a physical and emotional issue for athletes.

Pain is different from nociception

- Nociception
 - The neural process of encoding noxious stimuli.
- However, the term pain includes both
 - Neural processes and emotional experiences.

***Trainers balance the athlete's physical
and emotional reaction to pain.***

Emotionally athletes walk a tightrope when injured

- Athletes often feel pressure
 - To play through an injury.
- Sports medicine professionals must balance
 - The athlete's desire to play
 - With a need to prevent further injury.

Injured athlete: "My only thought ... was getting back in the game. I thought I needed to be tough."

Pain is a complex medical issue that trainers deal with everyday

- Pain has
 - Many forms and many causes.
- Some forms have a purpose
 - While other forms have no (known) purpose.
- Some forms of pain are beneficial
 - Others are not.

***Proper diagnosis
reduces the risk of career-ending chronic pain.***

Pain is also a costly medical issue for trainers

- Pain is multi-faceted
 - The number one reason people seek medical attention.

***Proper treatment
reduces the long-term costs of pain management.***

Pain is not just a symptom for the trainer to diagnose

- Pain starts with a symptom
 - Which is related to an underlying cause (i.e. trauma).
- Often the trainer can fix the underlying cause
 - While the pain persists.
- In many cases no cause is found.

***Acute pain and lingering pain
often affect an athlete's entire life.***

Inadequate care during the acute pain stage causes lingering pain

- Inadequate treatment of acute pain is one of the strongest predictors
 - Of whether an injury will lead to chronic pain.
- Without early treatment to reduce sensitization
 - Recovery is longer and lingering pain results.

***Trainers reduce recovery time
by reducing sensitization while the tissue is healing.***

One problem for trainers: The pain that remains

- The problem isn't just acute pain
 - The pain directly related to tissue damage.
- The problem is often lingering pain
 - The pain that doesn't resolve after tissue injury

***Trainers need to reverse sensitization
during the lingering pain stage.***

Lingering pain

- Defined: Pain that doesn't resolve after injury
 - Due to increased neuronal sensitization.
- What should sports medicine professionals do about pain
 - After the direct threat to tissue damage is gone?

Trainers have many options for dealing with the athlete's lingering pain.

Problem: Most pain cream products do not reduce sensitization

- A product may be more irritating than therapeutic
 - Unless the product has a salicylate or aspirin.
- In fact, many products increase sensitization
 - At the worst possible time during recovery.

Many cream products have ingredients designed to fool the body

- If a product has menthol, it feels cool
 - This distracts your nervous system from pain.
- If a product has capsaisin, it feels hot
 - This also distracts your nervous system from pain.

***These ingredients cause irritation on purpose.
That is how they work.***

None of these ingredients actually treats the cause of pain

- If a product has camphor, it feels cool and tingles
 - This distracts your nervous system from pain.
- If a product has histamine, it may cause itch
 - This distracts your nervous system from pain.

***The critical point is that,
these ingredient just distract you from the pain.***

Some popular creams may be more irritating than therapeutic

- Currently available products actually cause counter-irritation
 - Icy-Hot
 - Biofreeze.
 - These products contain capsaicin and menthol
 - Which are counter-irritants.

Ted's Pain Cream is designed to reduce and reverse sensitization

- Ted's is an anti-inflammatory
 - That does not cause counter-irritation.
- Ted's reverses neuronal sensitization
 - When used as directed and applied properly.
- However, proper treatment is the most important part
 - Of a regimen to reverse sensitization.

Schedule the application of Ted's Pain Cream just like any other medicine.

Stay on schedule to reduce and reverse sensitization

- Use Ted's
 - 3X/day for at least a week.
- Finish Ted's treatment to prevent a relapse
 - Ted says, “It's just like taking an antibiotic.”
- Apply Ted's to clean, warm skin for best results
 - After a shower: Dry the affected area and then apply
 - Throughout the day: Put a hot towel on the affected area
 - In order to open the skin before application.