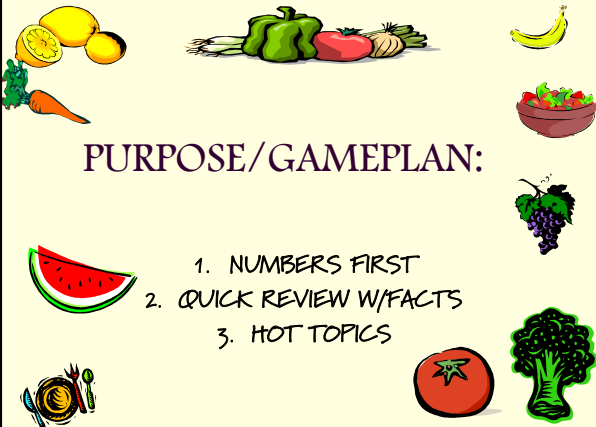


**ALIVE & WELL:
NUTRITION FOR
THE MILLENNIUM**

Lawrence Biscontini
Certified Dietary Counselor



PURPOSE/GAMEPLAN:

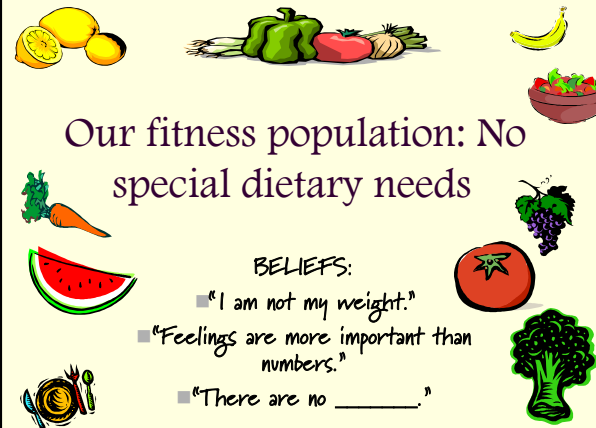
1. NUMBERS FIRST
2. QUICK REVIEW W/FACTS
3. HOT TOPICS



**ALIVE & WELL: NUTRITION
FOR THE MILLENNIUM**

FACTS AND FADS

- "meal-plan" vs. "diet"
- "If your lifestyle doesn't control your meal plan, your meal plan will control your lifestyle."



**Our fitness population: No
special dietary needs**

BELIEFS:

- "I am not my weight."
- "Feelings are more important than numbers."
- "There are no _____."



FACTS AND FADS

- The truth is that...
- "There is no such thing as junk food."
- "Ethics and food aren't related."
- "A nutrient is a nutrient is a nutrient."

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40 calories 40 calories

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BEFORE **AFTER** **BEFORE** **AFTER**

COINED 28 pounds in 8 weeks! **Lost 30 Pounds!**

MESO TECH **HYDROXYCUT**

Slim Jim

Behold Meso-Tech James (heftier than before) and Hydroxycut James (thinner). Someone should tell James that it's not healthy for his weight to fluctuate so much. The photos appeared in the same issue of Men's Fitness. (We're not sure if it's significant that Hydroxycut James has snapped a date.)

MESO Tech is a dietary supplement which you eat and don't have to cook. They take so delicious I can't believe they're good for me! - James Bentley

Hydroxycut has helped me lose more weight than any other product. I have to make sure to take it with my protein and Hydroxycut is not a magic pill. It appears, but it does depend on diet! - James Bentley

JUNE 2003 • CONSUMER REPORTS 59

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ADA
www.eatright.org
findLawrence.com

Nancy Clark's
SPORTS NUTRITION GUIDEBOOK
Updated, Expanded Second Edition
Eating to Fuel Your Active Lifestyle
NANCY CLARK, M.S., RD
America's Leading Sports Nutritionist

Over 200,000 in print!

FACT

- "It's harder to modify food behavior than to stop smoking."
- Harvard University

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RAINBOW

NUTRITIONAL ANALYSIS SHEET

Let's Get Specific...

