

## 5 Components of Physical Fitness

The 5 Components of Physical Fitness Some people think that being physically fit means being in good general health. Other people think it means being able to lift a certain amount of weight or being able to run a particular distance in a certain time. One common definition is that physical fitness is a set of attributes that people have or achieve relating to their ability to perform physical activity. Another common definition is that physical fitness is a state of well-being with a low risk of premature health problems and energy to participate in a variety of physical activities. Even though the definition of physical fitness can vary, there's near unanimous agreement on the 5 components of physical fitness. Let's take a closer look at these components individually.

**(1) Cardiovascular fitness** (or cardio-respiratory endurance or cardiovascular endurance) Of the 5 components, cardiovascular fitness is the cornerstone that creates the pathway to improving your other fitness levels. Cardiovascular fitness is the efficiency with which the body (the heart and lungs) delivers oxygen and nutrients to the required working muscles and transports waste products from the cells over a sustained period of time. Or to put it another way, it's the ability of your heart and lungs to work together to provide the necessary oxygen and fuel to your body without quickly reaching a high level of fatigue and tiredness. In our daily lives, we need cardiovascular fitness to handle the physical tasks and all of the "running around" we do. A common test of cardiovascular fitness usually involves some type of sustained running. But typical examples of physical activities that relate to cardiovascular fitness are jogging, swimming, cycling, plyometrics, brisk or speed walking and any type of aerobic exercises. Aerobic exercise is the best way to improve cardiovascular fitness.

**(2) Muscular strength** is the maximum amount of force (weight or heavy resistance) a muscle or muscle group can generate in a single effort to the point that no more repetitions can be done without rest. Muscular strength is quite the opposite of cardiovascular fitness in regards to the fact that cardiovascular fitness is measured over a certain period of time. While on the other hand, muscular strength is measured in one repetition. In our daily lives, we need modest levels of strength to be able to perform everyday physical tasks like lifting, moving, carrying, etc. A common test to measure upper body strength is some type of weightlifting exercise, such as the bench press. Anaerobic weight lifting exercises like the bench press, leg press, shoulder press, or bicep curls are examples of the best ways to improve muscular strength.

**(3) Muscular endurance** is the ability of a muscle or group of muscles to perform repeated movements (or to hold a particular position) with less than maximum force for an extended period of time or until muscular fatigue. Or, to put it simplistically, it's how long your muscles can do something before getting too exhausted to finish. Be careful not to confuse muscular endurance with muscular strength. While they can work together, they

are definitely not the same. For many athletes, there may be a need to distinguish between muscular strength and muscular endurance. But for everyday people who want to easily perform their daily routines, are trying to stay healthy and fit, and just want to enjoy physical activities like hiking, biking, or snowboarding, muscular endurance plays a major role in fitness. Common testing for muscular endurance can be dynamic (the ability to repeat contractions) or static (the ability to sustain a contraction). Dynamic tests would be to see how many sit-ups, for example, a person can complete in a designated amount of time (e.g. 30 seconds, a minute, or maybe longer). Or, without being timed, the person could do as many repetitions of the exercise as they could until they couldn't do anymore. An example of a static test would be the plank exercise. Muscular endurance can be improved by both aerobic and anaerobic exercises. Some examples would be cycling, step machines and elliptical machines.

**(4) Flexibility** is the ability to move the joints or any group of joints, muscles, ligaments, and tendons through their full, normal range of motion without discomfort or pain. Flexibility is actually more important to physical fitness than people realize. Not only does flexibility play a big role in performing many daily tasks, but maintaining or even increasing your flexibility is critical to protecting your joints and keeping them healthy. In addition, being flexible contributes to improving your lower back health, reducing the appearance and effects of arthritis, and reducing muscle-tendon injuries. Not everyone has the same flexibility or flexibility requirements. Your flexibility tells you how limber you are. And, when it comes to testing your flexibility fitness level, the sit-and-reach or shoulder flexibility test is most often used. Stretching is the best way to improve flexibility. And, most fitness experts recommend a daily routine of static and dynamic stretches for each joint.

