




TOPIC: EXERCISE

3 Types of Exercises

◆ Physical fitness & each of its components can be achieved via _____ types of exercise:

- **Aerobic Exercise:** continuous/rhythmic body movements that _____ heart rate & breathing.
- **Resistance Training:** body movements *working against a force* to build _____ strength/endurance/size.
- **Stretching:** body movements/positions that deliberately *lengthen* muscles or tendons to *improve* flexibility.

Aerobic Exercise	Resistance Training	Stretching
Cardiorespiratory Fitness & Body Composition	Musculoskeletal Fitness & Body Composition	Flexibility
		
Intensity measured as a _____ of max heart rate ($220 - \text{Age} = \text{Max HR}$).		

PRACTICE

Grace has been going to the gym to stretch and participate in weight training for 6 months but does not do any other exercises. Which component of physical fitness might she be lacking in, and why?

- Body composition, because it's impossible to improve body composition with weight training alone.
- Muscle strength, because 6 months is not long enough to significantly increase strength.
- Flexibility, because stretching once a day is not enough to improve flexibility.
- Cardiorespiratory endurance, because she's not doing any aerobic exercise (cardio).

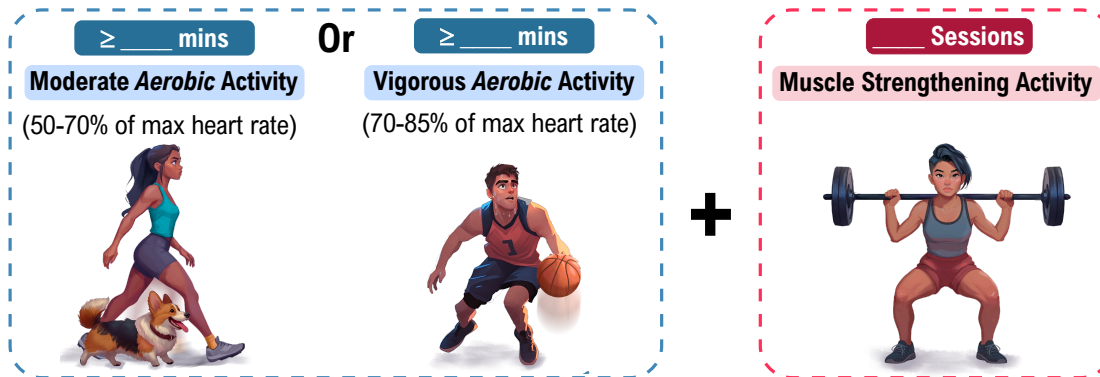
TOPIC: EXERCISE

Many Benefits of Exercise

◆ Regular exercise can:

Risk of Disease	Strengthen Muscles/Bones/Joints	Overall Health
E.g. obesity, heart disease, type 2 diabetes, some forms of cancer.	May reduce risk of certain injuries.	Mental health, bone density, sleep duration/quality, lung/immune health.

◆ How can you get these benefits? The Physical Activity Guidelines (PAG) for Americans recommend (per week):



Note: Doing some exercise is better than none, & more is often better than less.

EXAMPLE

Tommy wants to start a new exercise program, and he finds one online that involves going to the gym twice a week to lift weights and playing some form of ball sport such as tennis, soccer, or basketball for 3 hours per week.

Does this exercise program meet the recommended physical activity guidelines for Americans? If not, why?

- Yes, it meets the guidelines because it has a lot of aerobic exercise (ball sport) & two muscle-strengthening sessions per week.
- No, because it doesn't include any stretching.
- No, because it doesn't include strength training with resistance bands.
- No, because it doesn't include swimming, cycling, or jogging.

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PRACTICE

Austin goes for a 2-hour bike ride twice a week and does one strength workout per week using heavy weights.

Is he meeting the recommended exercise guidelines? If not, what should he add to his routine?

- a) Yes.
- b) No, he should aim to do at least two muscle-strengthening activities per week.
- c) No, he should aim to vary the type of cardiorespiratory exercise he does.
- d) No, he should aim to incorporate strength training with resistance bands & bodyweight exercises.

PRACTICE

Going for walks or running regularly can directly reduce the likelihood of all the following EXCEPT:

- a) Osteoporosis.
- b) Type 2 diabetes.
- c) Tooth decay.
- d) Heart disease.

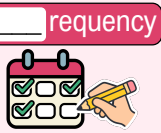



TOPIC: EXERCISE

Designing an Exercise Program

◆ To ensure that your fitness continues to improve without injury, you must progressively overload your body.

▸ **Progressive Overload:** _____ increasing frequency, intensity, & duration of workouts over time.

- **FITT Principle:** acronym for designing a physical fitness program.

 _____ frequency	How _____ you exercise (# of sessions per week).
 _____ intensity	Degree of _____ of an activity (low, moderate, vigorous).
 _____ time	The duration of each activity.
 _____ type	Well-rounded exercise programs include aerobic exercise, resistance training, & stretching.

Note: Include ~5-10 min _____-up
& _____-down exercises before &
after each exercise session.

PRACTICE

Olivia has been running 3 miles, three times a week at a similar pace for the last 2 months. Which of the following would you suggest to effectively implement the progressive overload principle to her workouts?

- Suggest she changes one of her runs to a swim, even though she doesn't enjoy swimming.
- Suggest she switches to 5 runs per week, each 6 miles long.
- Suggest she changes her focus to strength training and stop running for now.
- Suggest she increases one of her runs to 3.5 miles and change one of them to an interval run.

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PRACTICE

Rick has been strength training for 2 years and has greatly improved his body composition & muscular strength. However, he struggles to run for more than 2 minutes at a time. What is the best explanation for this?

- a) All the strength training has likely made him too heavy to be able to run for longer.
- b) The strength training has led to excessive strain on his cardiovascular system.
- c) He hasn't done enough cardiorespiratory training, which would improve lung capacity & endurance.
- d) He must have only trained upper body, leading to an imbalance where his legs aren't strong enough to run.

PRACTICE

Jared has begun an exercise program where he runs 4-6 miles four times per week. Which of the following could be a downside to this program?

- a) It does not allow for progressive overload.
- b) He may struggle with muscle imbalances or weakness if he doesn't do any supplemental resistance training.
- c) He will not burn enough Calories without the addition of strength training.
- d) He needs to include other forms of aerobic activity, such as swimming & cycling.