WHAT IS SPORTS MASSAGE?
Kathy Flippin, Dynamic Touch Massage Therapy
YOUR PRESENTER, KATHY FLIPPIN

- Sports Massage Therapist since 1997
- USA Swimming Sports Medicine and Science participant since 2001
- Member of Sports Med team for USA Swimming at London Olympics
- Other sports event experience:
  - Pan American Games USOC Sports Med Team
  - ParaCycling World Championships Track & Road
  - CrossFit World Games

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COACH’S TAKE-AWAY LIST:

- Update on Science behind DOMS
- See how Sports Massage can:
  - Compliment Training Regimen through improving Recovery
  - Prepare for events
  - Prevent and/or Manage Injuries and Overuse

Obstacles:
- Budget
- Time
- Age-Appropriate Use
TRUE OR FALSE?

Lactic Acid is the main cause of Muscle Soreness
OLD SCIENCE ON DOMS

Myth: Lactic Acid Causes DOMS

- Lactic Acid is produced from Glucose metabolism, and is burned for energy at >50% of max capacity
- Causes acute burn during activity
- Interferes with muscle/nerve signals, impairs muscle contraction
- Clears within 20-120 minutes after end of activity
MUSCLE FATIGUE
(aka: DELAYED ONSET MUSCLE SORENESS)

- Muscle Contraction: Concentric vs. Eccentric lengthening creates the most soreness

**Concentric muscle contraction**—The bicep muscle is **shortening** while contracting.

**Eccentric muscle contraction**—The bicep muscle is **lengthening** while contracting.
CURRENT SCIENCE ON DOMS

- Z-Disk Streaming and resulting inflammation
ANATOMY OF A MUSCLE
MUSCLE PHYSIOLOGY

- A Muscle is made of thousands and thousands of little contractile units called “Sarcomeres”
CURRENT SCIENCE ON DOMS

- Connections between Sarcomeres get torn (Z-Disk Streaming) resulting in inflammation
Facilitating Muscle Recovery: Treatments for DOMS

- **Active Recovery: Warm-Down exercise & Stretch**
  - ALWAYS do a 15-20 minute warm down after hard efforts and races

- **Food/Water- Healthy Eating Habits & recovery drinks/bars**

- **Ice Bath/Hot Tub- results vary by individual, inconvenient**

- **Compression Clothing- results vary, expensive**

- **Nutrition Supplements- risky, best source is from food**

- **NSAID’s & Topicals- treat symptoms only**
  - Use Permitted products only- no banned substances

- **Recovery Massage (aka Post-Event Massage)**
Post Event “Massage has been shown to reduce effects of inflammation response to exercise”

What does that mean for your swimmers?
- Decreases pain and
- Facilitates recovery

Reference:
“Massage therapy, the Tool of Choice for Treating Post-Exercise Inflammation”
Ewa Basiukiewicz Karolina Guzik-Miszczyk
http://www.ccmts.ca/docs/Runnerupc.pdf
POST-EVENT MASSAGE REDUCES INFLAMMATION

Reducing Recovery Time

Better Training Time

Improved Performance
Research shows individual results vary
Complement Training Regimen

- Recovery Massage must be administered within 24 hours of maximum effort in order to be effective at reducing DOMS.

The Sooner the Better!
**Post Event Massage Protocol**

- **Brisk and firm** –
  - focus on moving blood

- **Over 15 minutes duration** allows Parasympathetic Nervous System response which may aid sleep
  - Keep it under 15 minutes between events to stay mentally sharp

- **Common Massage Strokes**
  - Compressive Effleurage- long flowing strokes along length of limb
  - Kneading- Petrissage

- No oil necessary, can be done over clothing
ATHLETE PROTECTION

USA Swimming protocol from Handbook

- “Any rubdown or massage performed on an athlete by any adult member or Participating Non-Member, excluding the spouse, parent, guardian, sibling, or personal assistant of such athlete, is prohibited unless such adult is a licensed massage therapist or other certified professional. Any rubdown or massage performed at a swim venue by a licensed professional must be conducted in open/public locations and must never be done with only the athlete and licensed massage therapist in the room. Even if a coach is a licensed massage therapist, the coach shall not perform a rubdown or massage of an athlete under any circumstances.” 305.2
RECOVERY TOOLS FOR KIDS

- Knead your own muscles!
- Elevate after warm down
- Use massage tools
EDUCATING SWIMMERS AND PARENTS
HERE’S WHAT TO SAY:

- You can’t wash your car so well you will never have to wash it again!
- Take care of the body and give it frequent tune-ups to run optimally
YOUR BODY IS LIKE A CAR!