**(5) Body composition** is the percentage of fat in your body compared to your lean body mass (muscles, bones, tendons, ligaments, organs, etc.). Body composition is a better indicator of your overall fitness condition than body weight. So understand that your total body weight or what you see on your bathroom scale does not tell you how much fat or lean body mass (muscle) you have. Body composition is useful in helping to determine health risks. Therefore, knowing your body composition and how it relates to your overall fitness level is essential. An optimal ratio of fat mass to lean mass is a clear indicator of good fitness. Your body composition is a consequence of the extent that you perform the other components of physical fitness. In other words, when you improve the other four components, it will have a positive impact on body composition resulting in less body fat. Alternatively, when you have a 10/16dd high body fat content ratio, you are considered overweight or possibly obese. And, it negatively affects the other fitness components as well as your daily performance, your appearance, and your overall health. There are several methods that can be used to calculate body composition. The best method is underwater weighing. But due to the expense, this isn't practical for the everyday person. Other methods of determining your body composition include skinfold readings - using skinfold calipers and taking measurements from certain areas of your body, or

electrostatic measurements which are now incorporated into many scales used in homes. A regular program involving aerobic exercise and strength training can help you decrease your body fat and increase your muscle mass; and thereby, significantly improving your body composition and general overall health and fitness. In conclusion, you now know that being fit is not just about being able to bench press a lot of weight, but you also need to know how well you can handle running a mile, for example, and a few other things. The key is that by understanding the 5 components of physical fitness, you'll be better able to assess your fitness level and determine what specific health and fitness goals you'd like to achieve.

List and Describe the 5 Components of Fitness

## One-Week Personal Fitness Plan

### Criterion B: Planning for Performance

**Task Description:** You are wanting to improve your overall fitness and to get started you will need to create your own personal fitness plan.

#### Your Job is the following:

- Learn about the 5 components of fitness
- Complete a fitness evaluation (establish baselines)
- Set Fitness Goals
- Design, explain and justify a one-week fitness personal plan
- After implementing plan, reflect on how effective the plan was

**Guidelines:** Answer all questions completely. Put quality thought and effort into each of the answers so you can establish reasonable goals.

#### Part 1: Fitness Component Evaluation:

- a. **Body Composition:** Review the BMI chart below to complete the following and establish the your Healthy Fitness Zone (HFZ).

