NAVY Fitness

Intro to Cardiovascular Training

Total Fitness Series

Cardiovascular Training

What are we going to cover ?

- Basic Definitions
- Benefits of Cardiovascular Training
- Exercise Prescription
- Cardiovascular and Fat Burning
- Introduction to 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.

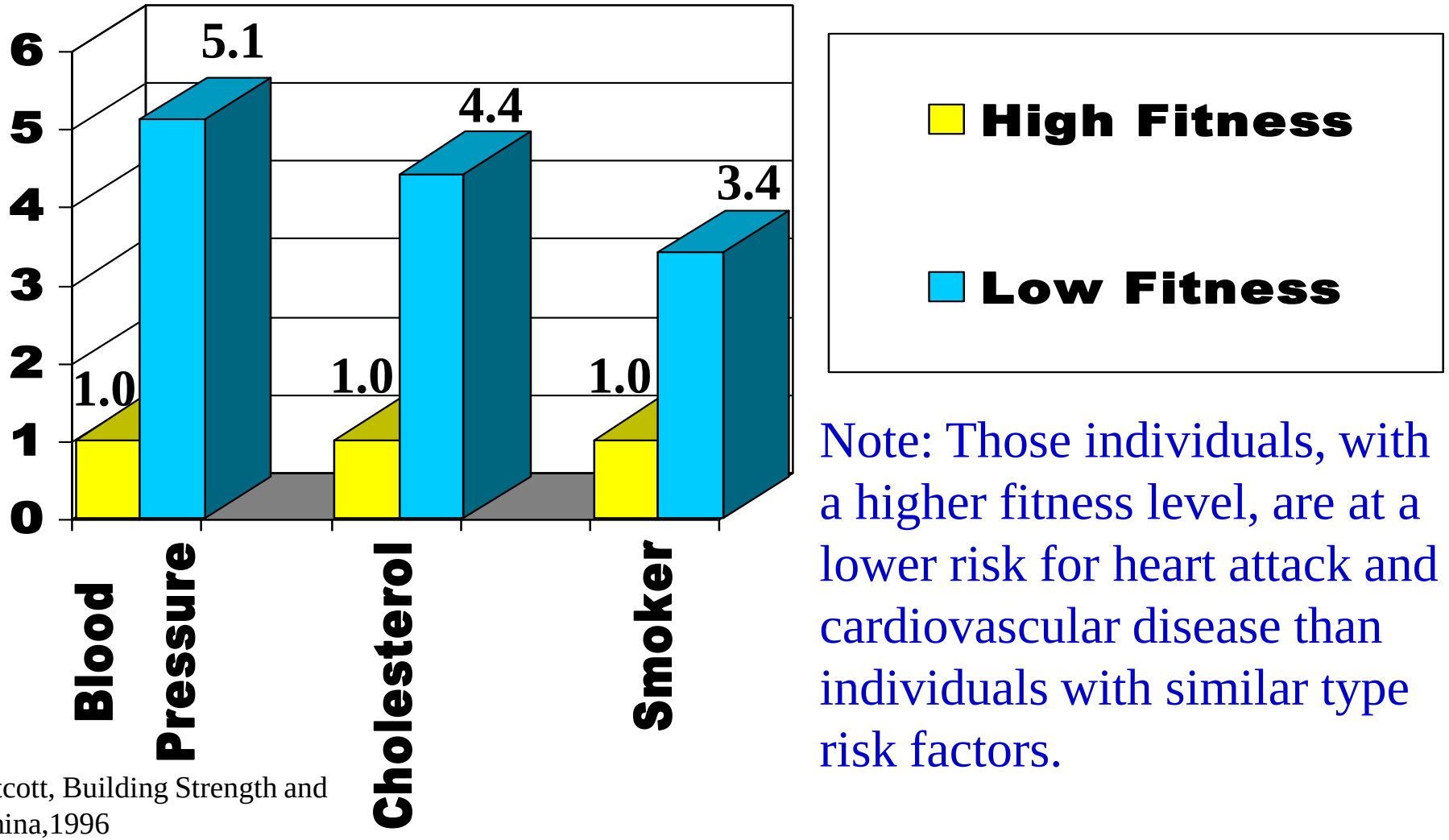
Cardio Training
What are the benefits?

