PRICE needs updating, should we call the POLICE?

C M Bleakley,1,3 P Glasgow,2,3 D C MacAuley4

The acronym PRICE (protection, rest, ice, compression and elevation) has been central to acute soft tissue injury management for many years despite a paucity of high-quality, empirical evidence to support the various components or as a collective treatment package. Treatment paradigms in sports medicine must be updated based on contemporary research evidence. As a recent example, the widespread use of non-steroidal anti-inflammatory drugs in acute soft tissue injury management has been challenged, particularly with ligament and muscle injuries.1

Ice compression and elevation (ICE) is the basic principle of early treatment. Most research has focused on the analgesic effect of icing or the associated skin and intramuscular temperature changes; a recent randomised controlled trial by Prins and colleagues,2 which examined the effectiveness of ice on recovery from acute muscle tear, is the first of its kind. Clinical studies into compression are also lacking, and much of its rationale is extrapolated from research relating to deep venous thrombosis prophylaxis and lymphoedema management; there is little clinical research on elevation.3

Protection and rest after injury are supported by interventions that stress shield, unload and/or prevent joint movement for many years despite a paucity of high-quality, empirical evidence to support the various components or as a collective treatment package. Treatment paradigms in sports medicine must be updated based on contemporary research evidence. As a recent example, the widespread use of non-steroidal anti-inflammatory drugs in acute soft tissue injury management has been challenged, particularly with ligament and muscle injuries.1

Princely developed by Eliasson,4 Vailas,5 Vanderby,5 Martinez,6 and others, the PRICE acronym has been central to acute injury management. The acronym PRICE (protection, rest, ice, compression and elevation) has been central to acute soft tissue injury management for many years despite a paucity of high-quality, empirical evidence to support the various components or as a collective treatment package. Treatment paradigms in sports medicine must be updated based on contemporary research evidence. As a recent example, the widespread use of non-steroidal anti-inflammatory drugs in acute soft tissue injury management has been challenged, particularly with ligament and muscle injuries.1

The secret is to find the ‘optimal loading’. Optimal loading means replacing rest with a balanced and incremental rehabilitation programme where early activity encourages early recovery. Injuries vary so there is no single one size fits all strategy or dosage. A loading strategy should reflect the unique mechanical stresses placed upon the injured tissue during functional activities, which varies across tissue type and anatomical region. For example, a muscle injury to the lower limb has cyclic loading through normal ambulation. The upper limb may require additional cyclic load to be factored into the rehabilitation program in order to maximise mechanical stimulus.

POLICE, a new acronym, which represents protection, optimal loading, ice compression and elevation, is not simply a formula but a reminder to clinicians to think differently and seek out new and innovative strategies for safe and effective loading in acute soft tissue injury management. Optimal loading is an umbrella term for any mechanotherapy intervention and includes a wide range of manual techniques currently available; indeed the term may include manual techniques such as massage refined to maximise the mechano-effect. Paradoxically, crutches, braces and supports, traditionally associated with rest, may have a greater role in adjusting and regulating optimal loading in the early stages of rehabilitation.

POLICE should make us think more about research into designing rehabilitation strategies that are appropriate to the nature and severity of injury in different sports and activities. If the primary principle of treatment is to restore the histological and mechanical properties of injured soft tissue, optimal loading may indeed be sport specific. The challenge is in determining what is ‘optimal’ in terms of the dosage, nature and timing.

POLICE is not just an acronym to guide management but a stimulus to a new field of research. It is important that this research includes more rigorous examination of the role of ICE in acute injury management. Currently, cold-induced analgesia and the assurance and support provided by compression and elevation are enough to retain ICE within the acronym.

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1Health and Rehabilitation Sciences Research Institute, University of Ulster, Jordanstown, Newtownabbey, UK

2Sports Institute of Northern Ireland, University of Ulster, Jordanstown, Newtownabbey, UK

3Association of Physiotherapists in Sports and Exercise Medicine, London, UK

4UKCRC Centre of Excellence for Public Health (NI), Queens University Belfast, Royal Victoria Hospital, Belfast, UK

Correspondence to C M Bleakley, Health and Rehabilitation Sciences Research Institute, University of Ulster, Jordanstown, Newtownabbey, County Antrim BT370QB, UK, chrisbleakley@hotmail.com

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