

# Flexibility and Stretching

---





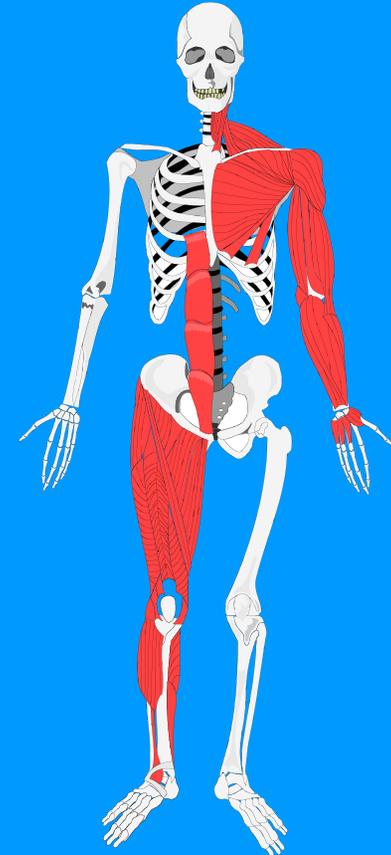
# Importance and Benefits of Stretching

---

- Improve sport performance
- Improve range of motion
- Reduce injury rate
- Reduce muscle soreness
- Reduce back pain
- Increase mental and physical relaxation
- Increased body awareness and kinesthetic sense
- Increased stride length
- Better coordination
- Increase GAG production

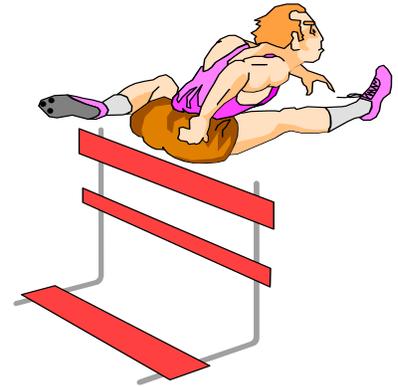
# Structures that limit flexibility

- Muscles
- Tendons
- Joint capsule
- Skin
- Joint type and bony structures



# Stretching Methods

- Static Stretching
- Ballistic Stretching
- Passive Stretching
- Active Stretch
- Movement Patterns –upper and lower body diagonal patterns
- Proprioceptive Neuromuscular Facilitation (PNF) Stretching Techniques (series of contractions and relaxations) partner or single stretches (hamstring ex)
  - hold/relax
  - contract/relax
  - contract/relax/contract



# Best Times to Stretch

- *Following* mild warm-up exercise
- Following your exercise bout
- After a shower or bath
- Daily whenever you can get the chance

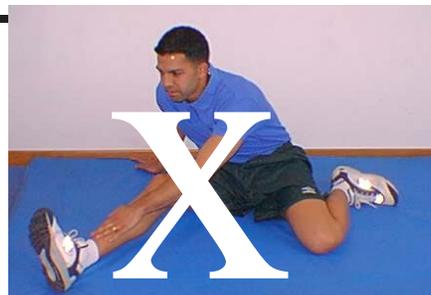


- 
- Bone blocks motion
  - Recent fracture
  - Recent strain or sprain
  - Sharp pain with movement or muscle lengthening
  - Inflamed or infected joint



# Stretches to AVOID!

## Hurdler Stretch



Stretches ligament and potentially tears cartilage in bent knee. Replace with stretches 2 or 3 from chart above.

## Standing Toe Touch Stretch



Can cause un-natural stretching of ligaments in low back area and sciatic nerve. Replace with stretches 2 or 3 from chart above.

## Yoga Plow Stretch



Dangerous to cervical area of neck. C-7 only meant to hold up head, not total body weight. Replace with stretches 9,10 and 11 from chart above.

# Stretching/Exercise No Nos

---

- Extreme flexion of joints (esp knee)
- Twisting with planted feet
- Straddle while standing with straight legs
- Straight legged toe touches
- Plough and bridge positions
- Double leg lifts
- Extreme loading of muscles while stretching



# When stretching

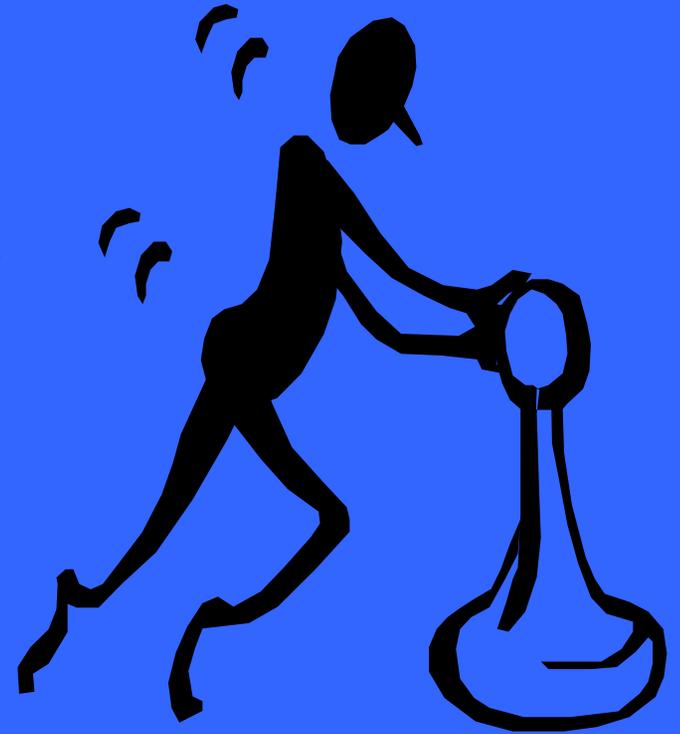
---

- Include exercises that stretch all the major muscle groups
- Add specialty exercises for your sport for example extra leg and foot stretches for running and more shoulder and trunk stretches for tennis
- You should feel stretch in a muscle not pain
- Each stretch should be held for at least 10 seconds or more to kick in GTO's
- Find a partner you can trust for buddy stretches

## A few stretching exercises

---

- Lower legs and feet
- Thighs
- Hip and Glutes
- Back and Trunk
- Arms/Shoulders and Chest



## Warm-Up

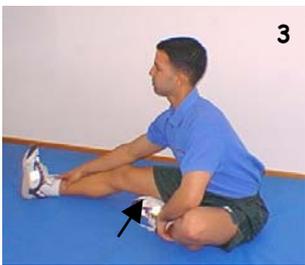
During the Warm-up the tempo of exercise is gradually increased thus preparing the body for the activity that follows. This will help your body prevent injury, workout longer, and in turn, burn more calories. The warm-up should last approximately 5 to 10 minutes and should consist of some type of continuous light aerobic activity. Some examples are: cycling, brisk walking, rowing or easy swimming. As a preventative step you should conduct a warm-up before doing either an aerobic or anaerobic (strength) training workout.

## Cool-Down

The Cool-down consists of gradually decreasing the tempo of exercise. Continue to exercise, however, decrease your intensity until the heart rate is approximately 110 beats per minute. At this point you should engage in a stretching routine. While stretching, DO NOT BOUNCE. Hold each position for 20 - 30 seconds, relax, and repeat. See diagrams below for stretches. If you are strength training, you may want to incorporate these stretches while waiting for your next station.



or



**NOTE: For optimal results hold each stretch for 20 - 30 seconds repeat 2 - 3 times.**