Decrease Cardiovascular Risk Factors

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

Note: By regularly overloading the heart it will become stronger. This allows the heart to pump more blood and deliver more oxygen to the body per heartbeat. The result is a lower resting heart rate and a higher level of fitness.

Relative Risk of Heart Attack Based on Fitness Level



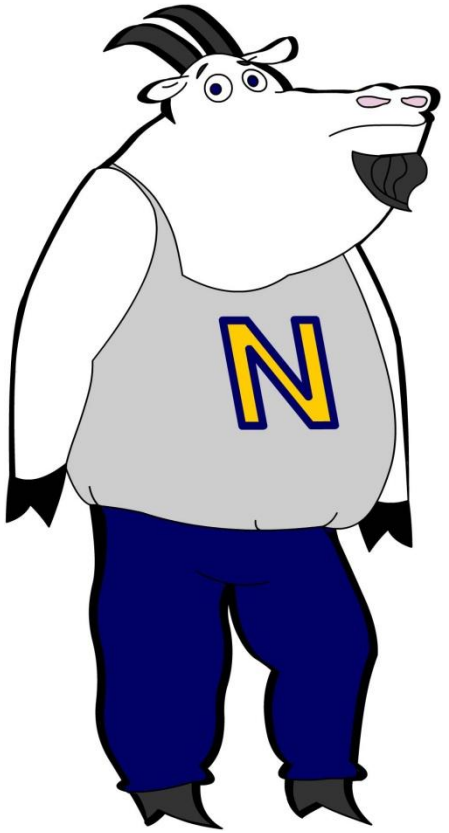
Note: Those individuals, with a higher fitness level, are at a lower risk for heart attack and cardiovascular disease than individuals with similar type risk factors.

Westcott, Building Strength and Stamina,1996

Cardio Training: Benefits Continued

Decreased risk of developing obesity

- Aerobic activity will allow your body to burn calories that could otherwise be stored as fat. This can aid in lowering your body fat to a desirable level.



Cardio Training: Benefits Continued

Improve Physical Capacity

- Having a greater capacity for endurance exercise will result in a better time in the 1.5 mile run.

Other Cardiovascular Training Benefits…

- Helps alleviate stress
- 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
- Improved PFA results

