

NUTRITION FOR A BETTER BODY

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Does exercise alone improve body composition?

- In a U of Texas study of ~100 sedentary individuals over 12 weeks:
 - Half stayed sedentary
 - Half followed an exercise program of 5-6 ½ hours per week of activity
 - No dietary intervention
- The results?

Exercise ALONE doesn't work

- The results were not very impressive.
- After 12 weeks, the exercisers only lost 1% body fat and gained 2% lean muscle mass
- Your diet is also a necessary component in improving body composition and performance.

Our goals for today

- Review basic nutrition terminology
 - Share guidelines for good nutrition practices
 - Provide strategies for making better food choices
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- *Please note:* “Nutrition and Hydration for Training and Racing” has been moved to a separate webinar on 4/5

Krista's background and credentials

Personal and Athletic

- 6 siblings, family of athletes
- Division 1 Track & XC runner
- Triathlete
 - Qualified for Ironman Hawaii 3x (competed 2006, 11:30)
 - Competed in IM China 2008
 - Qualified & Competed in Triathlon & Duathlon Worlds 2002 & 2003
 - Qualified for Best of the US (completed 3x for MD, top 10 in 2006)
 - USAT All America

Professional

- Education:
 - BS, Exercise Physiology
 - MEd
- Certifications
 - USA Triathlon & Cycling
 - USA Weight Lifting
 - NSCA CSCS & CPT
- Strength & Conditioning Coach for 2 years, Towson University
- Performed VO₂max, blood lactate, resting metabolic rate, body composition, field testing & personal training for over 10 years

Agenda

- Basic food terminology
- An epidemic in the U.S.
- Dietary guidelines
- Nutrition scores
- When to buy organic

Let's start with some basic terminology

Term	Description
Macronutrients	Carbohydrates, fats and proteins
Micronutrients	Vitamins, minerals, phytochemicals

Let's start with some basic terminology: macronutrients

Term	Description
Carbohydrates	<ul style="list-style-type: none">• Sugars, starches, fibers• Essential for life – required by brain and CNS• Glucose – major source of energy for humans
Fats	Energy source, hormones, cell membranes, transport fat-soluble vitamins
• Unsaturated	A fatty acid with double carbon bond(s)
• Saturated	A fatty acid with no double carbon bonds
• Trans fats	Created through hydrogenation (industrial fat processing); long shelf life
Proteins	<ul style="list-style-type: none">• Made up of amino acids• Structure, hormones, enzymes, immune chemicals
• Essential AA's	Amino acids that can only be supplied by diet (8)
• Non-essential AA's	Amino acids that the body can make (12)

Let's start with some basic terminology: micronutrients

Term	Description
Vitamins	<ul style="list-style-type: none">• Organic compounds needed in trace amounts.• Play roles in growth, digestion, energy transfer, nervous system function and more
Minerals	<ul style="list-style-type: none">• Inorganic compounds needed in small amounts• Serve as building blocks for body (teeth, bones, cells, enzymes) and act as electrolytes for muscle contraction, fluid balance and generation of nerve impulses
Phytochemicals	<ul style="list-style-type: none">• Non-energy-providing chemicals found in plants.• Estimated that there are more than a thousand phytochemicals appearing in our food supply.• Research indicates that they can help to protect humans from disease.

We have an epidemic in the U.S.

- We are “*overfed and undernourished*”
- The typical American diet of meats, sugars and refined flour is too rich in calories and too low in nutrients
- More than 1/3 of children and more than 2/3 of adults in the U.S. are overweight or obese (US Government 2011)
- Even if you are within normal weight ranges, chances are you are not getting the nutrients your body needs.



Unfortunately, what we eat may be influencing our behaviors to eat even more

- Rich, sweet or fatty foods stimulate dopamine release
- Dopamine is a neurotransmitter linked to the brain's pleasure center
- Certain foods are hyperpalatable & stimulate overeating
- May cause addictive eating patterns



The challenge is first to determine what to believe and then second what to do

Need to lose weight?
FIND YOUR WEIGHT >>

Height	Age 19-34	Age over 35
5'0"	97 - 128	109 - 138
5'1"	101 - 132	111 - 143
5'2"	104 - 137	115 - 148

FREE DIET PROF




ATKINS

LOSE 10 LBS IN FIVE

FREE SHIPPING REQUIRES DE

THE U.S. GOVERNMENT'S DI

Spoil Yourself
not your
Low-Carb Diet.



Carb Solutions

It's Good to Be Good

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Where to start?



The 2010 Dietary Guidelines for Americans were released the end of January

- Federal Govt's evidence-based nutritional guidance to:
 - Promote health,
 - Reduce the risk of chronic diseases, and
 - Reduce the prevalence of overweight and obesity through improved nutrition and physical activity.
- Key findings:
 - Between 1970 and 2010, energy intake has increased by over 600 calories per day in the US.
 - Grain-based desserts (for example, cakes and cookies) are the highest ranking contributor to energy intake in the US population,
 - Sodas and sports drinks provide the highest source of calories to adolescents, followed closely by pizza.

