

LOST TEMPLE FITNESS

Quick Summary

Safety First

- Benefits / Before Starting a Routine , Averages – Body Temperature; Respiration, Blood Pressure, Heart Rate; How to Monitor Intensity of Heart Rate ; Temperature – Heat and Cold; Dehydration; Altitude

Anatomy

- Anatomical Positions and Planes; Anatomical Directions; Muscles and Joint Action; Skeletal Positions and Average Joint Range of Motion

Components of a Conditioning Program

- Warm up/cool down; Duration, Frequency, Intensity & Movement Patterns ; Breathing –Diaphragmatic, Pursed lip and with Exercise; Equipment that may be needed

Self Tests

- Prior to starting program

Exercises

- Myofascial release, Flexibility/Stretches / ROM , Core / Abdominal, Strengthening - Upper and Lower Extremity, Balance > Lower Extremity Standing Exercises, Agility, Endurance/Aerobic Capacity; *Calories*

Nutrition

- Calories (*Male and Female*); Nutrients; Protein (*ChooseMyPlate.gov and Protein Supplements*); Amino Acids (*Essential and Non-Essential List*); Fats / Lipids ; Water / Fluid; Carbohydrates, Vitamins/Minerals

Carbohydrates

- Glycogen, Glucose; Glycogen Effects on Performance; Glycemic Index; Sugars; Glycogen Loading; Glycogen Recovery; Carbohydrate Exercise Guideline; Carbohydrate, Electrolyte & Water Intake Guideline

Vitamins & Minerals

- Vitamin List & Information
- Vitamin & Mineral Absorption

What's on the Nutrition Fact Sheet

- ChooseMyPlate.gov

References

- Home Exercise and Nutrition

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PHYSICAL AND PSYCHOLOGICAL BENEFITS OF KEEPING PHYSICALLY FIT

- Contributes positively to maintaining a healthy weight, building and maintaining healthy bone density, muscle strength, joint mobility, reducing surgical risks, and strengthening the immune system.
- Helps to prevent or treat serious and life-threatening chronic conditions such as high blood pressure, obesity, heart disease, Type 2 diabetes, insomnia, and depression.
- Endurance exercise before meals lowers blood glucose more than the same exercise after meals.
- It also improves mental health, helps prevent depression, helps to promote or maintain positive self-esteem, and can even augment an individual's sex appeal or body image.

(Physical Exercise - Wikipedia)

Before starting a routine here are some factors to consider

AGE	Men over 45 and women over 55 should have medical evaluation before starting a vigorous exercise program. If you will be participating in low to moderate exercise, it is suggested that those with, or have signs and symptoms of cardiopulmonary disease, set up a medical evaluation.
MEDICAL AND PHYSICAL CONDITION	<p>It is very important for you to be aware of any medical or physical problems that may impede your performance. If you have any of the following issues, please see a medical doctor and/or physical therapist to address issues before starting an exercise program:</p> <ul style="list-style-type: none"> • Cardiac issues • Pulmonary issues • Arthritis • Joint pain • Back pain • Diabetes • Acute or Chronic issues, such as, but not limited to, Parkinson's, Stroke, Autoimmune Diseases, Metabolic Disease or Orthopedic disorders/joint replacements.



VITAL SIGN AVERAGES

Adult (resting)	
Body Temperature	98.6 Fahrenheit under tongue.
Respiration	12-20 breaths per minute
Blood Pressure Systolic/Diastolic	120/80. Systolic is when the heart pumps blood to the body / Diastolic is blood that remains in arteries when the heart relaxes. <i>Pre-hypertension:</i> 120-139/80-89. <i>Hypertension:</i> Stage I 140-159/90-99 Stage II over 160/100
Resting pulse	Men: 70 beats per minute. Women: 75 beats per minute.

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HOW to MONITOR EXERCISE INTENSITY

Ways to monitor heart rate (HR):

