# PHYSICAL ACTIVITY FOR AMERICANS

BRENDA TUBELO IOWA STATE UNIVERSITY



# PHYSICAL ACTIVITY EXERCESE

## **PHYSICAL ACTIVITY**

Any bodily movement produced by skeletal muscles that results in energy expenditure.

- Walking to work
- Gardening
- Cleaning the house
- Playing with your grandkids
- Taking the stairs

### EXERCISE

A subcategory of physical activity that is planned, structured, repetitive, and done for the purpose of improving or maintaining physical fitness.

- Jogging for 30 minutes
- Lifting weights
- Attending a yoga class
- Cycling for training

### VIGOROUS INTENSITY

### MODERATE INTENSITY

#### **RPE SCALE** RATE OF PRECEIVED EXERTION



#### MAX EFFORT ACTIVITY

Feels almost impossible to keep going. Completely out of breath, unable to talk. Cannot maintain for more than a very short time



#### VERY HARD ACTIVITY

Very difficult to maintain exercise intensity. Can barely breathe and speak only a few words



VIGOROUS ACTIVITY Borderline uncomfortable. Short of breath, can speak a sentence



#### MODERATE ACTIVITY

Breathing heavily, can hold a short conversation. Still somewhat comfortable, but becoming noticeably more challenging



#### LIGHT ACTIVITY

Feels like you can maintain for hours. Easy to breathe and carry a conversation

VERY LIGHT ACTIVITY Hardly any exertion, but more than sleeping, watching TV, etc

### DEFINING TERMS

Aerobic, Muscle-Strengthening and Bone-Strengthening

# AEROBIC

Definition: Activity in which the body's large muscles move in a rhythmic manner for a sustained period of time.

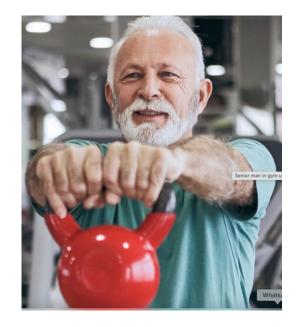
#### INTENSITY, FREQUENCY AND DURATION



#### MUSCLE -Strengthening

Definition: Physical activity, including exercise, that increases skeletal muscle strength, power, endurance, and mass.

#### INTENSITY, FREQUENCY, SETS AND REPETITIONS





## **BONE - STRENGTHENING**

Definition: Physical activity that produces an impact or tension force on the bones that promotes bone growth and strength.

#### CURRENT PHYSICAL ACTIVITY LEVELS IN THE U.S.

- Engage in at least 150 to 300 minutes per week of moderate-intensity aerobic activity.
- Perform muscle-strengthening activities of moderate or greater intensity on two or more days peer week, targeting all major muscle groups.

Older adults aged 65 and over, only about 1 in 7 met the federal physical activity guidelines

### BENEFITS OF PHYSICAL ACTIVITY FOR Adults and older adults

- Lower risk of all-cause mortality
- Lower risk of cardiovascular disease mortality
- Lower risk of cardiovascular disease (including heart disease and stroke)
- Lower risk of hypertension
- Lower risk of type 2 diabetes
- Lower risk of adverse blood lipid profile
- Lower risk of cancers of the bladder,\* breast, colon, endometrium,\* esophagus,\* kidney,\* lung,\* and stomach\*
- Improved cognition\*
- Reduced risk of dementia (including Alzheimer's disease)\*

- Improved quality of life
- Reduced anxiety
- Reduced risk of depression
- Improved sleep
- Slowed or reduced weight gain
- Weight loss, particularly when combined with reduced calorie intake
- Prevention of weight regain following initial weight loss
- Improved bone health
- Improved physical function
- Lower risk of falls (older adults)
- Lower risk of fall-related injuries (older adults)\*

#### Short Term Benefits

Improve quality of life

Reduce anxiety

Reduce blood pressure

Improve insulin sensitivity

Improve sleep outcomes

#### Long Term Benefits

For adults, prevent 8 types of cancer (previously 2)

For adults, reduce risk of dementia, including Alzheimer's disease

For older adults, lowers risk of injuries from falls

For all groups, reduces the risk of excessive weight gain

#### Disease Management

Decrease pain of osteoarthritis

Reduce disease progression for hypertension

Reduce disease progression for type 2 diabetes

Reduce symptoms of anxiety and depression

Improve cognition for those with dementia, multiple sclerosis, ADHD, and Parkinson's disease

#### **BRAIN HEALTH**

Outcome	Population	Benefit	Acute	Habitual
Cognition	Children ages 6 to 13 years	Improved cognition (performance on academic achievement tests, executive function, processing speed, memory)	•	•
	Adults	Reduced risk of dementia (including Alzheimer's disease)		•
	Adults older than age 50 years	Improve cognition (executive function, attention memory, crystallized intelligence,* processing speed)		•
Quality of life	Adults	Improved quality of life		•

#### **BRAIN HEALTH**

Outcome	Population	Benefit	Acute	Habitual
Depressed mood and depression	Children ages 6 to 17 years and adults	Reduced risk of depression Reduced depressed mood		•
Anxiety	Adults	Reduced short-term feeling of anxiety (state anxiety)	•	
	Adults	Reduced long-term feeling and signs of anxiety disorders		•
Sleep	Adults	Improved sleep outcomes (increased sleep efficiency, sleep quality, deep sleep; reduced daytime sleepiness frequency of use of medication to aid sleep		•
	Adults	Improved sleep outcomes that increase with duration of acute episode	•	

## MOVE MORE AND SIT LESS!!

For health professionals:

https://health.gov/PAGuidelines

For consumers: <a href="https://health.gov/MoveYourWay/">https://health.gov/MoveYourWay/</a>



Information adapted from the Physical Activity Guidelines for Americans, 2<sup>nd</sup> edition.