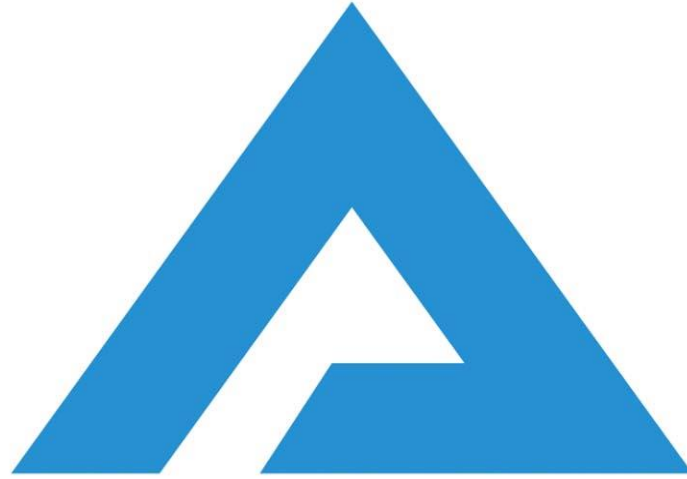




APPLIED**FITNESS**SOLUTIONS
SCIENCE ▲ SYSTEMS ▲ RESULTS

Incorporating Physical Activity into Your Workday

Important Terminology

- **Physical Activity (PA):** any bodily movement produced by skeletal muscles that require energy expenditure
 - Limitless, Non-specific, Varied Intensities
- **Exercise:** is a type of PA consisting of planned, structured, and repetitive bodily movement done to improve and/or maintain one or more components of physical fitness
 - Specific (performed to improve one or more aspects of fitness)
 - Moderate-to-higher intensities

Definitions

- **Health:** state of complete physical, mental and social well-being and not merely the absence of disease or infirmity
- **Physical Fitness:** is the ability to carry out daily tasks with vigor and alertness, without undue fatigue, and with ample energy to enjoy leisure-time pursuits and meet unforeseen emergencies
 - Health-Related Physical Fitness
 - Skill-Related Physical Fitness

Health- & Skill-Related Fitness

Health-Related Physical Fitness Components

- Cardiorespiratory endurance: the ability of the circulatory and respiratory system to supply oxygen during sustained physical activity
- Body composition: the relative amounts of muscle, fat, bone, and other vital parts of the body
- Muscular strength: the ability of muscle to exert force
- Muscular endurance: the ability of muscle to continue to perform without fatigue
- Flexibility: the range of motion available at a joint

Skill-Related Physical Fitness Components

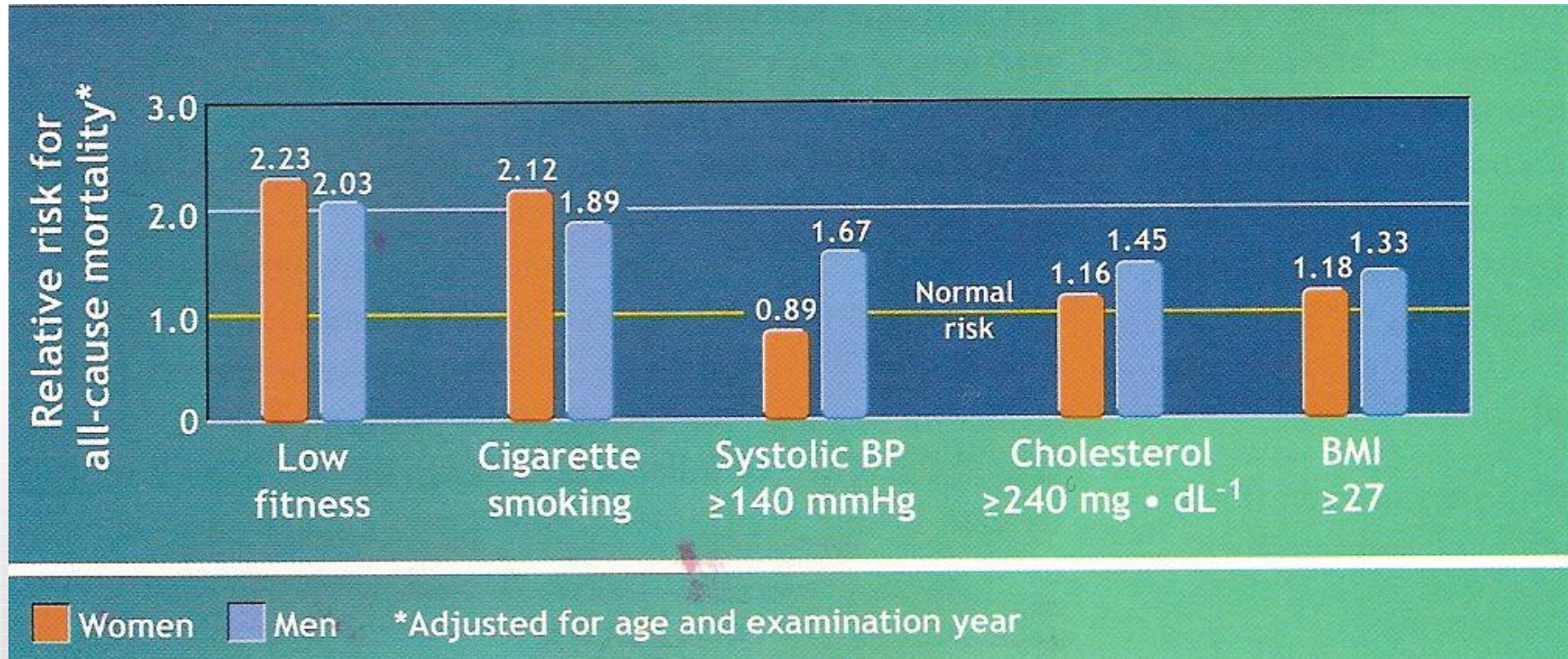
- Agility: the ability to change the position of the body in space with speed and accuracy
- Coordination: the ability to use the senses, such as sight and hearing, together with body parts in performing tasks smoothly and accurately
- Balance: the maintenance of equilibrium while stationary or moving
- Power: the ability or rate at which one can perform work
- Reaction time: the time elapsed between stimulation and the beginning of the reaction to it
- Speed: the ability to perform a movement within a short period of time



