

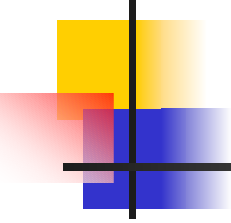


# ARE YOU FIREFIT?

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- Fireline Fitness
- Bequi Livingston, CPFT



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Fitness is not something that belongs to the young – it's everybody's right, no matter what the age...





# INQUIRING MINDS WANT TO KNOW?

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- How many of you feel that “fitness” is an important part of your job?
- How many of you work out more than 6 days a week?
- How many of you feel that management supports your “wellness”?



# Why is fitness important for firefighters?

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- Fitness improves overall health.
- An established fitness regime improves personal attitude and crew moral.
- Helps decrease absenteeism and increase productivity in the workplace.
- Maintaining good physical fitness can improve your chance of surviving a catastrophic incident....



# What do firefighters do that require good fitness levels?

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- Work long hours utilizing muscle strength, muscle endurance, and aerobic capacity with little if any recovery.
- Endure stress, fatigue, dehydration, and poor nutrition for up to 14 day assignments.
- Work at optimal performance in poor environmental conditions.
- Ability to pass the "Work Capacity Test" (arduous level) for wildland firefighting.



# Before you get started:

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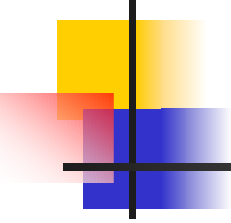
- Get informed – Get educated
- Consult with your physician
- Complete a “Health History” (HSQ)
- Have the appropriate PPE
- Make the commitment (to yourself)

LET'S GET GOING.....

# Getting Started.....

- Set Realistic Goals – Is it a SMART goal?
  - Specific
  - Measurable
  - Action-Oriented
  - Realistic
  - Timed





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In order to have an effective fitness program – you **MUST** balance all of the fitness components –  
..... No Short Cuts!





# Components of Fitness....

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- Warm-Up (limbering, rhythmic..)
- Aerobics (cardiovascular- with O<sub>2</sub>)
- Muscle Strength/Muscle Endurance
- Flexibility (stretching)
- REST.....and Relaxation.....



## AEROBICS (..with oxygen..)

A variety of exercises creating an increased demand for oxygen over a period of time while maintaining the heart rate at 55-85% of estimated maximum heart rate.  
(THR = target heart rate)



# AEROBICS – How To Proceed!

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- Duration: *minimum* of 20 minutes @ THR (target heart rate)
- Frequency: 3-6 times weekly
- Type: Cross-train (bike, jog, walk, jump rope, , etc....)
- Avoid overuse – doing the same activity day after day – diversify your aerobics – caution w/impact activities
- Enjoy what you are doing...

# MUSCULAR STRENGTH & ENDURANCE



The muscles are only as adaptive as you provide them with an overload.....then, they need rest to strengthen and grow!

# MUSCLE

## STRENGTH/ENDURANCE

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- Muscle Strength: (absolute power) the ability of a muscle to exert maximum force for 1 repetition
- Muscle Endurance: (dynamic strength) the ability of a muscle/muscles to exert minimum force over a sustained period of time



# BASIC "GROUND RULES" FOR WEIGHT TRAINING

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- Start slowly – start light.
- Never sacrifice proper form for heavier weight.
- Be diligent – three days a week – 45-60 minutes a workout – no more, no less.