NUTRITIONAL ANALYSIS SHEET

Body Mass Index = $\frac{\text{weight (lbs.)}}{\text{height inches} \times \text{height inches}} \times 705 = \text{BMI}$

BMI	
20- 25	very low risk
26- 30	low risk
31-35	moderate risk
36-40	high risk
40 +	very high risk

NUTRITIONAL ANALYSIS SHEET

Activity Range
.30-.40- sedentary
.50-.60-moderately active
.70-.80-vigorously active
.90-athlete/instructor
1-EXCEPTIONALLY ACTIVE

Base Metabolic Rate = _____ x _____ = _____ calories / day
 (10 women, (body weight) (maintenance basal metabolic rate/ MBBMR)
 11 men)

Activity Calories = [.30-1.0] x _____ = _____ calories
 range of activity] (MBBMR) (Activity Calories/AC)

Daily Energy Expenditure = _____ + _____ = _____ calories
 (DEE) (MBBMR) (AC) (DEE)

NUTRITIONAL ANALYSIS SHEET

Macronutrients Body weight = _____ DEE = _____
 Activity Level = Low-Moderate Active/Athlete Specifics....

CHO (carbohydrates)	55-60% (____)g CHO 3g/lb x lbs = _____	60-75% (____)g CHO 3-4.5 g/lb x lbs = _____	x _____ = / _____ cal ÷ 4cals/g = _____ g CHO
PRO (teins)	10-15% (____)g PRO .4g/lb () g PRO	10-20% (____)g PRO .5-8g/lb () g PRO	x .10 = / _____ cal ÷ 4 cals/g = _____ g PRO
FAT [_____ = my fat goal]	25-30% <10% saturated fat () g FAT	25% () g FAT	x _____ = cal ÷ 9cals/g = _____ g FAT or less (_____ g x .10 = _____ g of saturated fats or less)

NUTRITIONAL ANALYSIS SHEET

Macronutrients: Body weight = 120 DEE = 2500
 Activity Level = Low-Moderate Active/Athlete Specifics....

CHO (carbohydrates)	55-60% (____)g CHO 3g/lb x lbs = _____ <u>120 x 3 = 360</u>	60-75% (____)g CHO 3-4.5 g/lb x lbs = _____	<u>2500 x .55 - .60 =</u> <u>1375 / 1500 cal ÷</u> <u>4cals/g =</u> <u>344 - 375 g CHO</u>
PRO (teins)	10-15% (____)g PRO .4g/lb () g PRO <u>120 x .4 = 48</u>	10-20% (____)g PRO .5-8g/lb () g PRO	<u>2500 x .10 - .15 = 250 /</u> <u>375cals ÷ 4 cals/g =</u> <u>63 / 94 g PRO</u>
FAT [_____ = my fat goal]	25-30% <10% saturated fat () g FAT	25% () g FAT	<u>2500 x .25 = 625 cal ÷</u> <u>9cals/g = 70 g FAT or less</u> <u>(_____ g x .10 = _____ g of saturated fats or less)</u>

NUTRITIONAL ANALYSIS SHEET

Sample Page:

CHO Example: Boiled Spaghetti, cooked (84g)	8 oz = 2 c	168g CHO	4 Serv Bread
Palmation (106)	1 ea	14g PRO	1 Serv Milk
Cherry Juice (100)	68 oz	26g CHO	1 Serv Fruit
2 slices wheat bread com		26g CHO	2 Serv Bread
raisins (60)	1 medium	15g CHO	1 Serv Fruit
Nonfat Yogurt (110)	1 container	16g CHO	1 Serv Milk
Peanut Butter (200)	2 tbsp	8g CHO	1 Fat occurrence
		8g PRO	1/3 Serv Meat
		16g FAT	
Rice (120)	1	26g CHO	1 Serv Fruit
Brown Rice (204)	4 oz = 1 c	68g CHO	1 Serv Bread
Steamed Broccoli (22)	1/2 c = 2 oz	2.3g CHO	1 Serv Veggies
		1.3g PRO	
PRO Example: Chicken Breast (83)	3 oz	18.5g PRO	1 Serv Meat
Tuna (150)	2 oz in water	15g PRO	1 Serv Meat
Lentils (230)	1/2 c	10g PRO	1/3 Serv Meat
Oatmeal-Oat Bran (164)	2 oz = 1/2 c	17g CHO	1 Serv Bread
		8g PRO	
FAT Example: Olive Oil (120)	1 tbsp	14g FAT	2 Fat occurrences