Physical Activity Guidelines

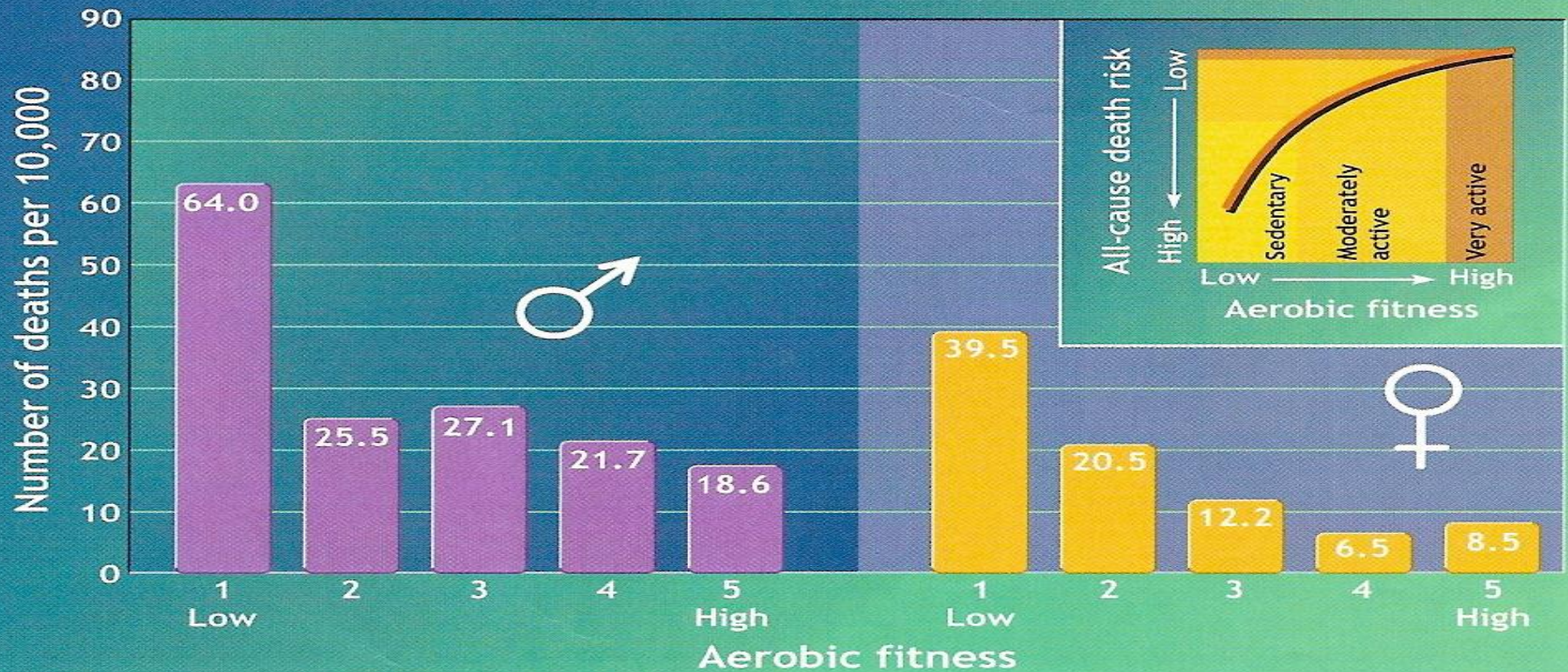
- 150 minutes/week of moderate intensity PA
 - 75 minutes/week of vigorous intensity PA (or combo)
 - “Aerobic” guideline
- 2 days per week of muscle strengthening
 - Can be included in the 75-150 of MVPA
- Limit sedentary time
 - Reduce the amount of time spent sitting