Age:\_\_\_\_\_ Weight:\_\_\_\_\_ Height:\_\_\_\_\_ BMI:\_\_\_\_\_

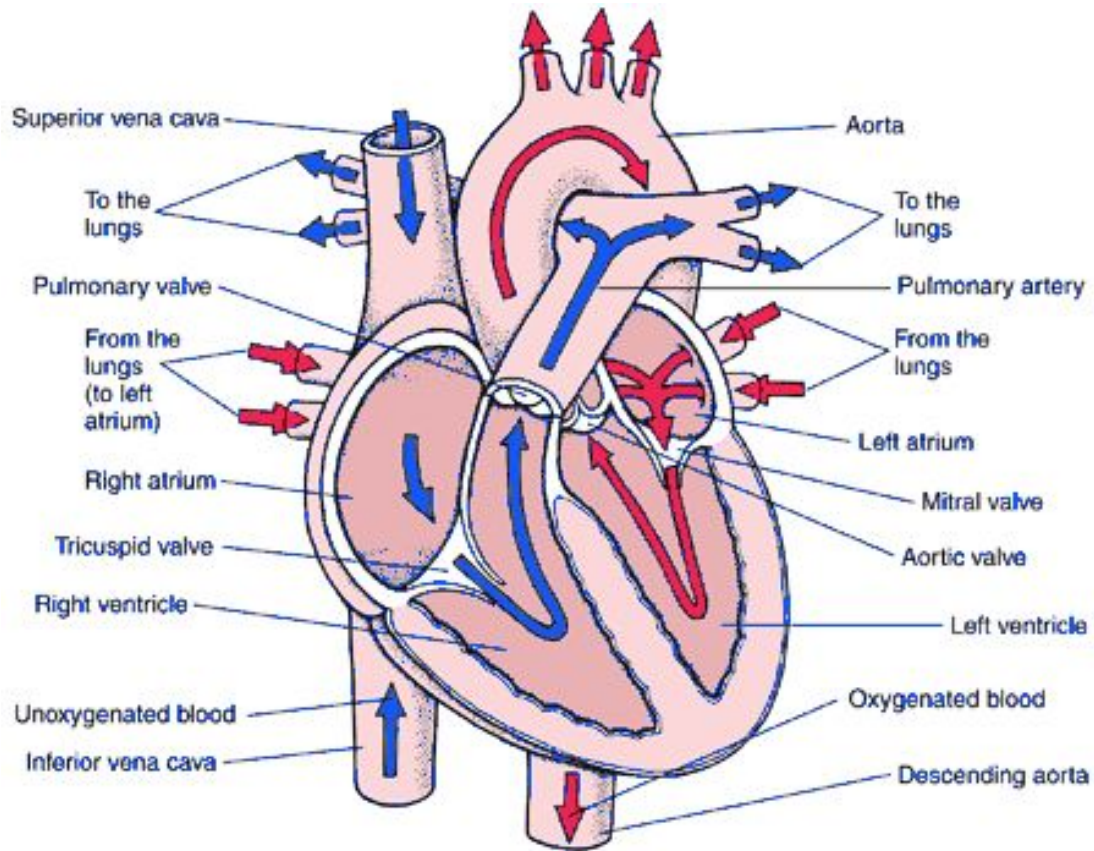
HFZ Are you within the zone? Yes / No (circle one)

BMI TABLE		WEIGHT (lb)																					
		120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330
4'5"	30	33	35	38	40	43	45	48	50	53	55	58	60	63	65	68	70	73	75	78	80	83	
4'6"	29	31	34	36	39	41	43	46	48	51	53	56	58	60	63	65	68	70	72	75	77	80	
4'7"	28	30	33	35	37	40	42	44	47	49	51	54	56	58	61	63	65	68	70	72	75	77	
4'8"	27	29	31	34	36	38	40	43	45	47	49	52	54	56	58	61	63	65	67	70	72	74	
4'9"	26	28	30	33	35	37	39	41	43	46	48	50	52	54	56	59	61	63	65	67	69	72	
4'10"	25	27	29	31	34	36	38	40	42	44	46	48	50	52	54	57	59	61	63	65	67	69	
4'11"	24	26	28	30	32	34	36	38	40	43	45	47	49	51	53	55	57	59	61	63	65	67	
5'0"	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	
5'1"	23	25	27	28	30	32	34	36	38	40	42	44	45	47	49	51	53	55	57	59	61	62	
5'2"	22	24	26	27	29	31	33	35	37	38	40	42	44	46	48	49	51	53	55	57	59	60	
5'3"	21	23	25	27	28	30	32	34	36	37	39	41	43	44	46	48	50	51	53	55	57	59	
5'4"	21	22	24	26	28	29	31	33	34	36	38	40	41	43	45	46	48	50	52	53	55	57	
5'5"	20	22	23	25	27	28	30	32	33	35	37	38	40	42	43	45	47	48	50	52	53	55	
5'6"	19	21	23	24	26	27	29	31	32	34	36	37	39	40	42	44	45	47	49	50	52	53	
5'7"	19	20	22	24	25	27	28	30	31	33	35	36	38	39	41	42	44	46	47	49	50	52	
5'8"	18	20	21	23	24	26	27	29	30	32	34	35	37	38	40	41	43	44	46	47	49	50	
5'9"	18	19	21	22	24	25	27	28	30	31	33	34	36	37	38	40	41	43	44	46	47	49	
5'10"	17	19	20	22	23	24	26	27	29	30	32	33	35	36	37	39	40	42	43	45	46	47	
5'11"	17	18	20	21	22	24	25	27	28	29	31	32	34	35	36	38	39	41	42	43	45	46	
6'0"	16	18	19	20	22	23	24	26	27	29	30	31	33	34	35	37	38	39	41	42	43	45	
6'1"	16	17	19	20	21	22	24	25	26	28	29	30	32	33	34	36	37	38	40	41	42	44	
6'2"	15	17	18	19	21	22	23	24	26	27	28	30	31	32	33	35	36	37	39	40	41	42	
6'3"	15	16	18	19	20	21	23	24	25	26	28	29	30	31	33	34	35	36	38	39	40	41	
6'4"	15	16	17	18	20	21	22	23	24	26	27	28	29	30	32	33	34	35	37	38	39	40	
6'5"	14	15	17	18	19	20	21	23	24	25	26	27	29	30	31	32	33	34	36	37	38	39	
6'6"	14	15	16	17	19	20	21	22	23	24	25	27	28	29	30	31	32	34	35	36	37	38	
6'7"	14	15	16	17	18	19	20	21	23	24	25	26	27	28	29	30	32	33	34	35	36	37	
6'8"	13	14	15	17	18	19	20	21	22	23	24	25	26	28	29	30	31	32	33	34	35	36	
6'9"	13	14	15	16	17	18	19	20	21	23	24	25	26	27	28	29	30	31	32	33	34	35	
6'10"	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	34	35	