Talk Test Method	This is a simple, subjective method for the beginner to determine your comfort zone while exercising. Are you able to breathe and talk comfortably throughout the workout without gasping for air? If not, reduce your activity level, catch your breath, and resume at a slower pace.
Heart Rate monitor or Watch	This is a device you wear on your wrist or chest, which allows you to measure your heart rate in real time. These devices range in price at about \$50.00 for just a basic HR monitor or higher with other bells and whistles. Some of the popular manufacturers are Fitbit, Apple Watch, Garmin and Samsung Galaxy among others. (See <i>Target Heart Rate</i>)
Rate of Perceived Exertion	This method was designed by Dr. Gunnar Borg and is often called the Borg Scale (revised). It rates what you feel your level of exertion is from a scale of 1-10, one being at rest and ten at maximal exertion. A rate of 5-7 is recommended, somewhere between somewhat hard and very hard. Like the talk test method, this is subjective and should be used with HR monitoring.
Training Heart Rate	Measuring Heart Rate: Place your first and second finger over the pulse site and gently apply pressure. Palpate the number of beats for a full minute or 30 sec x 2, 15 sec x 4 or 6 sec x 10. If you have an irregular heartbeat, it is suggested counting the full 60 seconds. Do not use the thumb, as this has its own pulse.
	Take your pulse after you've been exercising for at least five minutes. An easy way to check your pulse without interrupting your workout too much is to take a quick 6-second count and then multiply that number by 10 to get your heart rate in beats per minute (BPM). Make sure your pulse is within your target heart rate zone (see <i>below</i>). You can then increase or decrease your intensity based on your heart rate. You can also wear a heart rate monitor.
	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Radial: Wrist following line from base of thumb.</p> </div> <div style="text-align: center;">  <p>Carotid: Side of larynx.</p> </div> </div>
Target heart rate range (THR)	<p>Beginner or low fitness level: 50-60%</p> <p>Intermediate or average fitness level: 60-70%</p> <p>Advanced or high fitness level: 75-85%</p>
Percent of maximal heart rate	<p>$220 - \text{Age} = \text{predicted maximum heart rate (HR)}$. To get the desired exercise intensity, multiply the predicted maximal HR by the percentage. For example, a woman who is 40 years old of Intermediate fitness level would use the following equation at a 70% target heart rate:</p> <p>$220 - 40 (\text{age}) = 180$ predicted maximal HR. $180 \times 0.70 (\text{THR}) = 126$ BPM - desired exercise HR.</p>
Karvonen Formula	<p>Percentage of Heart-rate reserve. This formula factors in the resting HR as well, which will make the target heart rate higher than just the percentage of maximal heart rate. To figure this out, take the predicted maximal heart rate as above with a resting HR prior to exercise.</p> <p>Maximal HR – resting heart rate (RHR) = heart rate reserve; multiply by intensity + RHR + Target HR. See example under Percentage of maximal HR. Rest heart rate = 80. $220 - 40 (\text{age}) = 180$ (as above) – 80 (RHR) = 100 x 0.70 (THR) = 70 + 80 = 150 Target HR.</p>

TEMPERATURE – HEAT and COLD

HEAT

Avoid exercise in the hottest part of the day, as well as in humid weather. People need to sweat to regulate internal body temperature and must evaporate to dissipate heat. During hot, humid weather, sweat cannot evaporate, and therefore cannot cool the body down. It is also important to drink plenty of cool water during exercise, about 7-10 oz. every 10-20 minutes during exercise (see *Dehydration*).

Heat cramps:

- Severe cramps that begin in hands, feet or calves
- Hard, tense muscles

Heat exhaustion:

Requires immediate medical attention, although not usually life threatening

- Fatigue
- Nausea
- Headache
- Excessive thirst
- Muscle aches and cramps
- Confusion or anxiety
- Weakness
- Severe sweats that can be accompanied by cold, clammy skin
- Slow heartbeat (decreased pulse rate)
- Dizziness or fainting
- Agitation

Heat Stroke:

Can occur suddenly, with or without warning from heat exhaustion. Obtain immediate medical attention, as this can be ***fatal***

- Nausea and vomiting
- Headache
- Increased body temperature, but DECREASED sweating.
- Hot, flushed, DRY skin
- Dizziness
- Fatigue
- Rapid heart rate
- Shortness of breath
- Decreased urination or may have blood in the urine.
- Confusion or loss of consciousness
- Convulsions

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COLD

It is just as important to drink plenty of water when exercising in the cold weather secondary to increased urine production. Be sure to dress in layers to help self regulate body temperature. This simply involves taking off or putting back on clothing as dictated by the changing weather conditions. Choose clothing that will keep moisture out and away from the skin, such as Gortex® brand. Clothing that stays wet because of sweat will decrease your body temperature.

