STRETCHING FOR PERFORMANCE

How to effectively incorporate stretching into your fitness routine

ferdilicious@facebook.com

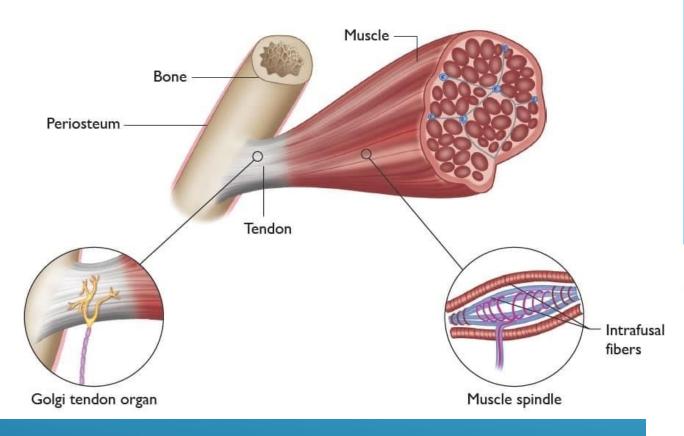
FITNESS TIP: Stretching is important.
Stretch out flat on your back. Stretch
your eyelids over your eyes. Stretch
a blanket over your body.

You're welcome

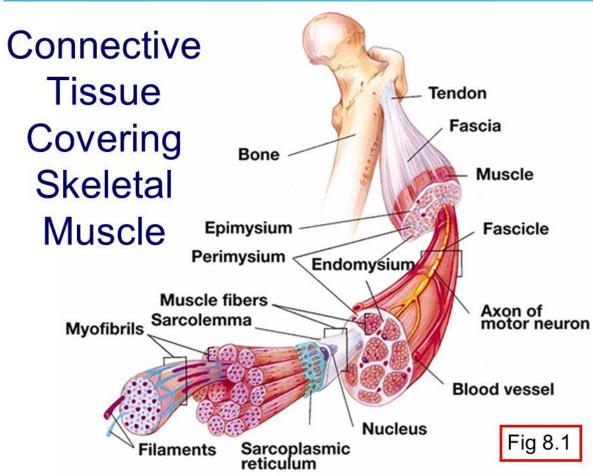
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- Basic anatomy
- Flexibility vs Mobility
- > Types of stretching
- Stretching and injury
- > Assessment
- Effective Stretching
- Questions/Additional Resources

OVERVIEW



ANATOMY



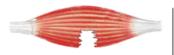
- Active
 - Spasm or contraction
 - Instability
 - Muscle innervation
- Passive
 - Muscle or fascial tissue
 - Scarring or posture

WHAT CAUSES TIGHTNESS?

How Scar Tissue Forms In Muscles

1 Muscle Tears

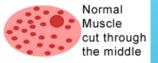
2 Micro-Tears In Muscles 3 Sustained Contraction



An Injury like Whiplash Or a sporting Injury



Repetitively using a muscle resulting in small tears of the muscle fibres



Muscles held in tension for long amounts of time e.g from bad posture or working on a Computer



The body senses the tear and repairs the break with scar tissue



The body senses the micro-tears and repairs them with scar tissue



Because the muscle is held tight blood can't get to all the parts of the muscle. The part that doesn't get enough Oxygen dies and scar tissue forms.

6 JL Quirepráctico 2012

Flexibility

 Ability of a muscle or group of muscles to lengthen passively through a range of motion.



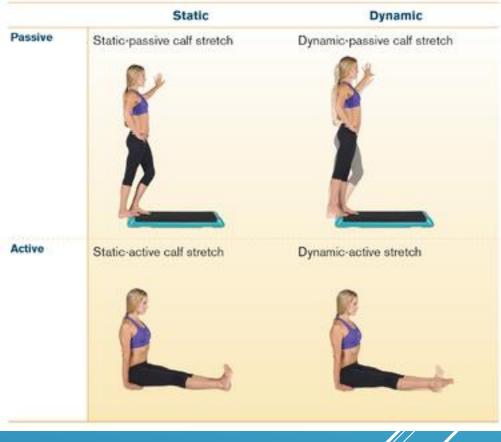
Mobility

Ability of a joint to move actively through a range of motion



- ▶ Static
 - Active
 - Passive
- Dynamic
- > Ballistic
- ➤ Contract-Relax (PNF)
- Self Massage





