

Hyperbaric oxygen therapy for delayed onset muscle soreness and closed soft tissue injury

NICE has developed the Cochrane Quality and Productivity (QP) topics to help the NHS identify practices which could be significantly reduced or stopped completely, releasing cash and/or resources without negatively affecting the quality of NHS care. Each topic has been derived from a Cochrane systematic review that has concluded that the evidence shows that the practice is harmful or ineffective and should not be used, or that there is insufficient evidence to support widespread use of the practice

Summary

NICE summary of review conclusions

Evidence shows that the harms of hyperbaric oxygen therapy on ankle sprain or acute knee ligament injury, or on experimentally induced delayed-onset muscle soreness may outweigh the benefits.

Reducing or stopping the use of hyperbaric oxygen therapy in delayed-onset muscle soreness, ankle sprain and acute knee ligament injury is likely to improve the quality of patient care and result in productivity savings by reducing exposure to unproven therapies for conditions for which less costly alternative interventions exist.

The 'Implications for practice' section of the Cochrane review stated:

'There was insufficient evidence from comparisons tested within randomised controlled trials to establish the effects of hyperbaric oxygen therapy on ankle sprain or acute knee ligament injury, or on experimentally induced delayed-onset muscle soreness. There was some evidence that hyperbaric oxygen therapy may increase pain in delayed-onset muscle soreness. Thus, the use of hyperbaric oxygen therapy in these patients cannot be justified by this review.'

Details of Cochrane review

Cochrane review title

Hyperbaric oxygen therapy for delayed onset muscle soreness and closed soft tissue injury

Citation

[Bennett MH, Best TM, Babul-Wellar S, Taunton JE. Hyperbaric oxygen therapy for delayed onset muscle soreness and closed soft tissue injury. Cochrane Database of Systematic Reviews 2005, Issue 4. Art. No.: CD004713. DOI: 10.1002/14651858.CD004713.pub2](#)

When the review content was assessed as up to date

25 April 2010

Cochrane Quality and Productivity topics

QIPP category

Right care

Relevant codes

OPCS

ICD10

HRG

Programme budget

Problems due to trauma and injuries

Evidence

Relevance to the NHS

The Cochrane review included nine small randomised controlled trials, involving a total of 219 participants. Two trials compared hyperbaric oxygen therapy versus sham therapy on ankle sprain and knee sprain respectively. Neither trial provided sufficient evidence to determine if hyperbaric oxygen therapy helped people with these injuries. The other seven trials examined the effect of hyperbaric oxygen therapy on muscle injury following unaccustomed exercise. There was no evidence that hyperbaric oxygen therapy helped, but some evidence indicated that it was associated with slightly more pain. Further research on hyperbaric oxygen therapy is not a high priority given the variety of other treatment interventions available.

Relevant NICE guidance

No relevant NICE guidance was available at the time of publication (October 2011).

Potential productivity savings

Estimate of current NHS use

There is no information available on the current levels of NHS usage of hyperbaric oxygen therapy interventions. 600 treatments were carried out as outpatients.

Level of productivity savings anticipated

Cost per outpatient treatment was £222 (2008–09 reference costs)

Type of saving

No impact on cash, but resources are freed up that can be used for other activity

Any costs required to achieve the savings

No additional resources required

Potential impact on quality of NHS care

Impact on clinical quality

Clinical quality will be improved by reducing the use of unproven therapies

Cochrane Quality and Productivity topics

Impact on patient safety

Not anticipated to have significant impact on patient safety but may reduce the risk of increased pain associated with hyperbaric oxygen therapy for delayed onset muscle soreness

Impact on patient and carer experience

Improved patient and carer experience anticipated

Likely ease of implementation

Time taken to implement

Can be achieved quickly: 0–3 months

Healthcare sectors affected

Affects one department or team

Stakeholder support

Likely to achieve good buy-in from key influencers
