Physical Training
Why Sailors Exercise

- Decrease Stress
- Increase Energy
- Feel Better
- Look Better
- Sleep Better
- Reduce Fat
- Self-Esteem
Components of Fitness

- Aerobic Activity
- Muscular Strength
- Flexibility
Aerobic (Cardiovascular) Fitness

- Uses Large Muscle Groups
- Activity Sustained for Long Period of Time
Target Heart Rate Zone

Base number 220
Subtract your age -30
Maximum heart rate 190
  Maximum times 60% (190x.60) 114
  Maximum times 85% (190x.85) 162

Target Heart Rate Zone for 30-Year-Old
114-162
## Target Heart Rate Zones

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Target Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Years Old</td>
<td>120 - 170</td>
</tr>
<tr>
<td>25 Years Old</td>
<td>117 - 166</td>
</tr>
<tr>
<td>30 Years Old</td>
<td>114 - 162</td>
</tr>
<tr>
<td>35 Years Old</td>
<td>111 - 157</td>
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<tr>
<td>40 Years Old</td>
<td>108 - 153</td>
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<tr>
<td>45 Years Old</td>
<td>105 - 149</td>
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<tr>
<td>50 Years Old</td>
<td>102 - 145</td>
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<tr>
<td>55 Years Old</td>
<td>99 - 140</td>
</tr>
<tr>
<td>60 Years Old</td>
<td>96 - 136</td>
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</tbody>
</table>
FITT Principle

- **Frequency** - 3 to 5 Times a Week

- **Intensity** - Target Heart Rate Zone

- **Time** - 20 to 60 Minutes of Continuous Aerobic Activity
Calorie Burn Increases

- Physical Activity Burns Up More Calories
- Physical Activity Develops More Muscle Tissue, Which Burns Up More Calories Even At Rest
Initial Stage of Activity

- Light Endurance Activities
- Four to Six Weeks
- Be Consistent
- Work Through Soreness, Not Pain
- Exercise Three Times a Week
- Gradually Increase Length of Activity
Improvement Stage of Activity

- Begin to Notice Improvement
- Endurance Activities Continue
- Up to Six Months
- Exercise Is Easier
- Be Consistent
- Exercise Three to Five Times a Week
Maintenance Stage of Activity

- Reached a Good Level of Fitness
- Endurance Activities Continue
- Occurs After Six Months
- Exercise Is A Part of Your Life
- Be Consistent
- Exercise Three to Five Times a Week
Set Goals

• Be Realistic
• List the Benefits of Activity
• List Sacrifices, and Compare
• Set Short Term Goals
• Allow for Temporary Setbacks
Equipment and Environment

- Choose Good, Appropriate Shoes
  - Ask a Professional for Help
- Wear Breathable Clothing
- In Cold Weather, Protect Your Skin and Layer
Hot Weather Precautions

- During Hot Weather, Work Out in Cooler Part of Day
- Back Off Intensity
- Allow for Acclimation if Relocating
- Drink Plenty of Water
Strength Training

• Strength Training Can Be Accomplished In Many Ways
  – Free Weights
  – Weight Machines
  – Using Body Weight

• Improvement Comes from Overload
Overload

- Increase the Amount of Resistance
- Increase the Repetitions
- Increase the Number of Sets
- Decrease the Rest Time Between Sets
Repetitions and Sets

- Repetition--The Completion of a Movement Through a Full Range of Motion
- Set--The Number of Repetitions Attempted Without Rest
Duration

• Varies With Personal Goals
• Good Workout Can Be Accomplished in Less Than 30 Minutes
  – Plus Warm Up and Cool Down
• Workouts Lasting Too Long Have Higher Drop Out and Injury Rates
Allow Muscles To Rest

- Plan Strength Workouts for Two Non-Consecutive Days Per Week
- Allow a Day of Rest Between Sessions
- If You Want to Work Consecutive Days, Work on Different Muscle Groups
Balance and Symmetry

- When Muscles on One Side of a Joint Are Worked, Then Muscles on the Other Side Should Also Be Worked
  - Abdominal Muscles and Lower Back Muscles
  - Quadriceps and Hamstrings
  - Pectorals and Rhomboids
  - Biceps and Triceps
ACSM Guidelines