Cardiovascular Fitness & Reduction in All-Cause Mortality¹



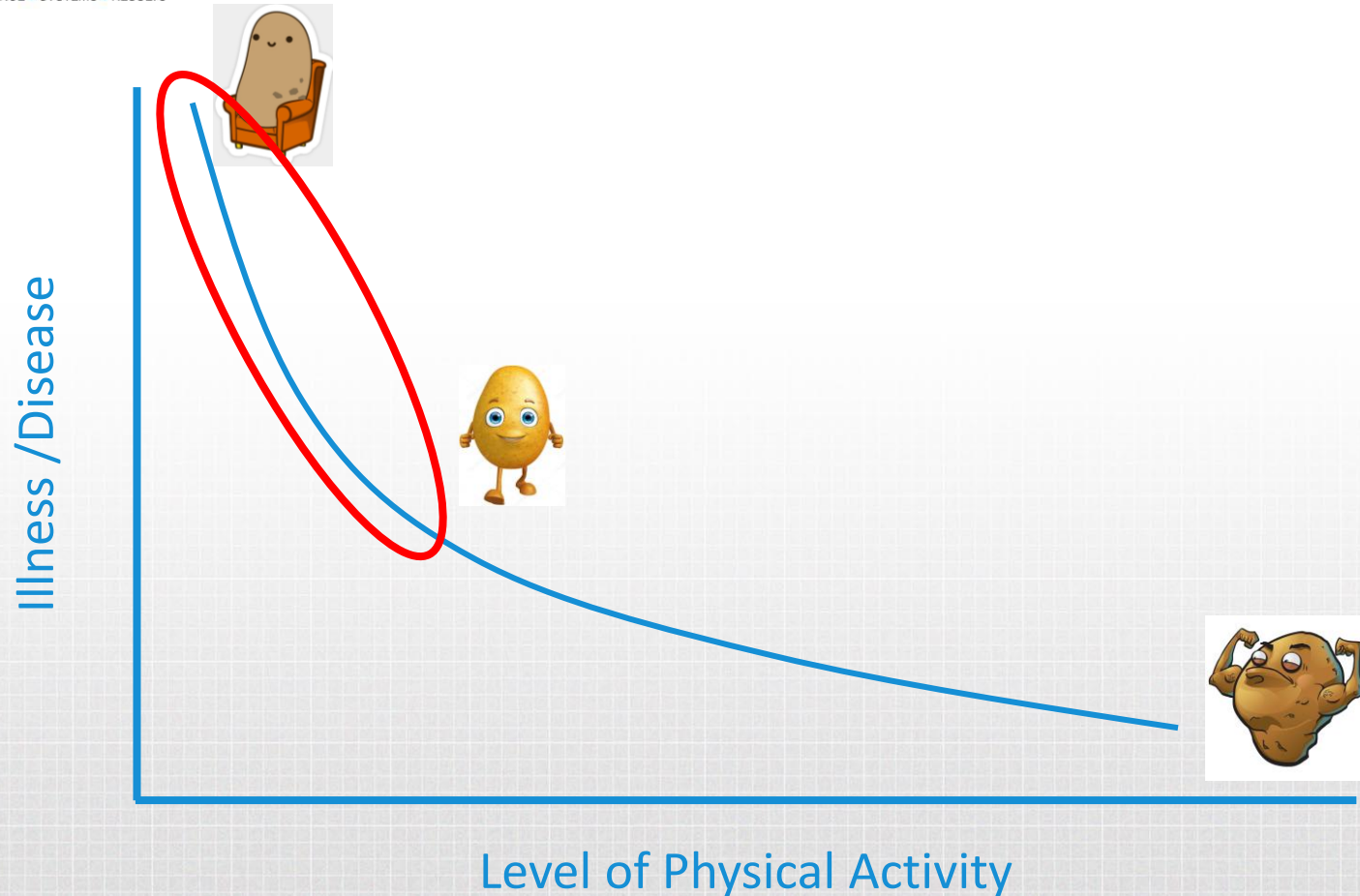
¹Blair et al. *Influence of cardiorespiratory fitness and other precursors on cardiovascular disease and all cause mortality in men and women.* JAMA 1996;276:205.

Cardiovascular Fitness & Reduction in All-Cause Mortality²



²Blair et al. *Physical Fitness and All-Cause Mortality: a prospective study of healthy men and women*. JAMA 1989;262.:2395.

Flattening the Curve



Pathology of Sedentary Time

- Muscle Weakness and Imbalances
- Poor Posture
- Poor Cardiometabolic Health
 - Reduced insulin sensitivity
- Back and Neck Pain
- Mental Health Impact
- Reduced Productivity and Cognitive Function



General Recommendations:

Physical Activity & Sedentary Time

- Try to sit for no longer than 60-90min without moving for 3-5min
- Try to meet the guidelines of 150min/wk MVPA
 - All activities at the moderate threshold count, not matter the duration
 - The biggest benefits are conferred going from nothing to something
 - Zero to 30min/week is the most dramatic