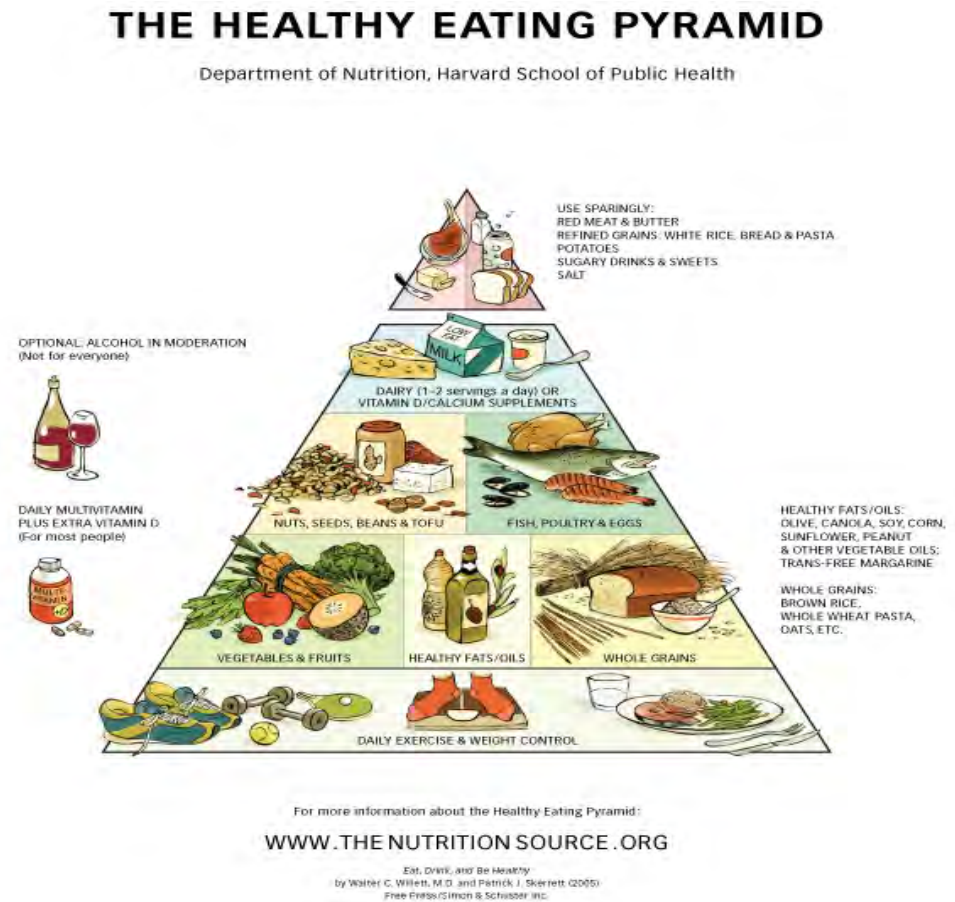
The Dietary Guidelines are an excellent starting point

- Guidelines include:
 - Enjoy your food, but eat less.
 - Avoid oversized portions.
 - Make half your plate fruits and vegetables.
 - Switch to fat-free or low-fat (1%) milk.
 - Compare sodium in foods like soup, bread, and frozen meals – and choose the foods with lower numbers.
 - Drink water instead of sugary drinks.
- Web: dietaryguidelines.gov

Another good guide is the Healthy Eating Pyramid from Harvard School of Public Health

- Includes:
 - Taking a daily multivitamin
 - Daily exercise
 - Alcohol in moderation

- Web:
thenutritionsource.org



Here are some other good nutrition practices

- Keep it simple – the fewer the ingredients the better
 - Processed foods are stripped of nutrients and our bodies are not equipped to metabolize highly processed foods.
 - We need many nutrients for optimal health, development and functioning.
- Balance portions and consumption of macronutrients
 - Eat a variety of proteins, carbohydrates and fats.
 - Moderate intake. Avoid overeating or underating.
- Don't skip meals (eat 5-6 smaller meals/day)
 - Prolonging meals depletes glycogen that liver and muscles depend on for fuel.
 - By skipping meals, we are more likely to over eat and this sets us up for cravings.

