NAVY Fitness

Intro to Cardiovascular Training

Total Fitness Series

What we are going to cover

- Basic Definitions
- Benefits of Cardiovascular Training
- Exercise Prescription
- Cardiovascular and Fat Burning
- Introduction on Machines

Basic Definitions

- **Cardiovascular Training** – The ability of the lungs and heart to take in and transport adequate amounts of oxygen to the working muscles, allowing activities that involve large muscle (ex. Running, Swimming, Biking) to be performed over long periods of time.

- **Cardiovascular Exercise Session** - Continuous exercise that uses large muscle groups rhythmically for a minimum of 20-30 minutes while maintaining 60-85% of your maximum heart rate.

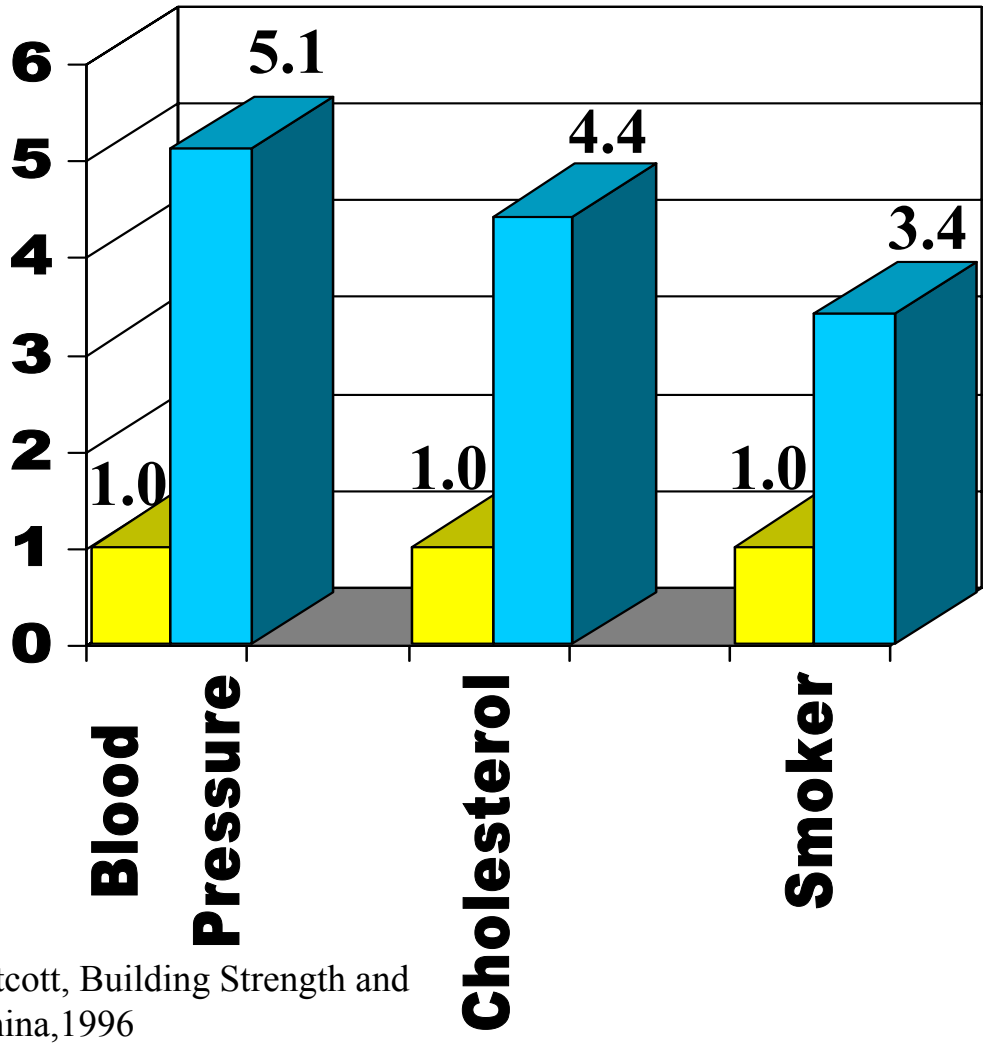
Benefits…
Why train your Cardiovascular System?

