



Physical Training



Why Sailors Exercise

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

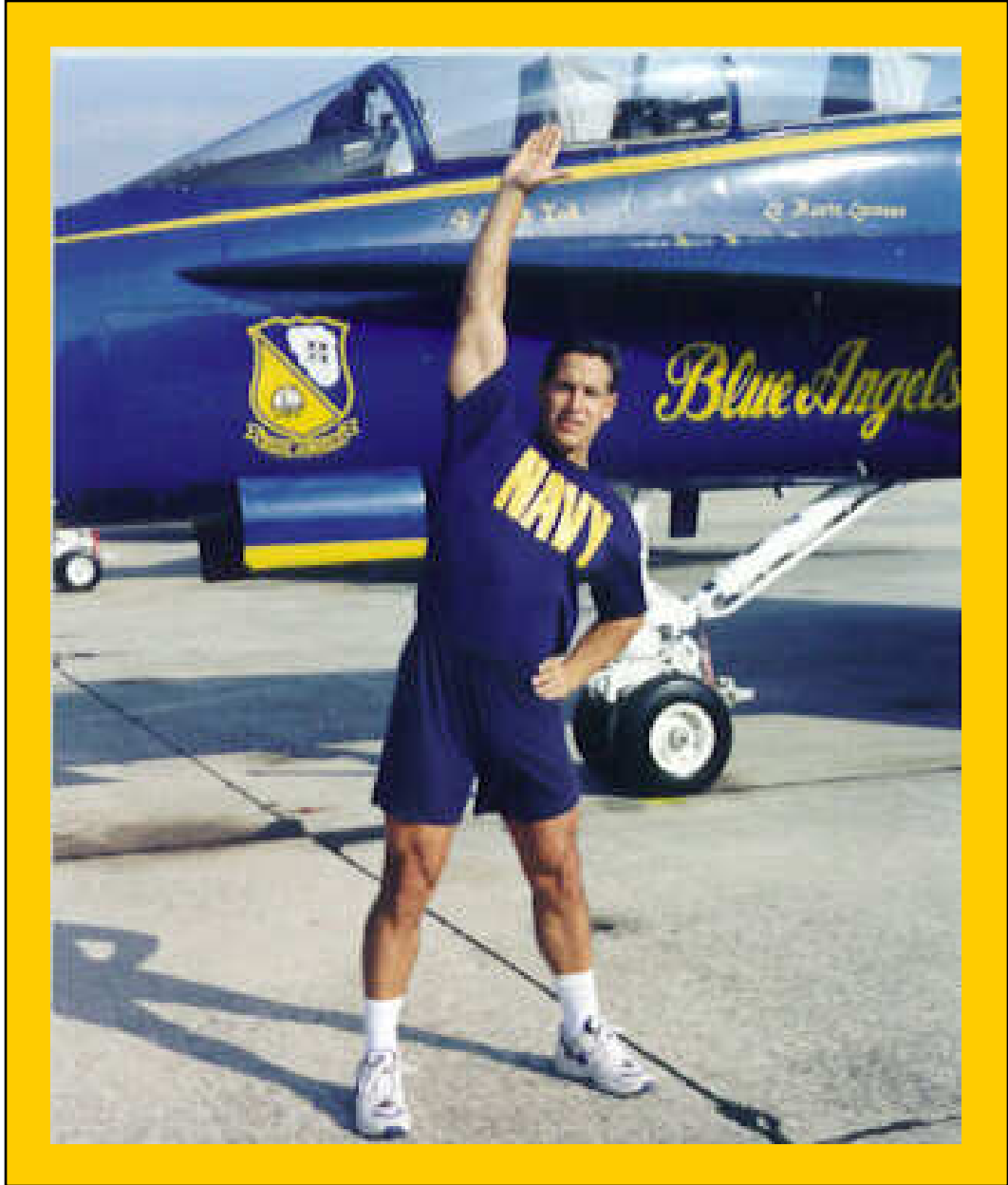




Components of Fitness

- 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	<u>-30</u>
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

20 Years Old	120 - 170
25 Years Old	117 - 166
30 Years Old	114 - 162
35 Years Old	111 - 157
40 Years Old	108 - 153
45 Years Old	105 - 149
50 Years Old	102 - 145
55 Years Old	99 - 140
60 Years Old	96 - 136