Less risk More risk

## B. Cardiovascular Fitness

### Diagram of the Heart



## Target Heart Rate Sheet

Start with 220	220
Subtract your age	
Equals maximum times heart should beat per minute	
Subtract resting heart rate (count for 6 seconds and add a zero)	
Multiply by: 60% Inactive 70% Active 80% Very Active	
Add Resting heart rate to this answer	
Equal target heart rate (THR)	Beats per minute

**Baseline Mile Time**

\_\_\_\_\_

**Active Heart Rate:**

**(Count for 6 secs & add a zero)**

\_\_\_\_\_

**Baseline Pacer**

\_\_\_\_\_

**C. Flexibility:**

Are you able to pass the "Shoulder Stretcher" on both sides Yes/No  
 Right \_\_\_\_\_ Left \_\_\_\_\_

**Trunk Lift:**

Are you able to score between 8 to 12 inches? Yes/No  
 Trunk Lift \_\_\_\_\_

**D. Muscular Strength:**

How many push-ups can you do? \_\_\_\_\_  
 Are you in the HFZ? Yes/No

**E. Muscular Endurance:**

How many curl ups can you do? \_\_\_\_\_  
 Are you in the HFZ? Yes/No

**F. Aerobic Capacity:**

How many Pacers can your do? \_\_\_\_\_  
 What is you mile time? \_\_\_\_\_  
 Are you in the HFZ? Yes/No

**Part 2: Fitness Evaluation:**

1. To be fit ideally is to score within the healthy fitness zone in all five categories. In looking at your results, outline the findings?

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2. Which fitness component do need to improve on? Explain why?

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3. Which fitness component are you the strongest? Explain why?

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4. What type of exercise or activities do you do outside of school. If you don't exercise which exercise or activity would you most like to do and why?

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### Part 3: Fitness Goal Setting

1. What are your fitness goals? Mark all that apply

Appearance		Muscular Definition		Reduce Body Fat	
Abdominal Strength		Muscle Size		Reduce Stress	
Aerobic Endurance		Muscle Strength		Sports Performance	
Improve Flexibility		Medical Reasons		Speed	
Improve Posture		Lose Weight		Self Esteem	
General Health		Play a sport		Tone and Shape	

2. Which of the following is an obstacle when designing your fitness plan?

( Check all that apply )

- You get bored easily when you exercise
- You can't find the time to exercise after school
- You have family obligations ( taking care of brothers or sisters)
- You are intimidated or embarrassed when you exercise
- You get frustrated when you don't see results immediately
- You do not like to exercise alone.
- You are not motivated



#### Part 4: Fitness plan

A very important aspect of designing a personalized fitness plan is to set fitness goals. The goals that you establish should take into account your current fitness levels as well as the fitness level you would like to achieve.