TOTALS: Calories: 2700	392g CHO	3 FAT occurrences
	84g PRO	2 Milk 3 Meat
	30g FAT	2 Vegt. 3 Fruit
		8 Bread
	58% CHO	
	12% PRO	
	10% FAT	

HOT TOPICS

CHOCOLATE: "stearic acid"
 Cocoaiva

TEA: egcg antioxidant
 (teastea.com, lipton.com)

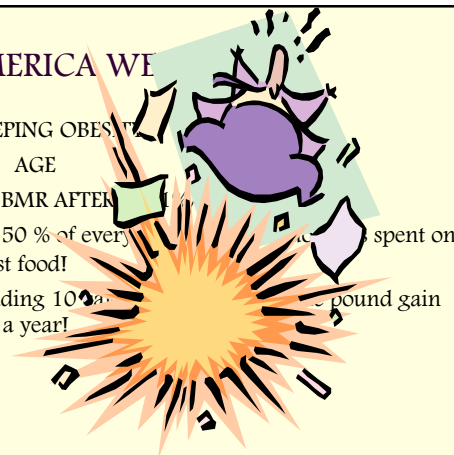
GRAPE JUICE:

ORGANIC

AMERICA WE

CREEPING OBESITY

- AGE
- BMR AFTER
- 50 % of every
- fast food!
- adding 100 lbs
- in a year!



FACT

- 3 out of 4 adults consume a 'junk food' at least every day (*Consumer Reports on Health* from November, 2001).

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6 NUTRIENTS OF FOOD:

MACRONUTRIENTS:

- WATER
- CARBOHYDRATES
- FATS
- PROTEINS

MICRONUTRIENTS:

- VITAMINS
- MINERALS

CARBOHYDRATES

•SIMPLE CARBOHYDRATES

MONOSACCHARIDES (GLUCOSE, FRUCTOSE, GALACTOSE)
DISACCHARIDES (SUCROSE, LACTOSE, MALTOSE)

•COMPLEX CARBOHYDRATES

POLYSACCHARIDES: STARCHES, FIBERS (SOLUBLE/INSOLUBLE)

•4 CALORIES PER GRAM

•NEED: 55-60 % CALORIES PER DAY

Eg: 2000 calorie meal plan x .55-.60 = 1100-1200cals ÷ 4 = 275-300g CHO

ANTIOXIDANTS & PHYTOCHEMICALS: HAPPY FOODS

•Vitamins A, C, E

•T...
Avocado, Dates, Bananas,
Eggplant, Passion Fruit, Pineapple,
and Tomato (Lycopene)

•Carotenoids

•Flavonoids

CARBOHYDRATES

POST WORKOUT REFUELING:

.7G/LB IMMEDIATELY AFTER EXERCISE

EXAMPLE: 112G FOR 160 POUND PERSON

112 G IN ONE CUP RAISINS



Research: ONLY MACRONUTRIENT
THAT FUELS THE BRAIN!

FACT

- "sweet" and/or "salty" snacks are a \$30 billion yearly industry in the US (IRI US Food of Dec 2002)
- eatright.org: 90% of snacks are unplanned
 - behavior (CRUNCH)

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PROTEINS

- ESSENTIAL AMINO ACIDS
- NON-ESSENTIAL AMINO ACIDS
- 4 CALORIES PER GRAM
- NEED: 10-15% CALORIES PER DAY

*Eg 2000 calorie meal plan x .10-.15 = 200-300cals ÷ 4 = 50-75g PRO

PROTEINS



- MUSCLES ARE 75% WATER
- PROTEINS ARE THE LEAST USEABLE MN.
- RESEARCH: EXCESS LEADS TO BURDENED KIDNEYS, CARDIAC RISK FACTORS, ET. AL.
- <10% PRO IN BODY USED FOR FUEL (K.)
- HELPS OPTIMIZE GLYCOGEN RECOVERY

PROTEINS

- DO WEIGHT LIFTERS NEED MORE PROTEIN THAN ENDURANCE/AEROBIC-ORIENTED ATHLETES?

FACT

- FAST FOOD NATION reports that 50% of every US food dollar is spent on junk food.