Hypothermia-Mild:

A body temperature that is below normal. People with hypothermia are usually not aware of their condition due to confusion or being overly focused on their current activity. Hypothermia may or may not include shivering in the early stages

- Confusion
- Lack of coordination
- Fatigue
- Nausea or vomiting
- Dizziness

Hypothermia

- Shivering
- Slurred speech
- Mumbling
- Clumsiness
- Difficulty speaking
- Stumbling
- Poor decision making
- Drowsiness
- Weak pulse
- Shallow breathing
- Progressive loss of consciousness

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DEHYDRATION

Excessive loss of body fluid (which can include water and solutes, usually sodium or electrolytes). It is also important to drink plenty of cool water during exercise, about 7-10 oz. every 10-20 minutes during exercise. During exercise, sports drinks may be necessary to keep an electrolyte balance as well.

Dehydration-Mild:

About 2% of water depletion

- Thirst
- Decreased urine volume
- Abnormally dark urine
- Unexplained tiredness
- Irritability
- Lack of tears when crying
- Headache
- Dry mouth
- Dizziness when standing due to orthostatic hypotension
- May cause insomnia.

Moderate:

About 5% -6% of water depletion

- Grogginess or sleepiness
- Headache
- Nausea
- May feel tingling in limbs (paresthesia)

Severe:

About 10% -15% of water depletion

- Muscles may become spastic
- Skin may shrivel and wrinkle (decreased skin turgor)
- Vision may dim
- Urination will be greatly reduced and may become painful
- Delirium may begin.

Over 15% of water depletion

- Usually fatal.

ALTITUDE

Oxygen decreases as you increase the altitude. The heart rate also increases as much as 50% above normal ranges. It is important that the athlete take time to acclimate to higher altitudes, about two weeks for up to 8000 feet, and about 4-5 weeks for over 12,000 feet.

Signs and symptoms:

- Insomnia
- Irritability
- Weakness
- Dizziness.

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References

Also, Some Good Books, Websites & DVD'

ACE Fitness Nutrition Manual - *American Council on Exercise* (2013)

ACE Idea Fitness Journal: *Martina M. Cartwright, PhD, RD* http://www.idealife.com/fitness-library/protein-today-are-consumers-getting-too-much-of-a-good-thing?ACE_ACCESS=ebec6bcf61abff08f7b1d8b27c555758

ACE Senior Fitness Manual, *American Council on Exercise* (2014)

American Physical Therapy Association, (APTA), 2007. *Basic Science for Animal Physical Therapy: Canine*, 2nd edition

Amino Acids (Wikipedia) - http://en.wikipedia.org/wiki/Amino_acid

Benardot, Dan (2012), *Advanced Sports Nutrition*, 2nd ed, Human Kinetics

Answer -The Benefits of Egg White Protein - <http://nutrition.answers.com/sports-nutrition/the-benefits-of-egg-white-protein>

Arleigh J Reynolds, DVM, PhD - www.absasleddogracing.org.uk/newgang/src/gangline/role.htm

Australian Institute of Sports - <http://www.ausport.gov.au>

BodyBuilder.com

Buzzle - <http://www.buzzle.com/articles/essential-amino-acids-list.htm>

Brown & Ferrigno, (2005). *Training for Speed, Agility and Quickness*, Champaign, IL: Human Kinetics.

Bryant, C & Green, D, editors (2003), *Ace Personal Trainer Manual*, 3rd ed., San Diego, CA: American Council on Exercise (ACE)

Buzzle - <http://www.buzzle.com/articles/essential-amino-acids-list.html>

Carbohydrates: About.com - <http://lowcarbdiets.about.com/od/glossary/g/glosstermcarb.htm>

Case, Carey, Hirakawa, and Daristotle (2000). *Canine and Feline Nutrition*, Missouri: Mosby, Inc.

Choose My Plate - Choosemyplate.gov

Colorado State University - Potassium - <http://www.ext.colostate.edu/pubs/foodnut/09355.html>

Complete Protein (Wikipedia) - http://en.wikipedia.org/wiki/Complete_protein

CVS.com

Cyanocobalamin (Wikipedia) - <http://en.wikipedia.org/wiki/Cyanocobalamin>

Dr. Hoffman.com

Dr. Weil.com

DSL Extreme <http://members.dslextreme.com/users/rotts4su/break.html>

Examine.com

Fitday: <http://www.fitday.com/fitness-articles/nutrition/vitamins-minerals/understanding-non-essential-amino-acid-function.htm>

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ExRx.net

ExRx.net: Carbohydrates - <http://exrx.net/Nutrition/Carbohydrates.html>

ExRx.net: Fat - exrx.net/Nutrition/Fat.html

ExRx: Glycogen - <http://exrx.net/Nutrition/Glycogen.html>)

Fatty Acid (Wikipedia) - http://en.wikipedia.org/wiki/Fatty_acid)

Feher & Szunyoghy (1996). *Cyclopedia Anatomicae*, Tess Press

Fitday: <http://www.fitday.com/fitness-articles/nutrition/vitamins-minerals/understanding-non-essential-amino-acid-function.html>

Gillette, R (2002). Temperature Regulation of the Dog. Retrieved June 2011 from <http://www.sportsvet.com/11Nwsltr.PDF>

Gillette, R (2008). *Feeding the Canine Athlete for Optimal Performance*. Retrieved September 25, 2008 from www.sportsvet.com/Art3.html.