Cardiovascular Program Guidelines

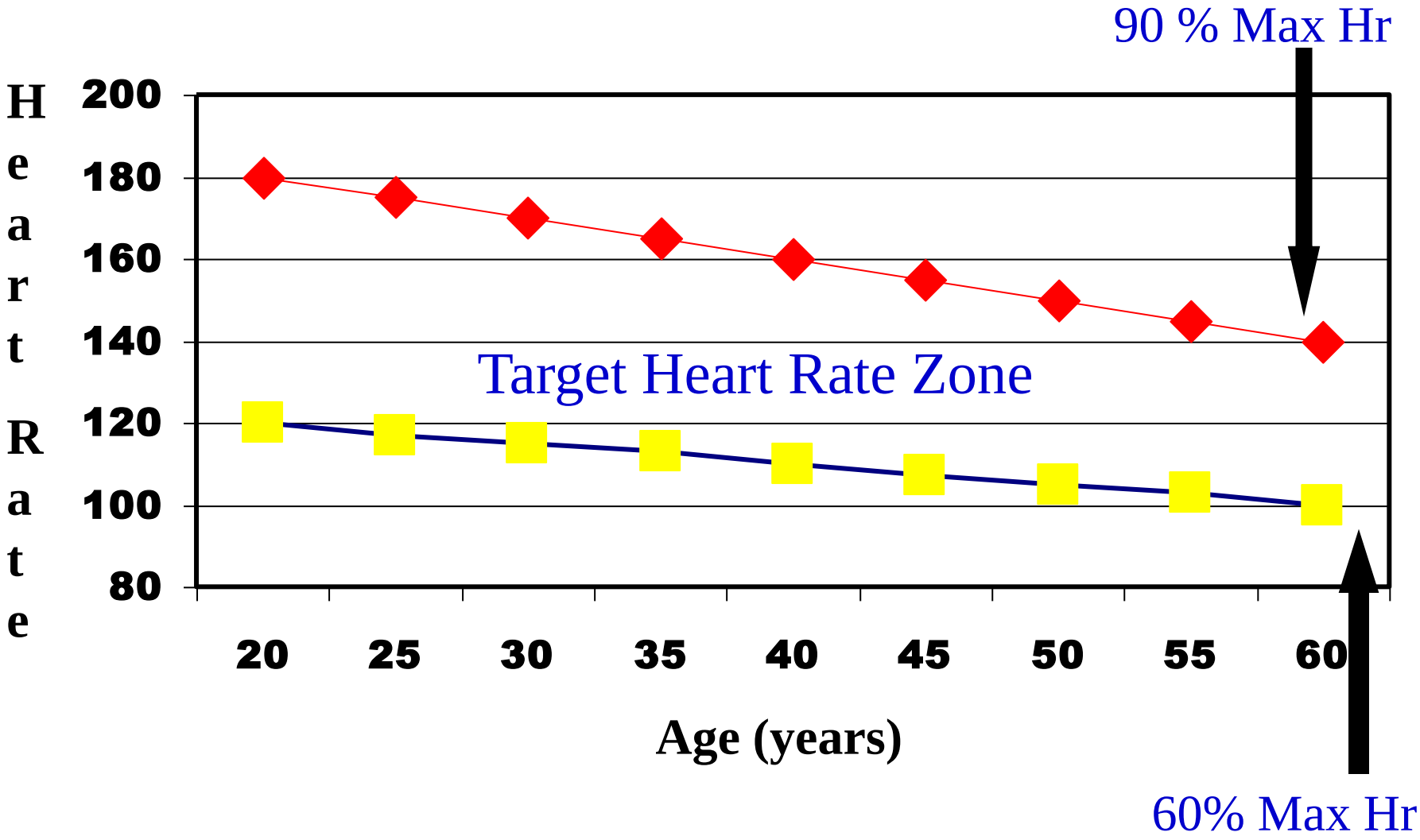
Cardiovascular Exercise Guidelines			
Individual Fitness Level	**Low Fitness Level**	**Average Fitness Level**	**High Fitness Level**
Frequency (Days per Week)	**3-5**	**3-5**	**4-6**
Intensity (% HR Reserve)	**60-70**	**60-80**	**70-85**
Time/Duration (Minutes at THR)	**10-30**	**20-45**	**30-60**
Type	**Walking, Running, Cycling, Cross-Trainer, Step Machine, Swimming, Group Exercise Classes**		

Note: You will use primarily the leg muscles and sometimes the back, chest, and shoulders. The larger muscles require more oxygen during exercise. This requires more blood flow and increases the workload on the heart.