• Include 8 to 10 Separate Exercises
• Plan Efficient Total-Body Workouts
• Perform One Set of 8 to 12 Reps
• Perform Each Exercise At Least 2 Non-Consecutive Days a Week
ACSM Guidelines

- Use Proper Techniques
- Perform Each Through Full Range of Motion
- Perform Both Lifting and Lowering in a Controlled Manner
- Maintain Normal Breathing Pattern
- Train With a Partner
Effective Strength Training

• Begin With a 5 to 10-Minute Warm Up
• Don’t Hold Your Breath
• Don’t Lock “Out”
• Maintain Natural Back Arch When Lifting
Avoiding Excessive Soreness

- Warm Up Properly
- Begin Your Program at Low Level Intensity
- Increase Your Workload Gradually
- Cool Down
Ergogenic Substances

- Drugs Must Meet FDA Standards
- Supplements Are Not Regulated
- Muscle Growth Can Not Be Increased by Consuming Excess Protein
- No Ergogenic Substance Is Worth the Risk
Be Prepared for Setbacks

• Expect Short Term Setbacks
  – Illness
  – Work and Family Commitments
• Do What You Can, When You Can
• Focus on Maintenance
Motivation Tips

• Workout With a Partner
• Allow Yourself an Occasional Light Workout
• Find Good Sources of Information
• Pick the Right Facility
• Listen to Music
Exercise Program Design

U.S. Navy
Command Fitness Leader Course

Optimizing operational readiness through the advancement of physical fitness of Sailors
Exercise Sequence

- Warm-up – 5 to 10 minutes
- Stretch 5 to 10 minutes
- Aerobic and/or Muscular Fitness or Sport/Recreation Activity
- Cool- Down 5 – 10 minutes
- Stretch 5 to 10 minutes
Aerobic Conditioning

- **Frequency:** 3 – 5x per week (daily)
- **Intensity:** 60 – 85% of HR max
- **Time:** 20 – 60 minutes
- **Type:** Continuous rhythmic movement of large muscle groups
Muscular Fitness

- **Frequency:** 2 – 3 times per week. (minimum; daily better)
- **Intensity:** perform set to volitional fatigue
- **Time:** Minimum one set of 8 – 12 repetitions
- **Type:** Minimum 8 – 10 exercises for major muscle groups.
- **Tip:** Rest each muscle group 48 – 72 hours
Flexibility Training

- **Frequency:** 2 – 3 days per week (minimum; daily better)
- **Intensity:** To position of mild discomfort
- **Time:** 10 – 30 seconds (static stretch)
- **Type:** General stretching routine for major muscle groups (See 4x5” Navy Fitness Planner Booklet)
Key Training Principles cont.

Specificity Training (Action, Speed, Intensity)

- Training effects from an exercise program are specific to the exercise performed and muscles involved.

Interval Training

- Alternating high intensity with low intensity exercises.
- Predominately used in cardiovascular training.
Progression

Adaptation / Plateaus (Strength)

- Change training exercises
- Vary number of sets performed
- Change the resistance/repetitions relationship
- Reduce training frequency
Strength Plateaus cont.

- Breakdown training (complete 2-3 post-fatigue reps with a decreased weight)
- Assisted training (complete 2-3 post-fatigue reps with assistance during lifting phase)
- Slow the movement speed
Progression

Aerobic / Cardiovascular Phases

- Conditioning (initial) (4-6 weeks or longer)

- Improvement (approx. 8-20 weeks)

- Maintenance (after first 6-12 months of training)
Muscular Fitness

- Key to strength development is progressive resistance.
- As muscles adapt to a given exercise resistance, it must be gradually increased to stimulate further strength gains.
Adherence & Motivation

- Self-motivation
- Type and variety of activities
- Outside support
- Environment
- Realistic expectations/appropriate goals
- Contracts/Agreements
- Visualization
Additional Resources

Crossfit
• http://www.crossfit.com/

Beginner Triathlete
• http://www.beginnertriathlete.com/

Runners’ World
• http://www.runnersworld.com/
Where to Work Out?

Campus Recreation Facilities

• [http://www.campusrec.uiuc.edu/schedules/fac_fall_08.html](http://www.campusrec.uiuc.edu/schedules/fac_fall_08.html)

Armory

• Hours vary
Any Questions?