Glucose (Wikipedia) - <http://en.wikipedia.org/wiki/Glucose>

Glycemic Index (Wikipedia) - http://en.wikipedia.org/wiki/Glycemic_index

Hand, Thatcher, Remillard, Roudebush, Novotny (2010). *Small Animal Clinical Nutrition*, 5th ed. Mark Morris Institute.

Hemp Milk (Wikipedia) - http://en.wikipedia.org/wiki/Hemp_milk

Hydrolysate (Wikipedia) - <http://en.wikipedia.org/wiki/Hydrolysate>

Kilocalories: (Wikipedia) - http://en.wikipedia.org/wiki/Food_energy

LiveStrong.com

Livestrong: Exercise & its Effect on Sodium Levels- <http://www.livestrong.com/article/80019-exercise-its-effect-sodium/>

Manore, M, Meyer, L and Thompson, J (2009). *Nutrition Strategies for Fitness and Performance*, 2nd ed. Human Kinetics.

Mayo Clinic - Fat - <http://www.mayoclinic.com/health/fat/NU00262>

McNarmara, John P (2014). *Principles of Companion Animal Nutrition*, 2nd ed. Pearson Education, Inc.

Medline Plus - <http://www.nlm.nih.gov/medlineplus/minerals.html> Generally

Mercola.com

Myofascial Release: Wikipedia - https://en.wikipedia.org/wiki/Myofascial_release

Nutrients (Wikipedia) - <http://en.wikipedia.org/wiki/Nutrient>

Nutrition Express - <http://www.nutritionexpress.com/article+index/authors/mark+g+taylor+ms/>

Nutrition.gov

Office of Dietary Supplements: B12 - <http://ods.od.nih.gov/factsheets/VitaminB12-QuickFacts>

Office of Dietary Supplements: Folate - <http://ods.od.nih.gov/factsheets/Folate-HealthProfessional>

Office of Dietary Supplements: Iron - <http://ods.od.nih.gov/factsheets/Iron-HealthProfessional>

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Office of Dietary Supplements: Selenium - <http://ods.od.nih.gov/factsheets/Selenium-HealthProfessional>

One Green Planet. com

Organic facts

Reynolds, Arleigh J DVM, PhD. *The Role of Glucose Polymers in Recovery from Exercise in Sled Dogs ...*, Cornell University, Ithaca, NY <http://www.absasleddogracing.org.uk/newgang/src/gangline/role.htm>.

The Nutritional Requirements of Exercising Dogs - <http://jn.nutrition.org/content/128/12/2686S.full>

Rikli, Roberta and Jones, Jessie (2013) *Senior Fitness Test Manual, 2nd Ed.*,

Senior Fitness Test Manual, Rikli, Roberta and Jones, Jessie C (2013)

Strength Training: (Wikipedia) http://en.wikipedia.org/wiki/Strength_training
The World's Healthiest Foods

Toll, P and Reynolds, A (1998). *Feeding Canine Athletes: Part I*. Retrieved September 25, 2008 from <http://www.vetmed.auburn.edu/uploads/1223/67/winter1998.pdf>

Twist, Peter (2009). *Twist Agility, Quickness and & Reactivity Workbook*. British Columbia: Twist Conditioning, Inc. University of Maryland Medical Center.com

UOM Medical Center

Vitamin Stuff.com

Waltham - pocket book of essential nutrition for cats and dogs – Proteins - https://www.waltham.com/dyn/_assets/_pdfs/waltham-booklets/Essentialcatanddognutritionbookletelectronicversion.pdf

Web MD Vitamins: <http://www.webmd.com/vitamins-supplements/ingredientmono-1005-branched-chain%20amino%20acids.aspx?activeingredientid=1005&activeingredientname=branched-chain%20amino%20acids>

Web MD Protein - <http://www.webmd.com/diet/protein-shakes?page=3>

Workout Australia

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