

Quick Guide to Physical Activity and Ergonomics for Educational Athletes

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Exercise for Cardiovascular Endurance

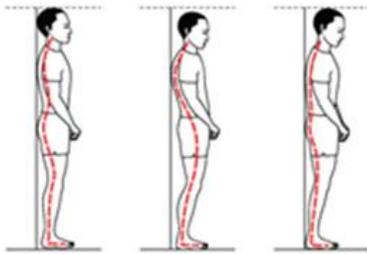
Calculate your Training Heart Rate (THR): 220 minus your age multiplied by 70%
Choose an activity (one you enjoy!) that will keep you at your THR for 30 minutes or longer, do this or similar activities five days per week, aiming for 150 minutes each week (ACSM, 2018).

$$220 - (\text{your age}) \times .70$$

Eating for Weight Loss

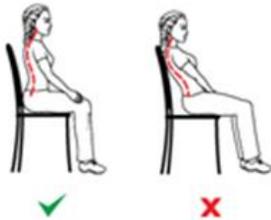
An average woman needs to eat about 2000 calories per day to maintain weight, and 1500 calories to lose one pound of weight per week. An average man needs 2500 calories to maintain, and 2000 to lose one pound of weight per week. Studies show that protein both increases your metabolic rate and helps curb your appetite, a diet higher in protein can increase your calories burned by 80-100 calories per day. Adding cardiovascular exercise burns even more calories.

Posture



Alignment in Standing

- Bring your sternum/breast bone toward the ceiling
- Level your head
- Gently bring shoulder blades toward each other



Alignment in Sitting

- Sit with equal weight through your "sit bones"
- Thighs are parallel to the floor, knees bent to 90 degrees, feet are flat on the floor (not tucked under or out in front) use footstool if needed
- Feet, knees, and hips aligned (ie, don't let your knees fall open)
- Maintain a small lumbar curve: should be between full arch and no arch
- Sit such that your ears are in line with your "sit bones"

Whole-body Exercise to Improve Posture, Flexibility, and Strength



"Cat"



"Cow"



"Bird dog"



"Plank"



"Upward facing dog"



"Downward facing dog"

Injury Prevention

Back straight

Avoid twisting

Close to body

Keep movements smooth

- Store frequently used or heavy items in an easily accessible area and at waist height.
- Avoid bending down at the waist to interact with children. Instead use a squatting or kneeling position.
- If possible when sitting on the floor, sit against a wall, or furniture to support your back.
- Minimize repetitive bending and stooping when cleaning up toys, etc.

Infant Lifting Technique / “Tripod Lift” (SISC, 2019)

1. Put one foot next to the infant. Keep your back straight, push your buttocks out and slowly lower yourself down onto one knee.
2. Position the infant close to your knee on the floor.
3. Slide the infant from your knee on the floor to mid-thigh, keep your head forward, your back straight, your buttocks out, and lift the infant onto the opposite thigh.
4. Put both of your forearms under the infant with your palms facing upward and hug the infant close to you.
5. Prepare for the lift by looking forward.
6. Lift upwards following your head and shoulders. Hold the infant close to your body. Lift by extending your legs while keeping your back straight and buttocks out. Remember to breathe as you lift.



Toddler Lifting Technique

1. Avoid bending from the waist to reach children or objects located at ground level.
2. Squat with feet shoulder width apart, keeping your back straight, and pushing your buttocks out to bring yourself as close to the child as possible, while holding the child securely.
3. Tighten stomach muscles and look forward and use your thigh muscles to raise yourself, while breathing out as you lift.
(SISC, 2019)

Lifting Objects



References

- American College of Sports Medicine (2018). ACSM’s Guidelines for Exercise Testing and Prescription (7th ed.). Wolters Kluwer.
- SISC/Self Insured Schools of California. Risk Management Services. (2019). Early childhood educator lifting techniques. Available <http://sisc.kern.org/rm/>
- Veldhorst, MA, Westerterp, KR, van Vught, AJ, & Westerterp-Plantenga, MS. (2010). Presence or absence of carbohydrates and the proportion of fat in a high-protein diet affect appetite suppression but not energy expenditure in normal-weight human subjects fed in energy balance. British Journal of Nutrition, 104(9), 1395-405.