Well-Written goals will drive the activity selection and FITT (frequency, intensity, time, and type) design.

Use the “**SMART**” criteria to set your fitness goals:

**Specific:** What do you want to achieve? How will you achieve it?

**Measurable:** Establish how to measure your success, actual an amount or specific event.

**Achievable:** Your goals should be realistic.

**Relevant:** Your goals should be important and the outcome should impact your life in a positive manner.

**Timely:** Your goals should have a time element established. This helps you to stay on track.

**Goal: Identify** a fitness goal that you would like to achieve within a week for each of the health related components below:

- Aerobic capacity: \_\_\_\_\_

\_\_\_\_\_  
(Examples: jogging, cycling, swimming, dancing, stationary bike)

- Muscular strength: \_\_\_\_\_

\_\_\_\_\_  
(Examples: curl ups, push ups, pull ups, bench press, tricep press)

- Muscular endurance: \_\_\_\_\_

- Flexibility: \_\_\_\_\_

\_\_\_\_\_  
(Examples: yoga, hamstring stretches, quadriceps stretches, able to reach toes)

- Body composition: \_\_\_\_\_

\_\_\_\_\_  
(Examples: eat more fruits and vegetables, eat a healthy breakfast, drink less soda, drink more water, no fried food, reduce eating bread)

- Other: \_\_\_\_\_

\_\_\_\_\_  
(Examples: warm-up, walking, jogging, jump rope, jumping jacks, or cool-down)

**Your fitness plan needs to include the following:**

- Each day must include an activity/exercise for each of the health components:
  - Muscular Endurance (ME), Muscular Strength (MS), Flexibility (F), and Aerobic Capacity (AC)
- The activities planned should be those you are willing and able to perform.
- The activities planned should have an amount or time that you can reach.
- Each day include a warmup and cooldown that is clearly stated.
- Each day must total a minimum of 30 minutes of activity/exercises.

Read the information below to help you complete the FITT Table.

**Definition of FITT Principle**

**F=Frequency:** Describes how often the activity takes place in a week.

**I = Intensity:** Describes how vigorous you engaged in the activity.

**T= Type:** Describes the specific activity selected

**T= Time:** Describes how long you are engaged in activity.

When constructing the plan consider the overload and progression system

**Definition of Overload**

Overload is the amount of resistance or distance run to provide a greater stress on the body than it is normally used to in order to increase fitness.

**Definition of Progression**

Progression is the way a person should increase the workout ( weight lifted or distance run). It is gradual increase either in frequency, intensity, or time or combination of all three components.

**(Example of a one-day fitness plan)**

<b>Component</b>	<b>Frequency</b>	<b>Intensity</b>	<b>Type</b>	<b>Time or amount</b>
Warm-up	Once	Moderate	Jogging	5 minutes
Muscular Strength	Once	Moderate	Push ups	3 x 10
Muscular endurance	Once	Moderate	Sit-ups	50
Aerobic Capacity	Once	Intense	Step aerobics	20 minutes
Flexibility	Once	Moderate	Stretching	10 minutes
Cool Down	Once	Easy	Walking	8 minutes

**Design Personal One-Week plan below: Only using bodyweight exercises.**





## Criterion D: Reflecting and Improving performance

### Task Description

1. You will need **analyze** and **demonstrate** how effective your fitness plan worked.
2. In your reflection **Identify** your goals, and **apply** strategies that helped you enhance your performance while creating your goals.
3. You will need to **describe** and **summarize**, in your reflection, your own performance.