# DEVELOPING MUSCLE STRENGTH

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- Repetition: 5 – 8 reps
- Sets: 1 – 3 sets w/ 2 minute rest interval
- Resistance: 85% – 90% of maximum effort
- Frequency: 2-3 times weekly with 24 – 48 hours rest between workouts



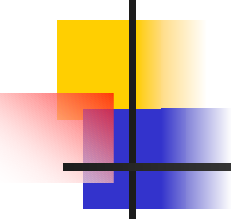
# MUSCLE ENDURANCE

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- Repetitions: 8 – 12
- Sets: 1 – 3 sets w/ 1–2 minute rest interval
- Resistance: 60% – 85% of maximum effort
- Frequency: 3 – 5 times weekly with 24 – 48 hours rest between workouts



# MUSCLE WORKOUT CHECKLIST

- 
- Use proper technique and alignment using full ROM.
  - Exercise large muscles groups (shoulders, chest, back, biceps, triceps, legs, abs).
  - Use multiple-joint movements involving many muscles.
  - Avoid muscle imbalance – work opposing muscles equally (biceps-triceps, chest-back, abs-lower back, quads-hamstrings...)
  - Concentric –  
Eccentric movement
  - (2 counts, 4 counts)



# MUSCLE WORKOUT CHECKLIST (continued)

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- Breathing Technique: always breathe and count out loud, never hold your breathe
- Always have a rest interval of 24 – 48 hours in order to provide maximum results and avoid overuse
- Wear proper PPE including lumbar belt, weight gloves as needed
- Use a mirror to check alignment and technique
- Use a “spotter” when needed
- Variety is the key to success



# GOOD EXERCISE CHOICES....

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- The squat – proper form is critical
- The crunch – breathing is important
- The plank – works abs
- Back extension – use good technique
- The press – shoulders
- Incline press – chest
- One-arm dumbbell row – back
- Pull-Ups
- Tricep dips – triceps
- Push-ups

# ALTERNATIVES TO WEIGHTS

- Medicine Ball
- Flexi-Bands
- Calisthenics (push-ups, pull-ups...)
- Pilates
- Yoga
- Tai Chi
- Weight Walking
- Exercise par course
- Flexi-Ball
- Wobble Board



# FLEXIBILITY



The ability to move muscles and joints through their full range of motion.



# BENEFITS OF STRETCHING

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- Enhance/optimize performance
- Increase physical/mental relaxation
- Promote body awareness
- Reduce risk of injury
- Reduce risk of muscle soreness
- Reduce muscle tension



# PROPER STRETCHING TECHNIQUES

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- Use static stretches (slow, rhythmic...)
- Avoid ballistic stretches (jerky, bouncing)
- Use proper breathing techniques
- Hold stretches 30 – 60 seconds
- Warm-Up first, then stretch before and after workout
- If it hurts..... Don't push it.....

# REST AND RELAXATION



The opportunity to let the body and system slowly relax and resume normal metabolic rate.





# REST AND RELAXATION TECHNIQUES

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- Proper breathing techniques (slow, rhythmic)
- Use visualization – visualize your optimal performance/body weight/wellness...
- Allow 1 day minimum rest per week for optimal wellness
- Avoid overuse – results from repeated stress placed on body without time for recuperation and rebuilding



# A SIMPLE "PT" PLAN

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- Monday – Wednesday – Friday
  - *Cardiovascular (jog, bike, aerobics) x 20 -30minutes*
  - *Lower Back and Abs*
  - *Stretch x 10 minutes*
- Tuesday – Thursday – Saturday
  - *Pack Hike – Power Hike x 30 -60 minutes*
  - *Weight Training x 30 minutes*
  - *Stretch x 10 minutes*
- Sunday
  - *Rest x all day long!*



# OVERUSE INJURY COMMON CAUSES

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- Training errors (too much, too soon)
- Improper technique
- Repetition of exercises – no variety
- Anatomical factors
- Excessive body weight
- Improper shoe wear (specific to activity)
- Training surfaces
- Imbalance in muscle strength
- Pushing too hard (not allowing for rest)
- Machismo.....