Common Posture of a Desk Job





Chronic Aches/Pains Associated with Sitting

- Neck/Upper Back Pain
- Shoulder Pain
- Lower Back Pain
- Hip Pain

Causes of Chronic Aches & Pains

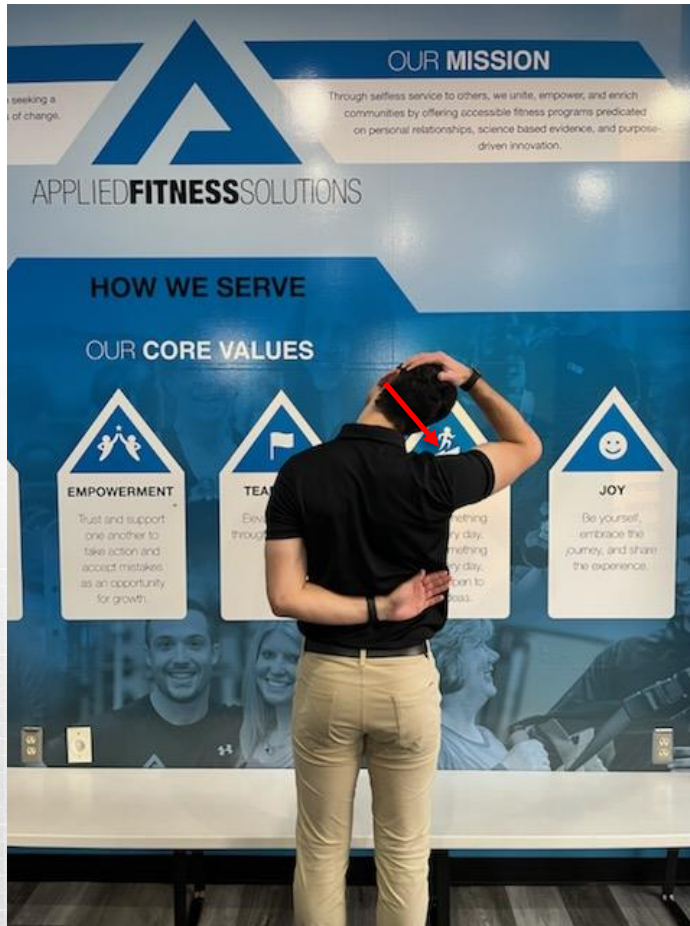
- Muscles on the front side of the body get tighter and more immobile
- Muscles on the back side of the body get weaker
- To combat seated posture aches/pains:
 - Improve seated Posture
 - **Stretch Tight Muscles:** Upper Traps, Pectorals, Internal Rotator Cuff, Hip Flexors
 - **Strengthen Weak Muscles:** Lower and Middle Trapezius, Glutes, Transverse Abdominals

Proper Seated Posture



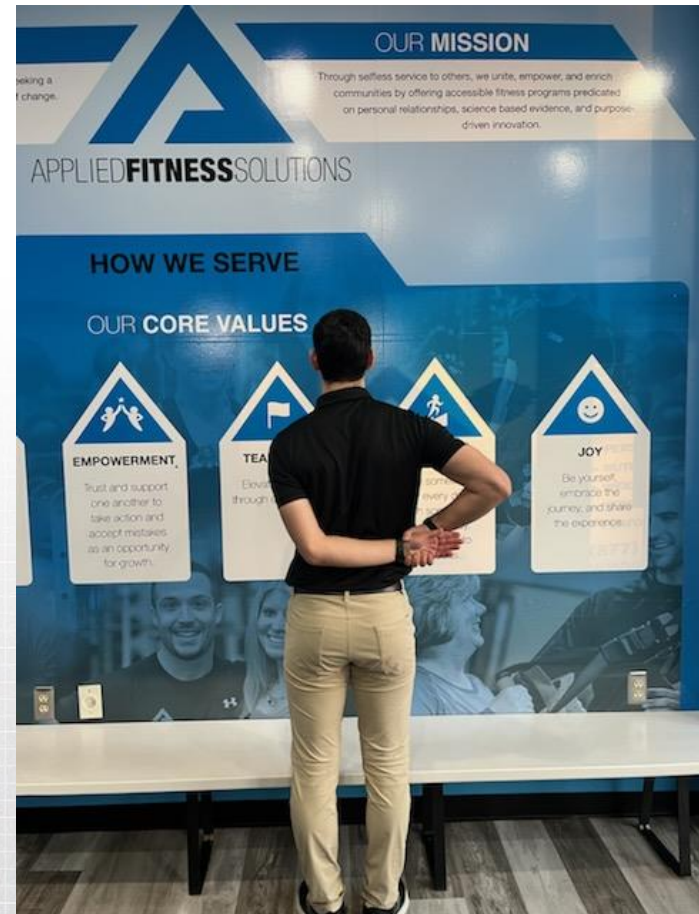
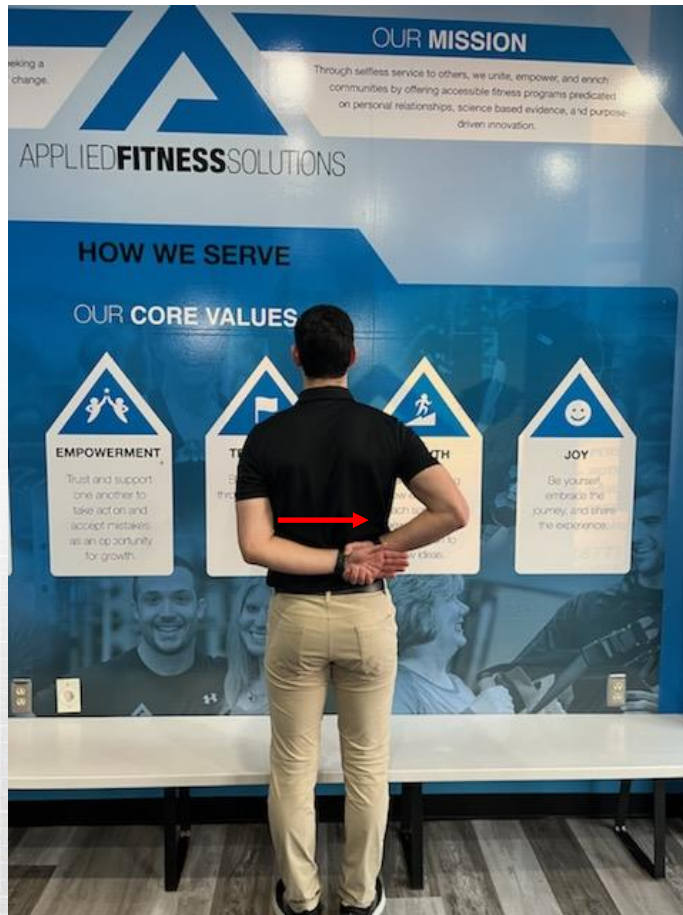
Upper Trap Stretch