### PART 5: Description of the effectiveness of the plan based on the outcome of the results.

1. Describe based on your opinion how effective or how well the one-week plan worked?

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2. What strategies or resources did you use to construct the one-week plan?

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3. How would you improve the one week plan that you created?

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4. Describe how did you use the overload and progression in the one-week plan. Example: On day 3 we moved from 40 to 50 sit ups and I felt that I needed to push myself a bit more than normal.

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**Criterion B: Planning for Performance**

<b>Achievement Level</b>	<b>Level Descriptor</b>	<b>Task-Specific Clarification</b>
0	The student does not reach a standard described by any of the descriptors below.	
1-2	The student: <b>i. constructs</b> and <b>outlines</b> a plan to improve physical performance or health, <b>ii. outlines</b> the effectiveness of a plan based on the outcome.	The student: <b>i. provides brief answers</b> of few parts of the plan in the evaluation, goal setting, and one-week plan <b>ii. brief answers</b> after implementing the fitness plan on how effective the plan was, strategies used, and how to improve the plan
3-4	The student: <b>i. constructs</b> and <b>describes</b> a plan to improve physical performance or health, <b>ii. explains</b> the effectiveness of a plan based on the outcome.	The student: <b>i. displays basic information</b> of some of the parts of the fitness plan such as interview, evaluation, goal setting, and one-week plan <b>ii. provides a basic answer</b> after implementing the fitness plan on how effective the plan was, strategies used, some improvements for the plan <b>based on outcome</b>
5-6	The student: <b>i. designs</b> and <b>explains</b> a plan to improve physical performance or health, <b>ii. analyzes</b> the effectiveness of a plan <b>based on the outcome</b> .	<b>i. gives a brief account</b> of most of the parts of the fitness plan such as interview, evaluation, goal setting, and one-week plan <b>ii. provides a brief answer</b> after implementing the fitness plan on how effective the plan was, strategies used, some improvements for the plan <b>based on outcome</b>
7-8	The student: <b>i. designs, explains</b> and <b>justifies</b> a plan to improve physical performance or health, <b>ii. analyzes</b> and <b>evaluates</b> the effectiveness of a plan based on the outcome.	<b>i. displays complete information</b> and <b>outlines</b> all of the parts of the fitness plan such as interview, evaluation, goal setting, and one-week plan <b>ii. gives a detailed account</b> after implementing the fitness plan on how effective the plan was, strategies used, some improvements for the plan <b>based on outcome</b>

**Criterion D: Reflecting & Improving Performance**

<b>Achievement Level</b>	<b>Level Descriptor</b>	<b>Task-Specific Clarification</b>
0	The student does not reach a standard described by any of the descriptors below.	
1-2	The student: ii. <b>identifies goals</b> to enhance performance, iii. <b>outlines</b> and <b>summarizes</b> performance.	The student: ii. <b>Identified minimal</b> goals iii. provided a <b>minimal outline</b> and <b>summary</b> of performance
3-4	The student: ii. <b>outlines goals</b> and <b>applies strategies</b> to enhance performance, iii. <b>describes</b> and <b>summarizes</b> performance.	The student: ii. Provided <b>brief outline</b> of goals and strategies iii. <b>Briefly describes</b> and <b>summarizes</b> performance
5-6	The student: ii. <b>explains</b> goals and <b>applies</b> strategies to enhance performance, iii. <b>explains</b> and <b>evaluates</b> performance.	The student: ii. Provides a <b>moderate</b> outline of goals and strategies iii. <b>Moderately explains</b> and <b>evaluates</b> performance
7-8	The student: ii. <b>develops</b> goals and <b>applies</b> strategies to enhance performance, iii. <b>analyses</b> and <b>evaluates</b> performance.	The student: ii. Provides a <b>complete information</b> on the development of goals and strategies iii. Gives a <b>complete</b> and <b>detailed analyzes</b> and <b>evaluation</b> of performance