Decrease Cardiovascular Risk Factors

- Decreased risk of developing cardiovascular disease or having a heart attack

Note: By regularly overloading the heart it will become stronger. This results in pumping more blood and delivering more oxygen to the body per heartbeat, and a lower resting heart rate. This promotes a higher level of fitness.

Relative Risk of Heart Attack



Westcott, Building Strength and Stamina,1996

Note: Those individuals who have a higher fitness level through cardiovascular training and strength training are at a lower risk for heart attack and cardiovascular disease.

Benefits…

Decreased risk of developing obesity

- Burning calories through aerobic activity will aid in a lower body fat level. This is done by using extra calories instead of storing them as fat.

Benefits…

Helps Alleviate Stress

- Aerobic exercise helps release stress.

Other Cardiovascular Training Benefits…

- Increased HDL Cholesterol levels
- Decreased resting blood pressure
- Decreased insulin levels
- Decreased triglyceride levels
- Decreased percent body fat
- Decreased risk of developing Type 2 diabetes
- Decreased risk of developing hypertension
- Decreased risk of some cancers
- Increase bone density

Cardiovascular Program Guidelines

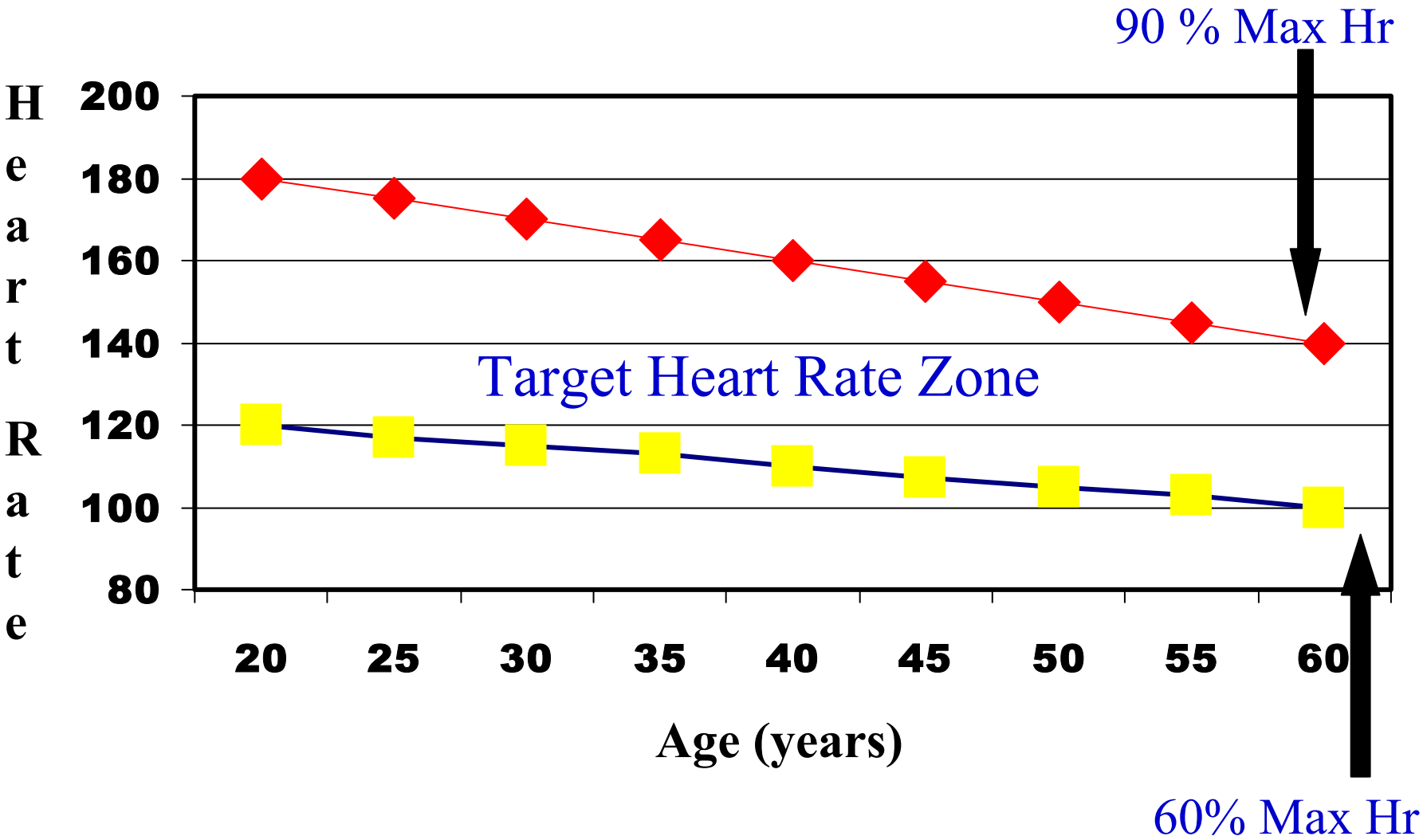
Individual Fitness Level	*Low Fitness Level*	*Average Fitness Level*	*High Fitness Level*
Frequency (Days/Week)	3-5	3-5	4-6
Intensity (%HR Reserve)*	60-70	60-80	70-85
Time (Duration) (Minutes at THR)	10-30	20-45	30-60
Type	Walk, Swim, Cycle, Run, Cross-Country Skiing, Rollerblading, Stair Climbing.		