(Hold for 30sec/side)



Internal Rotator Cuff Stretch

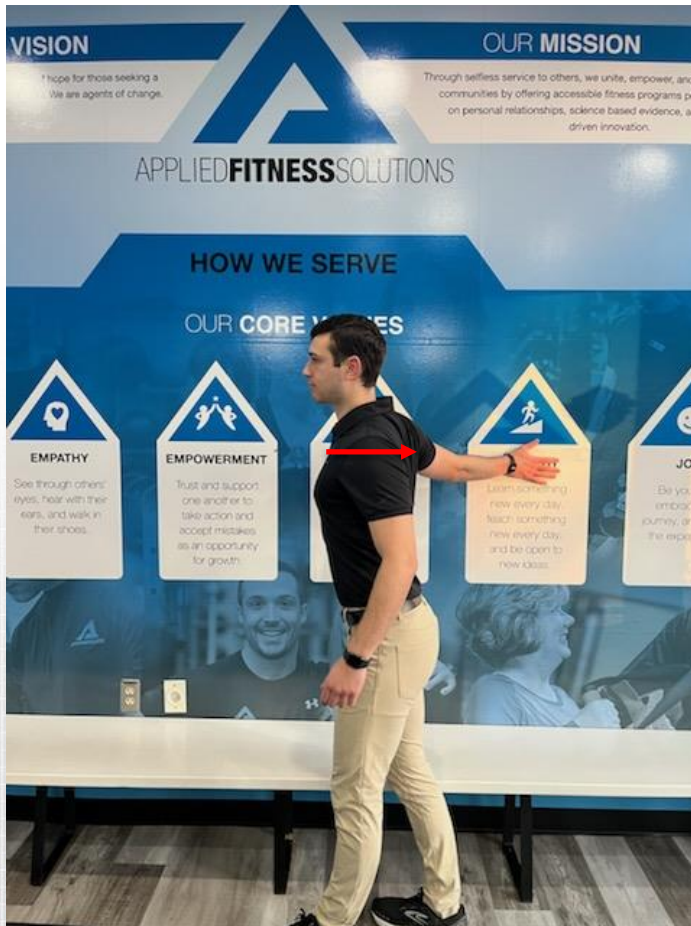
(Hold for 30sec/side)