TYPES OF STRETCHING



Tennis Ball/Massage Ball



Trigger Point Massager



Your Hands



Foam Roller

- Stretching does not prevent/rehab injury, unless
 - Functional range of motion
 - > Blood flow
 - Must be individualized

STRETCHING AND INJURY

Current belief is that stretching reduces injury incidence and that it should be performed prior to athletic activities. An examination of 11 articles provided inconclusive outcomes regarding the positive effect of stretching on injury prevention. A sport or activity-specific tailored stretch and warm-up program yielded the best outcomes in relation to preventing injuries. Direct negative effects of stretching were not identified; therefore, the application of stretching should be performed on an individual basis.

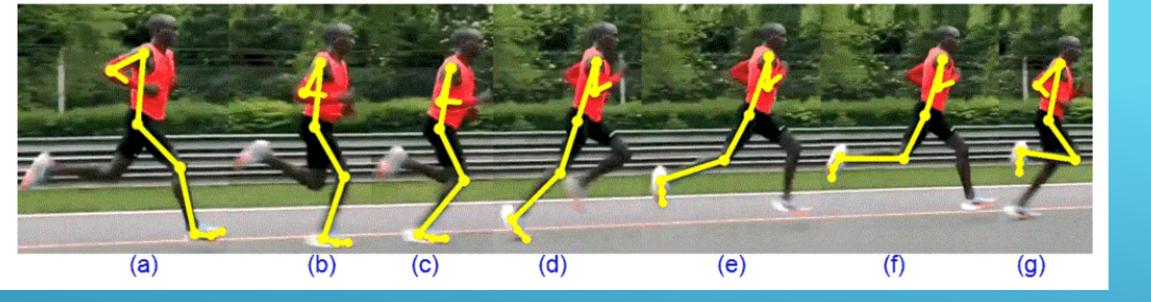
Orthopaedic Nursing: <u>November/December 2014 - Volume 33 - Issue 6 - p 312-320</u>

doi: 10.1097/NOR.0000000000000097

- Best done with professional practitioner or PT
- ► Functional Movement Screen
- Static and dynamic
- Active and passive



ASSESSMENT





- Step 1 warm up muscles with light cardio
- Step 2 release contractures with dynamic movements (eg
 CARS) and self-massage
- Step 3 work on flexibility via static stretching only where required
- Step 4 strength train with full range of motion to enhance Mobility
- Step 5 repeat 2-3x/wk on non-consecutive days

EFFECTIVE STRETCHING – WORKOUT DESIGN FOR REGULAR TRAINING

- Step 1 warm up muscles with gentle dynamic stretches and warm ambient temperature.
- Step 2 release contractures with self-massage
- Step 3 work on flexibility via combination of static stretches and contract-relax. Minimum 15s holds, repeat sets to at least 1min.
- Step 4 repeat at least 6x/wk

EFFECTIVE STRETCHING – WORKOUT DESIGN FOR INCREASING FLEXIBILITY

- CARs YouTube Playlist
 - Neck, Scapula, Elbows
 - Wrists, Shoulders, Thoracic Spine
 - Lower Back, Hips, Shins
 - Shins and Feet
- ► GMB tons of free content. Elements and Mobility for paid content.
- ▶ How to Stretch short online textbook. Older content, still relevant.
- <u>Becoming a Supple Leopard</u> book.
- Instagram Accounts
 - @littletfitness gymnastics, calisthenics, tutorials
 - @kneesovertoesguy knee health (basketball background)
 - @garagegymgirl handstands, calisthenics, tutorials
 - @yycgolfchiro golf, CARs
 - @kdkinetics general fitness, tutorials

ADDITIONAL RESOURCES

- ▶ Joanna Ford <u>Joanna.ford@esso.ca</u>
- Presentation is posted at: www.505qpwellness.ca/sustainableme/

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