- Big muscles are like the Engine; they need to warm up, and they generate big power.
- Small Muscles are the Steering and Brakes; they control the power.
- You must be able to control the power you generate, or you’re in trouble!
CAUSES OF PAIN: POSTURE AFFECTS SHOULDER FUNCTION
CAUSES OF PAIN: TRIGGER POINTS

Painful, irritated muscle knots

Respond very well to massage
KIDS AND PAIN- ASSESSMENT TOOLS

• Use “traffic light” to communicate
• We’ve all experienced soreness after exercise, clinically acute strains are very similar.
• How do we tell the difference?
  o Higher Intensity of pain
  o Pain doesn’t resolve with Rest
  o Gets worse with activity
  o Over a week without improvement
  o Interrupts Sleep
  o Can’t concentrate at school
  o Orthopedic testing for impingement signs
SPORTS MASSAGE- FREE ACCESS

Self-Care

- 30 seconds maximum of pressure in one spot. More than that creates more irritation.
Webinar Survey:

- Does your Team use any Self-Care tools as part of a regular routine?
- If so, use one or two words to describe

Examples:
- Tennis Balls
- The Stick
- Tiger Tail
- Foam Roller
- Etc.
SUMMARY: WHEN TO USE SPORTS MASSAGE

- Manage Injuries
  - Reduce inflammation from overtraining issues - PARTNERSHIP WITH COACH
  - Resolve underlying postural issues that perpetuate injuries
  - Improve flexibility, pliability required for proper stroke technique
WHEN TO USE SPORTS MASSAGE

- Pre/Post event care at big meets
  Especially if Swimming Multiple Events
WHEN TO USE SPORTS MASSAGE

Additional Benefits:

- Kinesthetic Awareness
  - Athlete learns to ready body signals.
  - Massage therapist’s input can help athlete and coach develop custom plans for racing and training to optimize performance.
WHEN TO USE SPORTS MASSAGE

- Improve Morale
  - Feeling of preparedness
  - Congratulate or Console for performance
MASSAGE RULE #1

“Deep Tissue” massage should *NEVER* hurt, especially for kids!
WHEN NOT TO USE SPORTS MASSAGE

No Deep Tissue within 48 hours before a big race. It should be moderate pressure only and relieve soreness, not increase it.

Don’t experiment before a big event.
**Ideas for Coaches**

- Ways to work with a local therapist:
  - *Therapist can Teach coaches how to lead self-care*
  - Lead dry-land session self-care for team
  - Workshops to teach parents how to massage their kids
  - Volunteer massages at the pool
  - Offer discounts for club members
  - Travel with team for big meets
Find a Massage Therapist

Recommended Qualifications:

Certification (1,000 hours, sports-specific education)
Experience (minimum 3 years)
Licensure (City or State)
LiveScan Background Check
Age-Group Experience
Other facility requirements- Insurance
FIND A LOCAL MASSAGE THERAPIST

Ask USA Swimming!

Point of contact
Stacy Michael-Miller 719-866-4962
smichael@usaswimming.org

Stacy can refer an individual who has worked with Swimming and is located in the athlete’s time zone. However, the athlete and his/her parents are responsible for checking and investigating qualifications. USAS does not make any representations or warranties regarding qualifications.
FIND A LOCAL MASSAGE THERAPIST

American massage Therapy Association
www.AMTA-massage.org
Check all qualifications
SPORTS MASSAGE
PART OF A COACH’S TOOLBOX

Reducing Recovery Time

Better Training Time

Improved Performance

And longevity in sports
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