Note: Use primarily the leg muscles. Back, chest, and shoulders are also used during cardiovascular exercise. These muscles require more oxygen to perform exercise than smaller muscle groups

Determining your maximum and minimum heart rate for Cardiovascular Training

- 220 – Age = Maximal Heart Rate
- Maximal Heart Rate – Resting Heart Rate = Heart Rate Reserve
- (Heart Rate Reserve X 60%) + Resting Heart Rate = Target Heart Rate Minimum
- (Heart Rate Reserve X 85%) + Resting Heart Rate = Target Heart Rate Maximum

Target Heart Rate Zones



Intensity VS Time

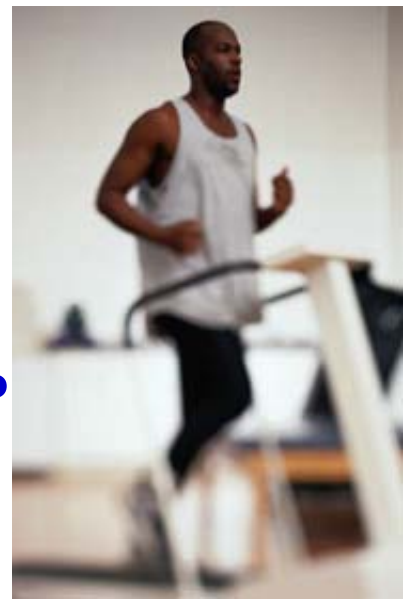
- INTENSITY + TIME = BENEFIT

Note: If you already know the time of your workout (e.g. 30 minutes) then the benefit received will be directly linked to the intensity. If you maintain 60% of your MHR for 30 minutes instead of 80%, you will receive less benefit from the workout.

