

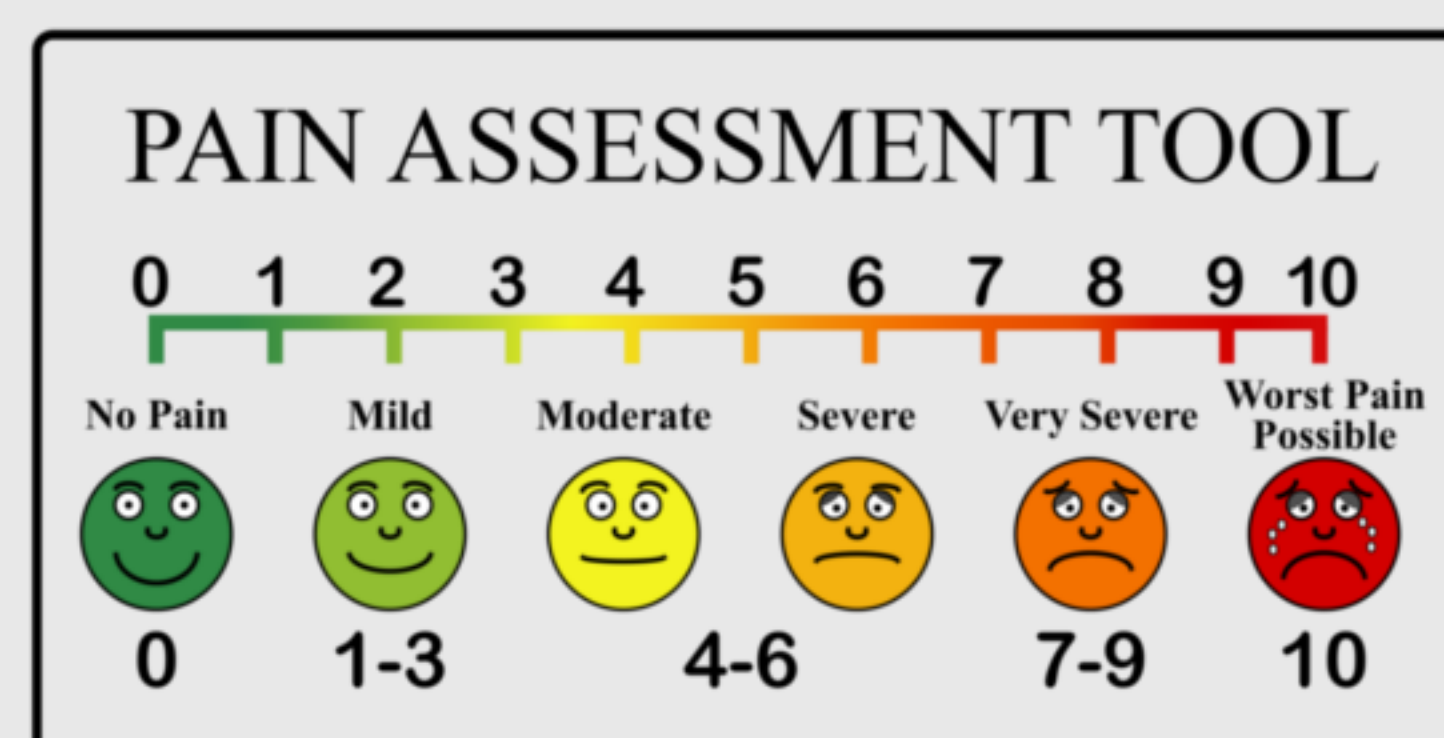
In postoperative adult patients, how effective is cryotherapy to decrease pain as opposed to exclusively analgaesics?

## INTRODUCTION

- A common intervention on orthopaedic units not often seen on general surgical floors
- Exploring the benefits of cryotherapy on surgical patients
- Benefits include:
  - improved recovery
  - reduced inflammation
  - reduced pain
- Used in conjunction with analgaesic therapy

## WHAT IS PAIN?

- "An unpleasant sensory and emotional experience with actual or potential tissue damage, or the experience described in terms of such damage"

