

MUSCLE TENSION

- Stress can lead to inflammation that irritates the nervous system causing constriction of blood vessels. This constriction results in reduced blood flow and oxygen to the muscles. Lack of oxygen diminishes the ability of the muscles to recover and heal from stress and inflammation.
- Meditation and the resulting relaxation response significantly improves blood circulation allowing the muscles to recuperate, reproduce cells, and heal damaged tissues leading to reduced tension.
 - Self-awareness [e.g., being aware of muscle tension] precedes self-control.

Self-regulation strategies to reduce muscle tension

1. Stretching
 - a. Aids in relaxing tense muscles associated with stress and eases lower back pain.
 - b. Increases blood flow and supply of nutrients to muscle tissues and cartilage.
 - c. Increases flexibility and joint range of motion making tasks involving lifting and bending become easier and less tiring.
2. Stay hydrated
 - a. Dehydration leads to fewer nutrients such as electrolytes reaching the muscles. This can lead to cramping and increased tension.
3. Frequent breaks → about every 30 minutes of sitting at desk, working, or studying get up and move around
4. Head/Neck Massage → See Method 4 at:
 - a. <http://www.wikihow.com/Image:Reduce-Neck-Tension-Step-13.jpg>
5. Heat/Ice
 - a. Use ice for inflammation and swelling if you have an injury
 - b. Use heat to warm and loosen the muscles and reduce tension

Stretching Mechanics

1. Hold each stretch 15-30 seconds and stretch each side of your body.
2. Focus on a *pain free* stretch. If you feel pain, you have gone too far.
3. Do not bounce as bouncing can cause small tears leading to scar tissue and increased pain.
4. Relax and breathe freely.

Neck and Chin Stretches

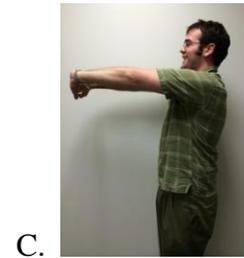
- Stretch the chin to the chest, ear to shoulder and chin to armpit allowing the opposite hand to gently pull into the stretch. Stretch both sides of neck.



Shoulder Stretches

- Corner Stretch (A)
 1. Stand facing a corner and place one foot in front and forearms and elbows on the wall about shoulder height
 2. Lunge into the corner and hold for 10-15 seconds then switch to other foot and repeat
 3. You can adjust the height of your elbows as needed to get a better stretch

4. By placing the arms above your head you will feel a stretch of your deltoid muscle to the bottom of your scapula
- Shoulder blade squeeze (B)
 1. Hold arms above head with elbows at shoulders and squeeze shoulder blades together as if trying to crack a nut
 - Forward arm extension stretch (C)
 1. Hold your arms out in front, lace the fingers together and then turn the palms away from you.
 - Other stretches (D, E, & F)



Low Back and Hip Stretches

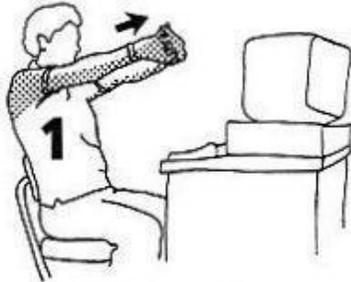
- a. Knee rocks, child's pose or prayer position, hip flexor
 - i. Knee rocks: <http://www.professionalphysicaltherapy.com/exercises/low-back/knee-rocks/>
 - ii. Child's pose or prayer position: <http://www.professionalphysicaltherapy.com/exercises/low-back/muslim-prayer-stretch/>
 - iii. Hip flexor to stretch psoas muscle (A=stretch; B=psoas muscle)
 1. When the psoas muscle is tight, it increases tension in lower back



Computer & Desk Stretches

Approximately 4 Minutes

Sitting at a computer for long periods often causes neck and shoulder stiffness and occasionally lower back pain. Do these stretches every hour or so throughout the day, or whenever you feel stiff. Photocopy this and keep it in a drawer. Also, be sure to get up and walk around the office whenever you think of it. You'll feel better!



10-20 seconds
2 times



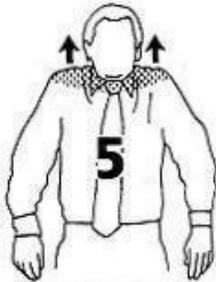
10-15 seconds



8-10 seconds
each side



15-20 seconds



3-5 seconds
3 times



10-12 seconds
each arm



10 seconds



10 seconds



8-10 seconds
each side



8-10 seconds
each side



10-15 seconds
2 times



Shake out hands
8-10 seconds