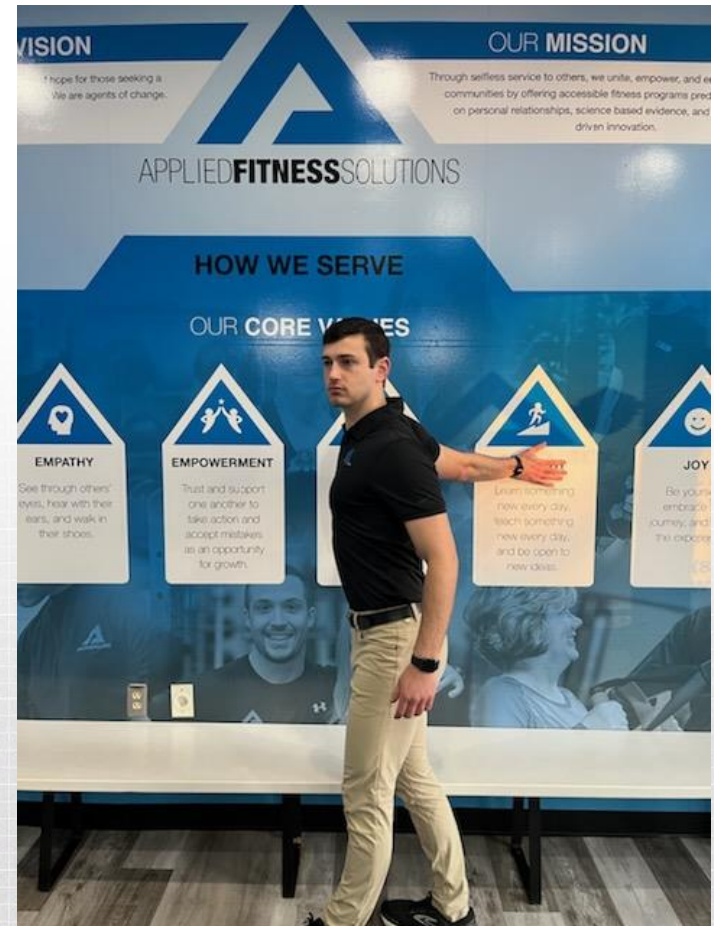
Pectoral Stretch

(Hold for 30sec/side)

Starting Position



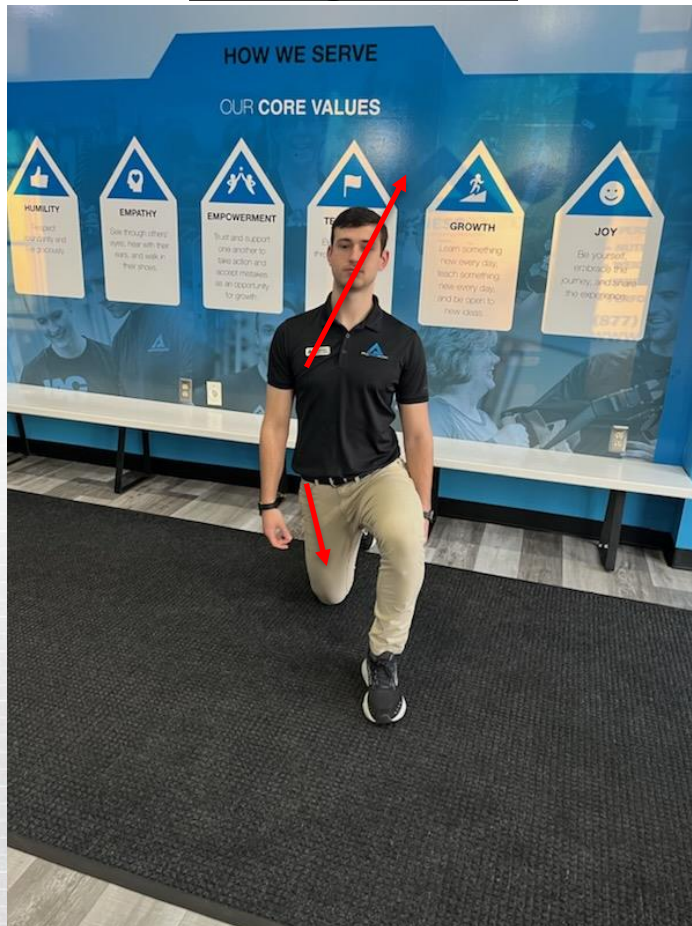
Ending Position



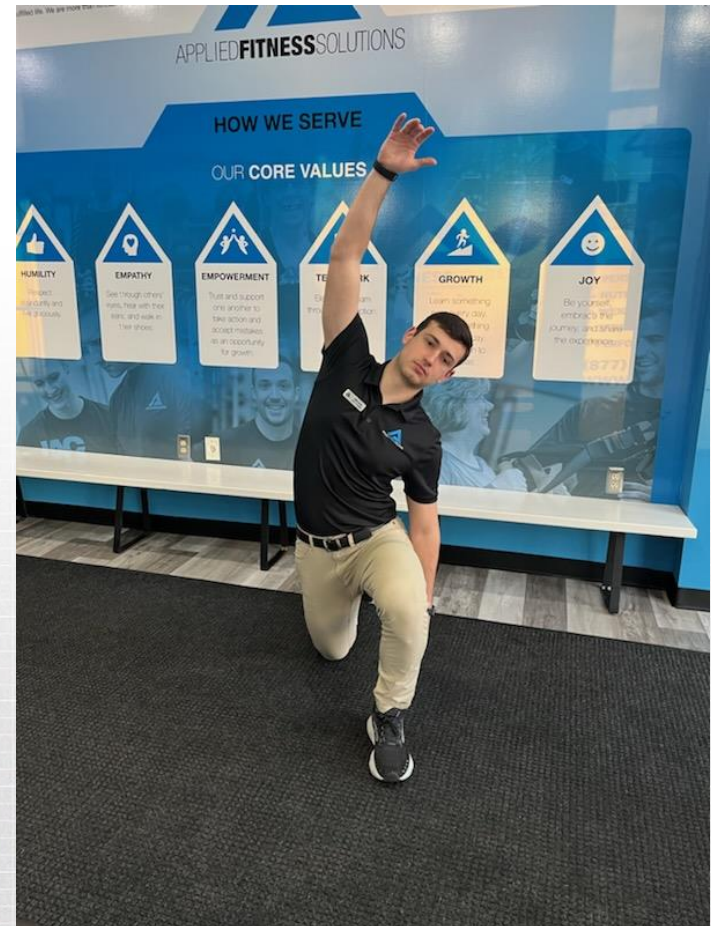
Hip Flexor Stretch

(Hold for 30sec/side)