FITT Principle

- **F**requency - 3 to 5 Times a Week
- **I**ntensity - Target Heart Rate Zone
- **T**ime - 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

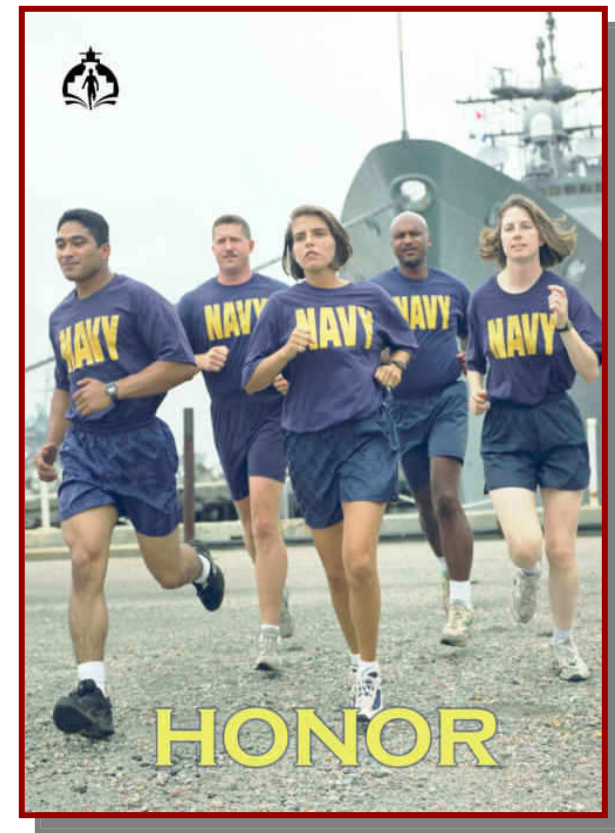
- Workout With a Partner
- Allow Yourself an Occasional Light Workout
- Find Good Sources of Information
- Pick the Right Facility
- Listen to Music



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

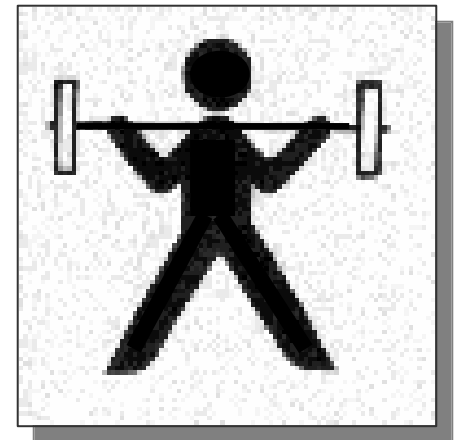
- Alternating high intensity w/h low intensity exercises.
- Predominately used in cardiovascular training.

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)



Progression

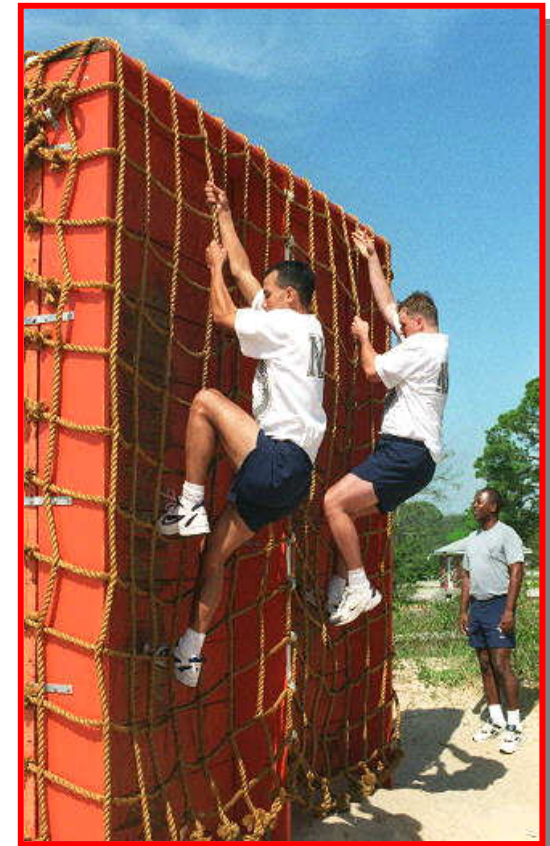
Muscular Fitness

- 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

Armory

- Hours vary



Any Questions?