# COMMON TYPES OF OVERUSE INJURIES

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- Knees: (chondromalacia, patellar tendonitis) usually caused by running everyday, downhill running/walking and muscle imbalance.
- Legs: (shin splints, anterior compartment syndrome, stress fracture) caused by lack of stretching, improper shoe wear, uneven surfaces, repetitive running, muscle imbalance between calves and shins (anterior tibialis)
- Feet/Ankle: (Plantar Fasciitis, stress fractures, bunions, achilles tendonitis) caused by anatomical, improper shoes, lack of stretching, impact exercises (running everyday)



# COMMON TYPES OF OVERUSE INJURIES (cont.)

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- Hips: (bursitis) caused primarily from lack of stretching, improper technique, anatomical, overuse (running everyday)
- Lower Back: (low back pain syndrome) caused by anatomical, lack of stretching, imbalance of muscle strength, impact exercise
- Shoulder/Arms: (bursitis, rotator cuff, tennis elbow) caused by overuse, lack of stretching, muscle imbalance, lifting too much weight, improper technique using weights.



# TREATMENT FOR COMMON INJURIES

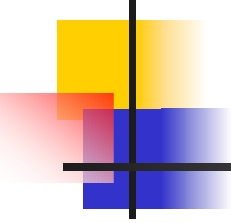
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- REST: necessary for healing
- ICE: minimize pain and swelling (apply immediately to injured area)
- COMPRESSION: to help reduce swelling and provide support to injured area
- ELEVATION: reduces pain and swelling
- See your doctor if pain and swelling continues or you lose feeling or function of affected area.

# EMERGENCY CONCERNS

(take immediate action)

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- 
- Difficulty breathing
  - Dizziness/lightheaded
  - Shortness of breath
  - Chest pain
  - Chest discomfort
  - Unusual fatigue
  - Severe headache
  - Loss of consciousness
  - Rapid heart rate
  - Nausea/vomiting
  - Loss of muscle control
  - Slurred speech
  - Impaired vision
  - Allergic reaction
  - Disorientation
  - Unexplained euphoria



# COMPONENTS OF WELLNESS?

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- Physical Fitness
- Nutrition and Hydration
- Fatigue Management
- Stress Management
- Spirituality



# NUTRITION



The relationship of foods to the health of the human body.



# Rules of "Nutritional" Engagement

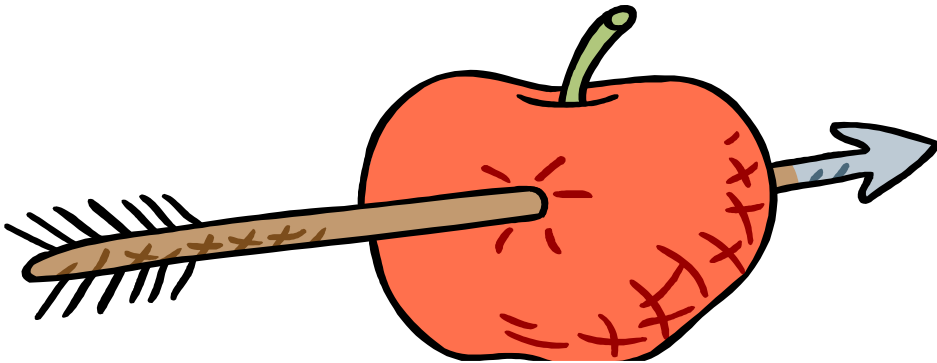
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- Avoid excessive sugar, sodium & alcohol.
- Consume smaller portions.
- Be cautious of "nutritional supplements".
- Avoid artificial "anything".
- Avoid "dieting".
- Drink plenty of water, water, water.
- Use moderation and common sense.
- Don't starve yourself or deny yourself of treats.
- Balance all your nutrients.

# Nutritional Summary "Rule of Thumb"

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E.A.S.E. into wellness through  
Exercise and Sensible Eating.





Fire has no prejudice.....

to age.....

to gender.....

to physical stature...





# ARE YOU FIREFIT?

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- Fireline Fitness
- Bequi Livingston, CPFT

Thank you for all you do – BE SAFE!



# "Fireline Fitness"

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