Starting Position



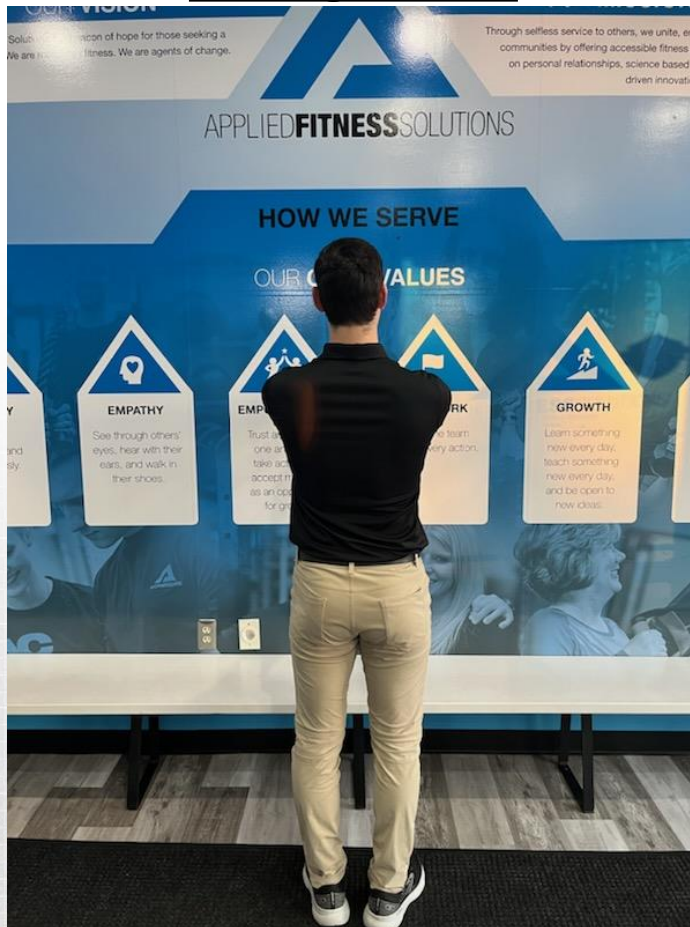
Ending Position



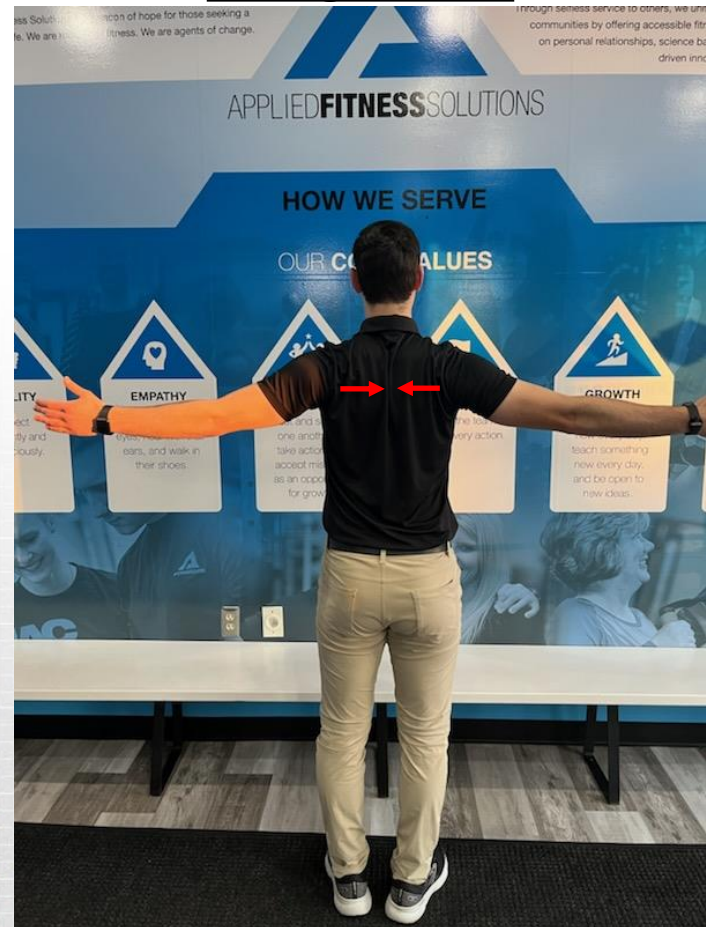
T's (Mid-Trap Strengthening)