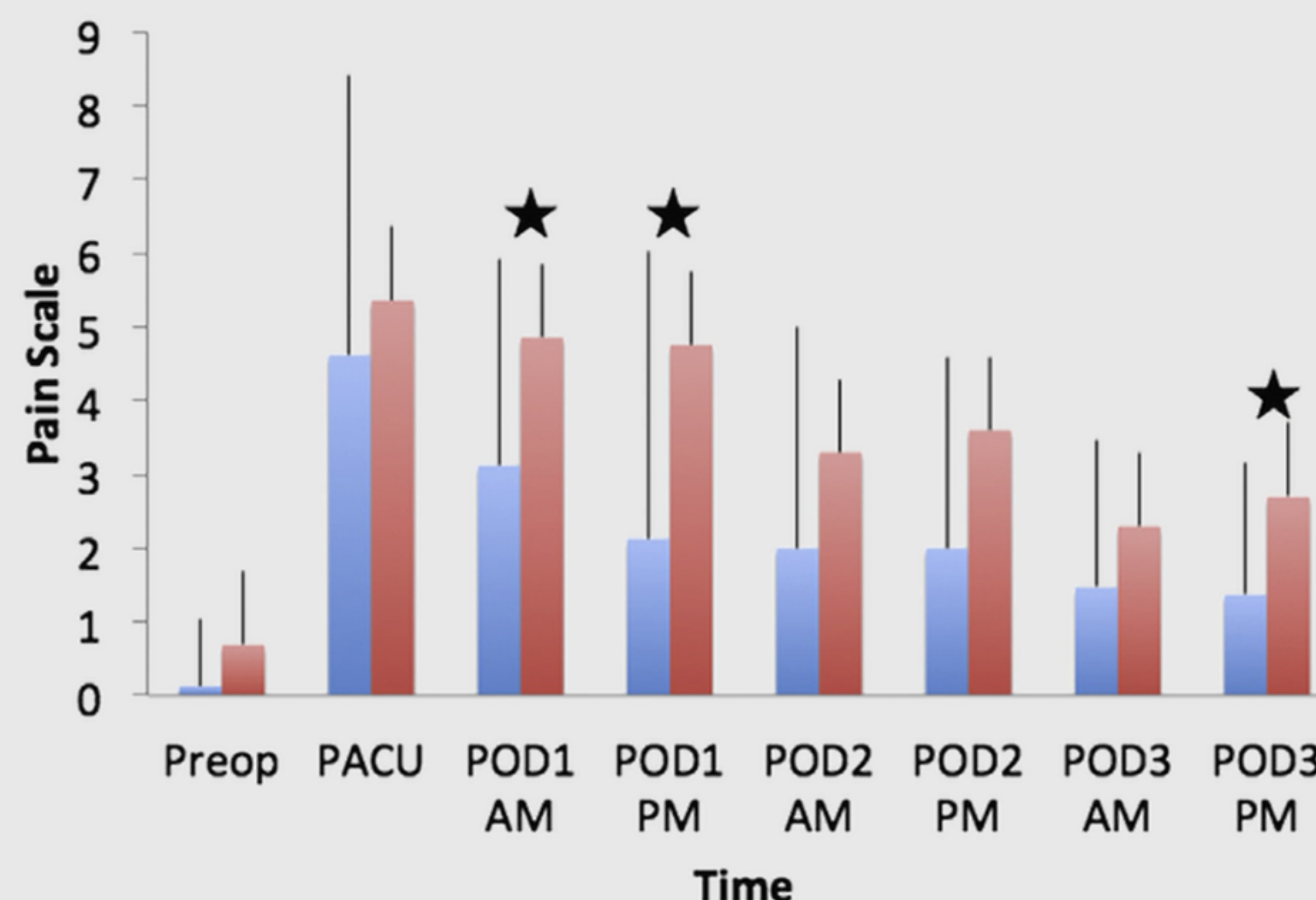


- Effective management:
  - reduces and prevents harmful complications
  - promotes optimal healing
  - allows patient participation

## NURSING INTERVENTIONS

- Cryotherapy application to surgical site (unless if too painful)
- Patient teaching for application at home
- Things to consider:
  - maximum 30 minute duration
  - assess skin integrity and vascular state
  - contraindicated in impaired sensation

## REVIEW OF THE LITERATURE



- Sample size: 55 patients (28 control, 27 experimental)
- Inclusion criteria: transperitoneal abdominal surgery with classic midline incision
- Purpose: to determine if cryotherapy is an effective method to decrease pain and narcotic use
- Method:
  - reusable ice-filled bags
  - pain measured using a visual analogue scale
  - duration of hospital stay measured
  - nurses and patients filled a questionnaire
- Results:
  - 81% of patients found cryotherapy effective
  - 76% of patients would use cryotherapy again
  - 80% of nurses found it effective for patients
  - cryotherapy decreased narcotic use

## CONCLUSION

- Cryotherapy is effective for surgical patients as an adjuvant to analgaesic therapy, and can be implemented by nurses without a physician's order
- In the study, nurses thought that ice packs could relieve patient pain moderately or significantly. Patients stated they were more inclined to use cryotherapy in the future
- Cryotherapy is effective through patient teaching and understanding

## WHAT IS CRYOTHERAPY?

- Application of moist or dry ice to skin
- Available as:
  - ice bag
  - cold towel
  - immersion bath
  - hydrocollator pack
- More effective than heat therapy for:
  - headache
  - traumatic or surgical acute pain
  - acute arthritis flares
  - muscle spasms

## MECHANISM OF ACTION

- Causes vasoconstriction to decrease:
  - inflammation
  - bleeding
  - metabolism
  - nerve excitability
  - hematoma formation
  - swelling
- Decreased metabolism decreases:
  - oxygen demand
  - bacterial exotoxin release
- Decreased nerve excitability increases pain threshold

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