Here are some more good nutrition practices

- Shop on the outer edges of the store
 - Inner isles contain mostly highly processed foods
- Choose better fats
 - Avoid hydrogenated, partially hydrogenated, trans fats and certain liquid vegetable oils (corn, soybean, etc.) in baked goods.
 - Better fats are olive oil, flaxseed oils, fish oils, avocados and nuts.
- Adjust eating habits rather than dieting
 - Make simple upgrades that become a habit – it takes 21 days to form a habit per Stephen Covey
 - Add things instead of cutting things out.
 - Integrate the small changes which then become habits and then become lifestyle

Place a value on your food choices beyond just calories and macronutrient mix

- Assign a nutritional score to foods
 - Nutrition Scoreboard by Dr. Michael F. Jacobson and Center for Science in the Public Interest (CSPI)
 - Aggregate Nutrient Density Index (ANDI) by Eat Right America and available at Whole Foods
- A nutritional score allows you to choose and track healthier food choices more easily
- For more information and food rankings: cspi.net and eatrightamerica.com

Examples of some foods with their ANDI scores

Category	Food	ANDI Score
Green Vegetables	Mustard/turnip/collard greens	1000
	Spinach	739
Fruit	Strawberries	212
	Apple	72
Beans	Lentils	104
	Edamame	58
Meat	Bison, top sirloin	39
	Turkey, light meat	25
Fish	Tuna	46
	Salmon	39
Dairy	Nonfat skim milk	36
	Egg	27

Easy and immediate steps you can take to improve the quality of your nutrition intake

- Read all nutrition labels; pay attention to serving sizes
- Keep a food log – awareness is half the battle!
 - Log both food type and portion size
 - Free online tool: The Daily Plate (livestrong.com/thedailyplate)
- Speak with a nutrition expert.
 - Find a registered dietician: eatright.org
- Set SMART goals and write them down.
 - Simple, Measurable, Actionable, Realistic and Timebound
- Plan ahead – failing to plan is planning to fail

Here's an example food log – awareness is half the battle!

- 2/25: 3 eggs, bacon, toast; grilled chicken sandwich
Chik-fil-A sandwich, French fries, milkshake; Ruby
Tuesday's salmon, rice asparagus; bottle wine, chips.
-
- 2/26: 3 eggs, ham, toast; salmon, rice, spinach salad;
Bottle wine, chips.
-
- 2/27: 3 eggs, ham, biscuit; salad bar, salmon, baked
potato, snow peas; 2 glasses wine
-
- 2/28: McDonald's sausage biscuit, Egg McMuffin; Arby's
roast beef; salmon salad; pistachios, Frito Scoops, 2
glasses wine.

Better food choices

Nutrient	Better choice
Water	64 oz/day, replace fluids lost post exercise (1 pint per pound)
Proteins (lean)	Eggs, non-fat milk, low fat cheese, 2% cottage cheese, non-fat plain Greek yogurt, water packed tuna, chicken breast, ham, lean red meats, natural peanut butter, turkey breast, fish (salmon, trout, etc.)
Fats (emphasize mono and polyunsaturated fats)	Walnuts, almonds, peanuts, cold water fish, olive oil, Avocados, essential fats such as flax or fish oil can be supplemented
Carbohydrates (fiber and nutrient rich)	Whole grain breads (Ezekiel), quinoa, brown rice, sweet potatoes, red potatoes, potatoes w/ skin, fresh blackberries, blueberries and strawberries
Alcohol	Limit consumption

What about organic foods?

- The “Clean Fifteen” (not as important to buy organic)
 - Asparagus, Avocados, Tomato, Cabbage, Broccoli, Cauliflower, Sweet Corn, Kiwi, Mangos, Onions, Papaya, Pineapples, Sweet Peas, Egg Plant, Watermelon
- The “Dirty Dozen” (buy these organic)
 - Peaches, Apple, Bell Pepper, Celery, Strawberries, Nectarines, Pears, Cherries, Spinach, Grapes, Carrots, Winter or Hard Squash

Sample meal plan

Meal	Foods
Breakfast	OJ (1 cup), 2 slices French toast, maple syrup, 1 cup strawberries
Lunch	Low-fat cheese (2 oz), 2 slices bread, 1 medium tomato, 1 yogurt w/ fruit, 1 pear
Snack	8 small crackers, ½ cup hummus, 8 oz. skim milk
Dinner	½ cups rice, 6 oz shrimp, 1 red pepper, 1 cup broccoli cooked, 1 tbsp sesame seed oil
Snack	1 cup frozen yogurt, ½ cup fruit slices

Source: *Sports Nutrition for Endurance Athletes* by Monique Ryan

Conclusion

- Eating healthy is a challenge on modern day America
- Educate yourself and make better choices

- Remember:

“Everything in moderation, especially moderation.”

– Mark Twain

Thank you for listening!

- Our next webinar will be on 4/5: *Nutrition and Hydration for Triathlon Training and Racing* (enduranceworks.net)
- Please contact Krista with any questions or feedback: krista@enduranceworks.net
- Be sure to visit enduranceworks.net for more great resources!