Do 10-15 reps

Starting Position



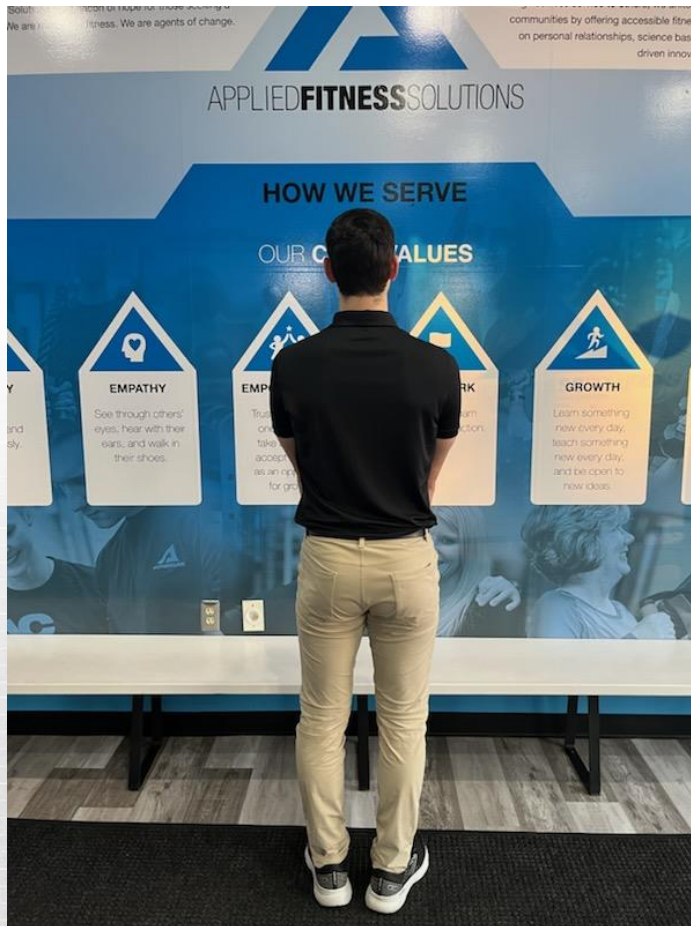
Ending Position



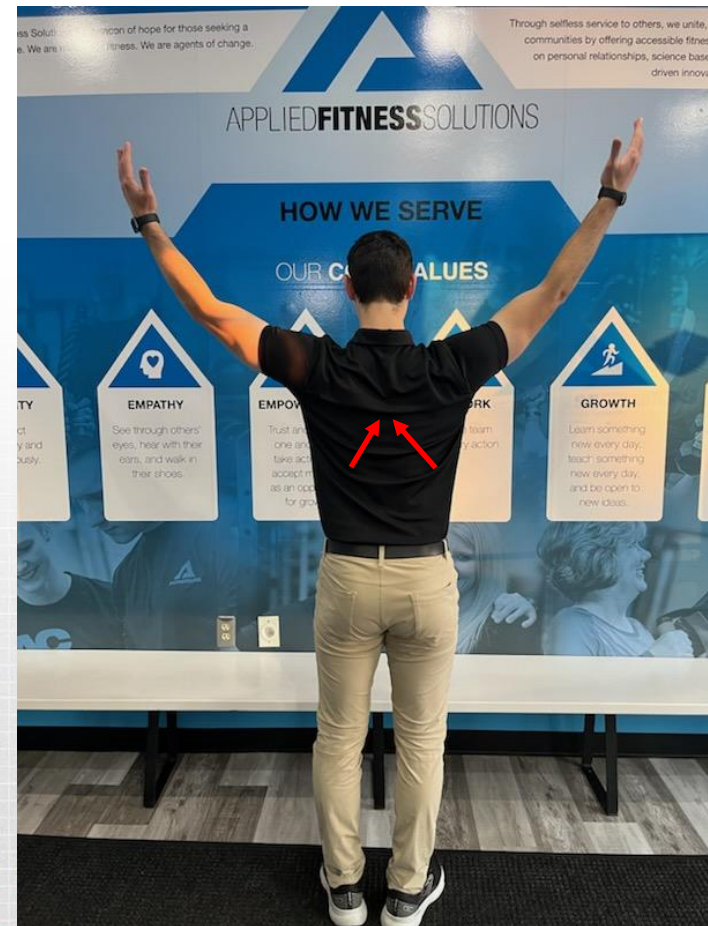
Y's (Lower-Trap Strengthening)

Do 10-15 reps

Starting Position



Ending Position



Pelvic Lifts (Glute Strengthening)

Do 10-15 reps

Starting Position



Ending Position



Planks (TA Strengthening)

Hold for 30-60 seconds



Modified (*easier*)

Regular (*harder*)



Take Home Message

- Incorporating as little as 5-10min of physical activity into your day can have a profound impact on health
 - Can accomplish this through activity breaks during workday
- Address postural aches/pains by:
 - Using activity breaks
 - Stretching chronically “tight” muscles
 - Strengthening chronically “weak” muscles
 - Improving seated posture



Thank You!!!

Mike's Contact Info



www.4afsfrit.com