High Intensity VS Low Intensity don't be fooled

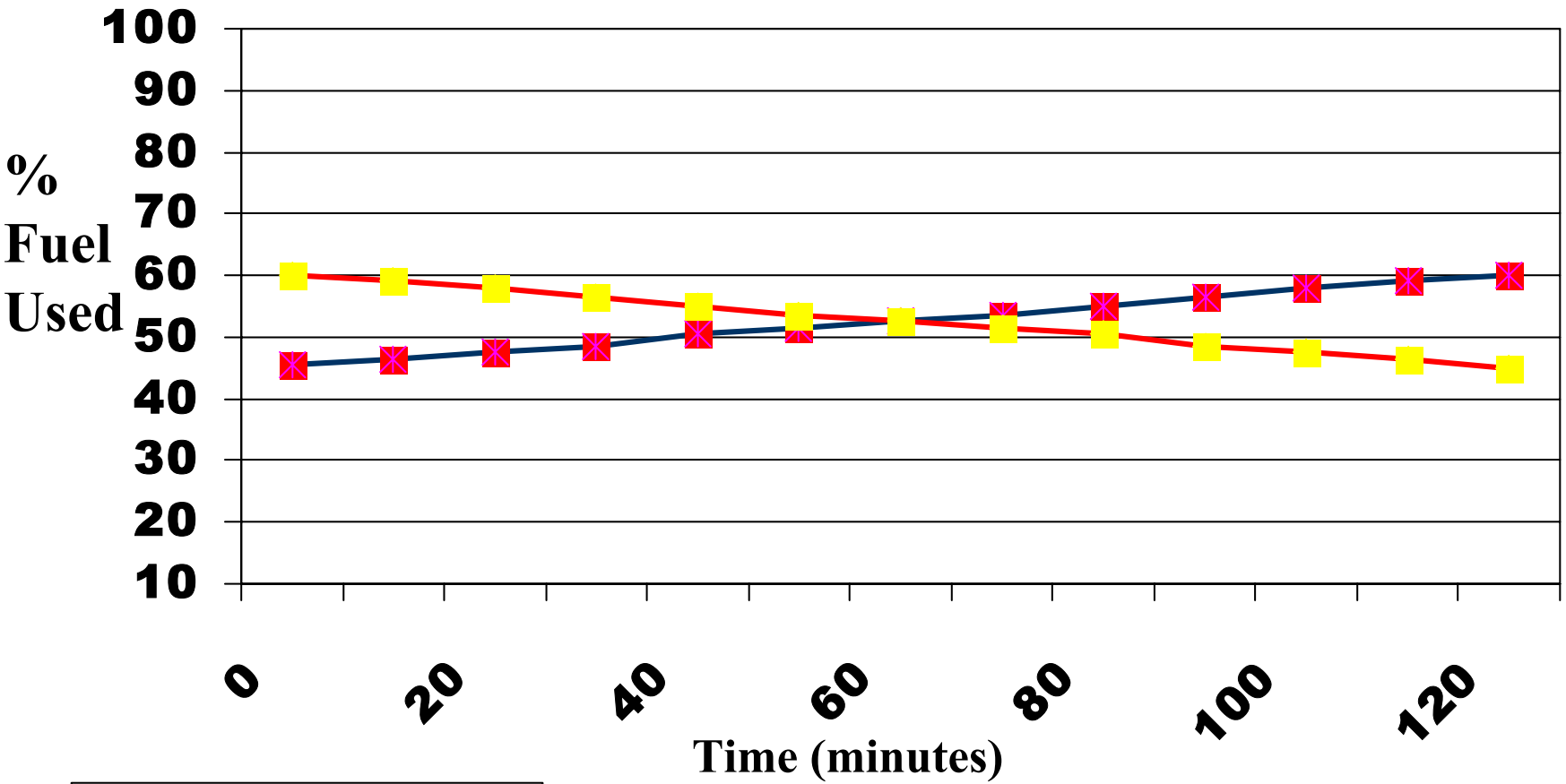
Exercising at lower intensities will result in a higher % of fat burned in comparison to sugar. However, the same or greater amount of fat can be burned in a shorter time by exercising at a higher intensity.

- **Performing high intensity cardiovascular training at 75-85% of maximal heart rate will burn sugar quicker in the body and tap into fat stores earlier than doing lower intensity 50-75% of maximal heart rate.**



Note: It will take longer to burn the fat at a lower intensity compared to a high intensity workout.

Fat and Carbohydrate use during aerobic exercise



Note: As duration increases, fat becomes the preferred energy source simply because carbohydrate is less available

What about sports? Are they considered cardiovascular activities?

Basketball, tennis, racquetball, soccer, and softball are all excellent activities that help promote your health

- Cardiovascular benefit received depends on the intensity and duration of play.
- Most participants play sports at a low intensity level and play is continuously stopping which reduces the fitness benefits they receive.

Lifestyle Change Options

No Changes In Lifestyle =

No Benefits

Cardio Training + No Changes in Lifestyle =

Some Benefit

Cardio Training + Nutritional Changes =

Moderate Benefits

Cardio Training + Strength Training + Nutritional Changes =

HIGH BENEFITS

Have a great workout!!

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