

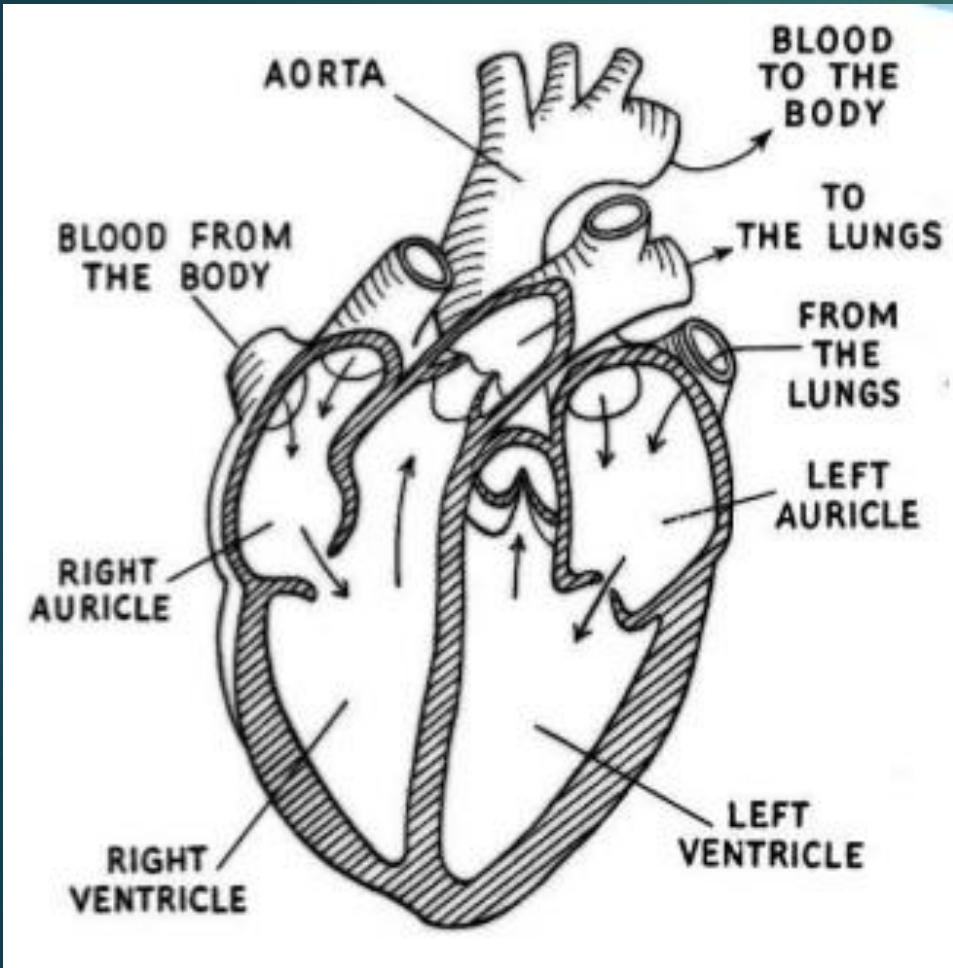
# Heart Rate

WHAT DOES YOUR HEART DO?

WHAT IS A HEART RATE?



# Introducing the Heart



- ▶ The **most important** muscle in your body.
- ▶ It is the pump that delivers oxygen rich blood throughout your body.
- ▶ The atria and ventricles work together, alternately contracting and relaxing to pump blood through your heart. The electrical system of your heart is the power source that makes this possible.
- ▶ Your heartbeat is triggered by electrical impulses that travel down a special pathway through your heart.
- ▶ The heart is made up of **cardiac muscles** and can become stronger with use and good health practices.
- ▶ To improve and maintain the strength of your heart, it is important to participate in regular **aerobic exercise**.

# What is Heart Rate?

- ▶ The number of times your heart beats per minute (BPM)
- ▶ Also known as **PULSE**.
- ▶ Normal HR varies from person to person, knowing yours can be an important health gauge.

**Resting Heart Rate (RHR):** Heart pumping the lowest amount of blood because body is at rest.

- Normal RHR ranges from 60 – 100 BPM



# What is Maximum Heart Rate?

- ▶ **Maximum Heart Rate (MHR):** Age related number of BPM of the heart when working at maximum.

$$\text{MHR} = 220 - \text{Age}$$



- ▶ Knowing this number along with RHR allows you to find the correct intensity for your body when being physically active.
- ▶ Low intensity, closer to RHR
- ▶ High intensity, closer to MHR
- ▶ **Given this information, where do you think HR should range during physical activity?**

# What is Target Heart Rate Zone?

- ▶ **Target Heart Rate Zone (THRZ):** Range that defines the upper and lower limits of training intensities.

