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## R.I.C.E. vs M.E.A.T.


-New guidelines in the acute treatment of soft tissue injuries

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### Introduction


- Different protocols for the immediate treatment of soft tissue injuries
  - R.I.C.E.
    - Where it came from
    - Thought process
  - Controversy with R.I.C.E. protocol
  - Alternatives to using R.I.C.E.
    - M.E.A.T.


  
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### R.I.C.E.

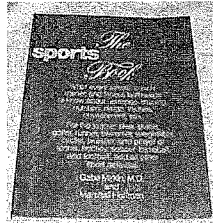
- Rest
  - Stay off injured body part
  - Reduce metabolic demands
- Ice
  - Ice or cold pack to injured area
  - Limit bleeding and swelling
  - Numbs pain
- Compression
  - External pressure such as ACE bandage or stocking
  - Decrease bleeding and swelling
- Elevation
  - Raise injured part above heart
  - Helps increase drainage of fluids





  
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### Origins of R.I.C.E.


- The Sports Medicine Book, 1978
  - Dr. Gabe Mirkin
  - Sports Medicine doctor currently been practicing for over 50 years
  - Coined the term "R.I.C.E." for the treatment of athletic injuries
  - Standard treatment because it helps relieve pain




  
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### Theory behind R.I.C.E.

- One primary goal--reduce swelling
  - Believed inflammation was delaying the healing process
  - Inflammation begins shortly after an injury
  - Redness, swelling, heat, pain, loss of function
  - Each component of R.I.C.E. is done to reduce swelling and pain associated with inflammation
  - Eliminating swelling would return functioning


  
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### Tissue response to an injury

- The inflammatory response
  - Acute phase, repair phase, remodeling phase
  - Damaged tissue heals the same way the body kills germs
  - Body sends cells and proteins to the damaged tissue to promote healing
  - Inflammatory cells release hormones which help tissues heal


  
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### R.I.C.E. controversy

- Inflammation promotes healing
- R.I.C.E. reduces inflammation

### Why Ice Delays Recovery


March 16, 2014 by Gabe Mirkin, MD @Common

When I wrote my best-selling *Sportsmedicine Book* in 1976, I coined the term **RICE** (Rest, Ice, Compression, Elevation) for the treatment of athletic injuries (Little Brown and Co., page 94). Ice has been a standard treatment for injuries and sore muscles because it helps to relieve pain caused by injured tissue. Coaches have used my "RICE" guideline for decades, but now it appears that both ice and complete Rest may delay healing, instead of helping.


  
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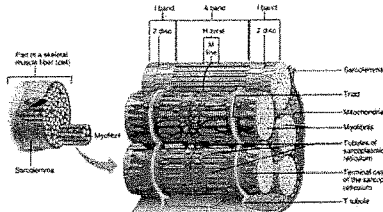
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### M.E.A.T.

- Movement
  - Range of motion to pain tolerance
  - Increases blood flow to bring in cells needed for proper healing




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### M.E.A.T.

- Movement
  - Range of motion to pain tolerance
  - Increases blood flow to bring in cells needed for proper healing
- Exercise
  - Light at first—begins strengthening of injured area
- Analgesia
  - Use of medications to decrease pain
  - Not NSAIDs (Ibuprofen, Alieve)
  - Tylenol
- Treatment
  - Physical therapy, ultrasound, electrical stimulation


  
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### Ideal protocol

- R.I.C.E. protocol
  - Beneficial with extreme swelling *when movement is possible*
  - In order to regain full motion
- M.E.A.T. protocol
  - Used as soon as motion is possible
- Conclusion
  - Inflammation promotes healing
  - R.I.C.E. reduces inflammation
  - Sometimes swelling restricts movement
  - Combination of both protocols
  - See a healthcare professional to diagnose any injuries