Determining your maximum and minimum heart rate for Cardiovascular Training

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

Target Heart Rate Zones

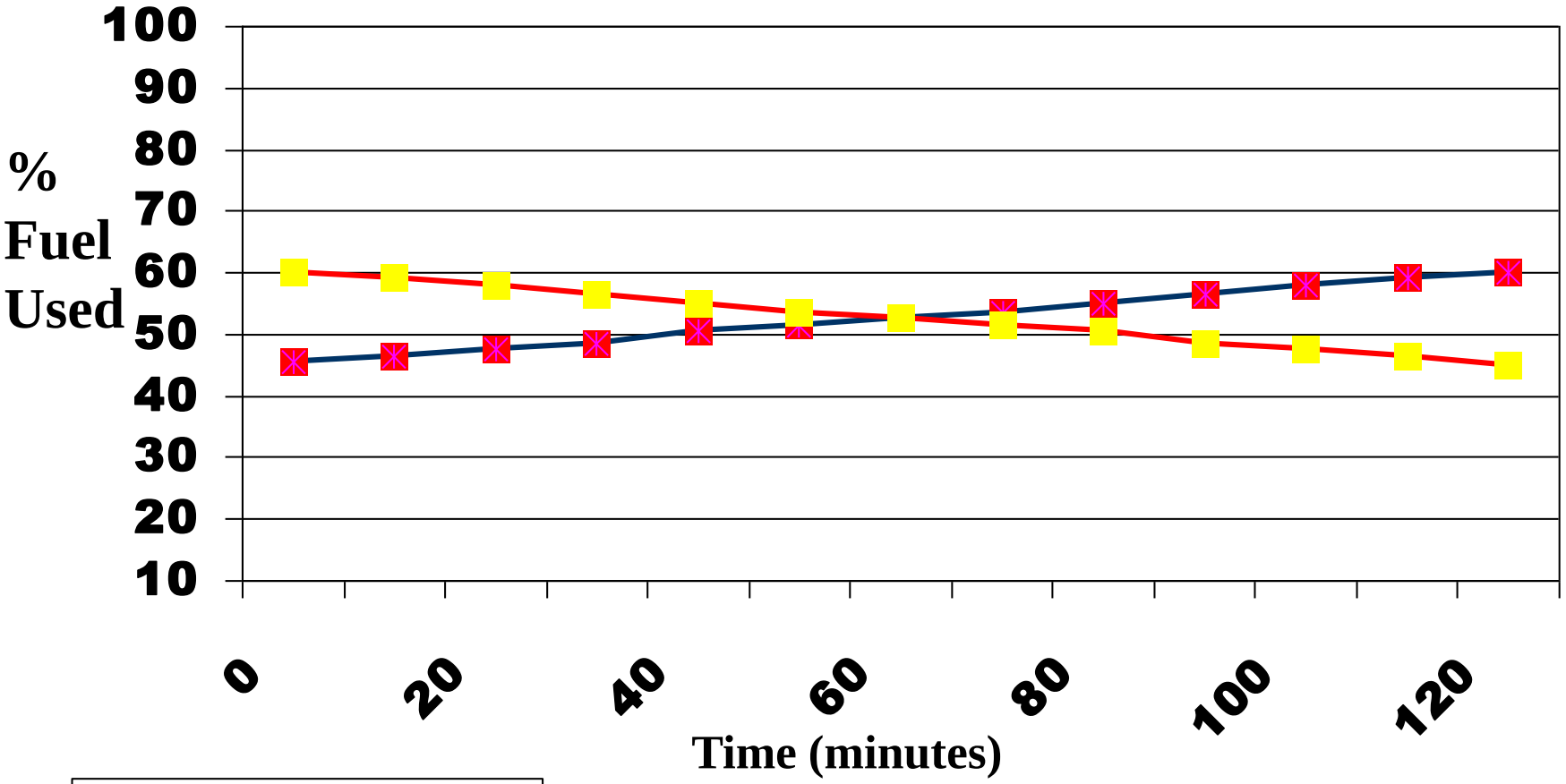


Intensity vs Time

- 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 (less calories / fat burned) from the workout.

Fat and Carbohydrate use during aerobic exercise



Note: As duration increases, fat becomes the preferred energy source simply because carbohydrate is less available. Higher intensity exercise will deplete carbohydrate stores faster.

Maximize the Benefits Achieved by Combining All Components of TF

No Changes In Lifestyle =

No Benefits=No improvement on PFA

Cardio Training + No Other Changes in Lifestyle =

Some Benefit=Improvement in 1.5 Mile Run

Cardio Training + Nutritional Changes =

Moderate Benefits=Improvement in Body Composition and 1.5 Mile Run

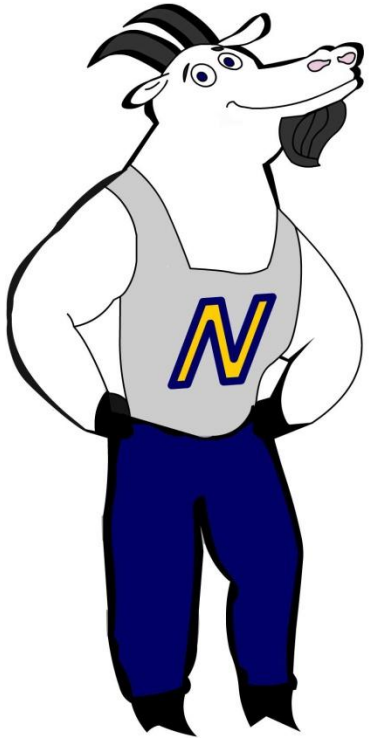
Cardio Training + Strength Training + Nutritional Changes =

HIGH BENEFITS=Improvement in Body Composition, 1.5 Mile Run, Curl Ups, and Push Ups

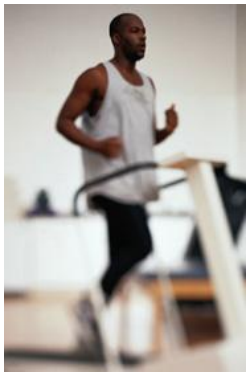
What about sports? Are they considered cardiovascular activities?

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.
- Many participants play sports at a low intensity level and play is continuously stopping which reduces the fitness benefits they receive.



Have a great workout!!



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