$$\text{THRZ lower} = \text{MHR} \times 0.65$$

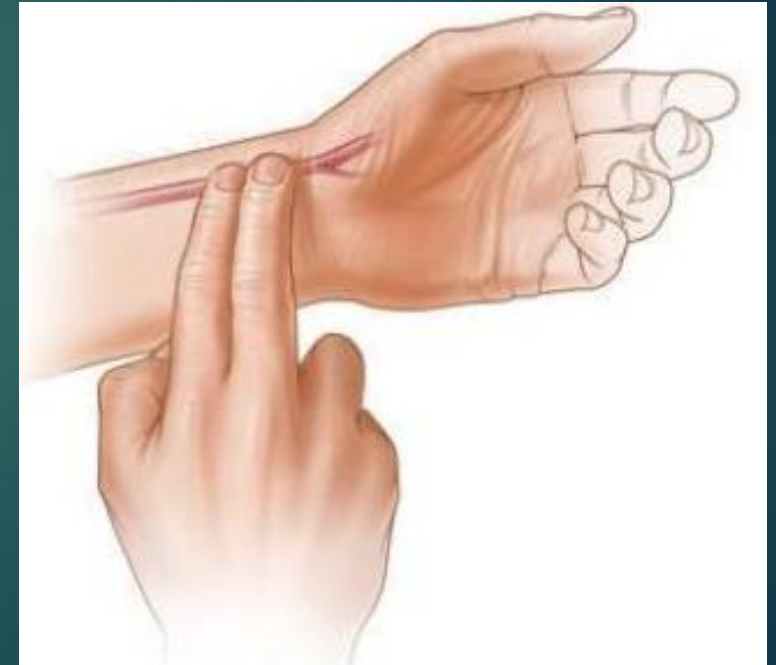
$$\text{THRZ higher} = \text{MHR} \times 0.85$$

- ▶ This is how you know if you are doing too much or not enough.
- ▶ This zone is also a good indicator of your physical health.
- ▶ **Remember to listen to your own body! Every BODY works and responds differently.**



# How to Check Your Pulse




- ▶ Find your pulse in either your neck or wrist.
- ▶ Count how many times you feel it beat for 30 seconds.
- ▶ Once you have that number, double it.
- ▶ **Example:** I counted 35 beats in 30 seconds. When I double that number, my heart rate is 70 BPM.



# THRZ & Example Activities

	TARGET ZONE HEART RATE	EXAMPLE DURATION	
Maximize Performance	VERY HARD 90-100%	LESS THAN 5 MIN	171-190 BPM BENEFITS: develops maximum performance and speed FEELS LIKE: very exhausting for breathing and muscles RECOMMENDED FOR: fit persons and for athletic training
	HARD 80-90%	2-10 MIN	152-171 BPM BENEFITS: increases maximum performance capacity FEELS LIKE: muscular fatigue and heavy breathing RECOMMENDED FOR: everybody for shorter exercises
Improve Fitness	MODERATE 70-80%	10-40 MIN	133-152 BPM BENEFITS: improves aerobic fitness FEELS LIKE: light muscular strain, easy breathing, moderate sweating RECOMMENDED FOR: everybody for moderately long exercises
Lose Weight	LIGHT 60-70%	40-80 MIN	114-133 BPM BENEFITS: improves basic endurance and fat burning FEELS LIKE: comfortable, easy breathing, low muscle load, light sweating RECOMMENDED FOR: everybody for longer and frequently repeated shorter exercises
	VERY LIGHT 50-60%	20-40 MIN	104-114 BPM BENEFITS: improves overall health and helps recovery FEELS LIKE: very easy for breathing and muscles RECOMMENDED FOR: weight management and active recovery

# HEART RATE ZONES FOR CHILDREN AND ADOLESCENTS

HEART RATE ZONE	FEELS LIKE	EXAMPLE ACTIVITIES	BENEFITS
<b>PERFORMANCE</b> <b>100-90%</b>	<b>VIGOROUS TO VIGOROUS+</b> » VERY EXHAUSTING » FAST BREATHING » MUSCLES MAY FEEL TIRED	» SHORT SPRINTS » SOCCER » BASKETBALL	DEVELOPS MAXIMUM PERFORMANCE AND SPEED 
<b>HEALTHY HEART</b> <b>90-70%</b>	<b>MODERATE TO VIGOROUS</b> » EASY TO HEAVY BREATHING » LIGHT MUSCULAR STRAIN » AVERAGE SWEATING 	» GAMES » JOGGING » CYCLING » DANCING <div><b>EXERCISE INCREASES BRAIN POWER AND MUSCULAR STRENGTH!</b></div>	IMPROVES AEROBIC FITNESS AND PERFORMANCE CAPACITY
<b>ACTIVE</b> <b>70-60%</b>	<b>EASY TO MODERATE</b> » EASY, COMFORTABLE BREATHING » LOW MUSCLE LOAD » LIGHT SWEATING	» WARM-UP AND COOL-DOWN » BRISK WALKING » PLAYING CATCH » VOLLEYBALL 	IMPROVES BASIC ENDURANCE AND MUSCLE TONE