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FATS

- MONO-UNSATURATED
- POLY-UNSATURATED
- SATURATED
- 9 CALORIES PER GRAM
- NEED: 30% CALORIES PER DAY

} HYDROGENATED
"TRANS,"
"FRACTIONATED"

*Eg 2000 calorie meal plan x .30 = 600cals ÷ 9 = 66g FAT (or less)
[CHOLESTEROL: <200, HDL > 35, LDL < 130, TRIGLYCERIDES <200]

POLITICALLY CORRECT By Jim Haber

Don't partially hydrogenate me™
www.bantransfats.com

findLawrence.c "How do you guys want your trans fatty acids prepared?"

FATS

- NECESSARY FOR CELL MEMBRANES, ENERGY PRODUCTION, LIPOPROTEINS, PROTECT ORGANS, THERMO REGULATION (SUBCUTANEOUS), CARRIER A/D/E VITAMINS, TRANSMIT MESSAGES ALONG NERVES



- STRESS PLAYS A ROLE IN FAT STORAGE
- HORMONE SENSITIVE LIPASE
- CORTISOL AND STRESS
- GALLBLADDER NEEDS 10G/MEAL

FACT

- 73% of Americans choose what they call a 'junk food' once a day, 39% do it twice a day, and more than 10% of it takes place while driving. (Information Resources Inc, *Snackworld* July 2002)

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ALCOHOL

- HIGH ALCOHOL INTAKE PROMOTES HEAD AND NECK CANCERS; MODERATE ALCOHOL INTAKE PROMOTES BREAST CANCER; LIGHT INTAKE MAY DECREASE RISK OF CARDIOVASCULAR DISEASE

- 7 CALORIES PER GRAM

COMBINING

- GLYCEMIC INDEX

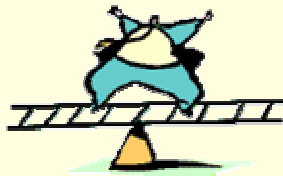
- LEVEL OF COMBINATION
- LEVEL OF FITNESS
- LEVEL OF HEALTH
- LEVEL OF ENERGY BALANCE
- METABOLIC STATE

Eg.: OATMEAL VS. PASTA

Carbohydrates are the best sources of glycogen.

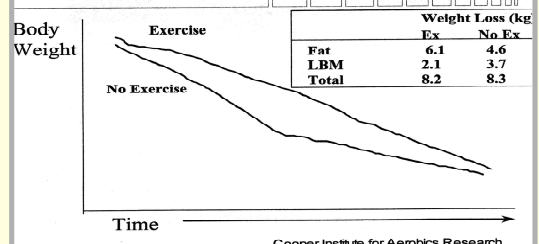
LOSING "WEIGHT" VS. LOSING FAT

- Any meal plan falling below 1,500 calories per day can be *unsafe!*
- Creatively manipulate the 500 calorie reduction!
- 1 POUND OF FAT SUPPLIES 3,500 CALORIES
- $3,500 \div 7 \text{ days} = 500 \text{ calories / day reduction}$

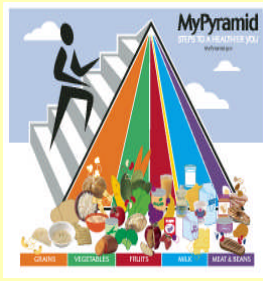


LOSING "WEIGHT" VS. LOSING FAT

Effects of Exercise and Caloric Restriction (Hill et al., 1987)



USDA Food Guide Graphic



MyPyramid Food Guidance System (2005)

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Learning how to use MyPyramid

Anatomy of MyPyramid

One size doesn't fit all. USDA's new MyPyramid symbolizes a personalized approach to healthy eating and physical activity. The symbol has been designed to be simple. It has been developed to reflect concerns to make healthy food choices and to be active every day. The different parts of the symbol are described below.

Activity
Activity is represented by the steps and the person climbing them, as a reminder of the importance of daily physical activity.

Proportionality
Proportionality is shown by the different widths of the food group bands. The widths suggest how much food a person should choose from each group. The widths are just a general guide, not exact proportions. Check the help site for how much is right for you.

Moderation
Moderation is represented by the narrowing of each food group from bottom to top. The wider base stands for foods with little or no solid fats or added sugars. These should be selected more often. The narrower top area stands for foods containing more solid fats and added sugars. The more active you are, the more of these foods can fit into your diet.

Personalization
Personalization is shown by the person on the steps, the steps, and the URL. Find the links and amounts of food to eat each day at MyPyramid.gov.

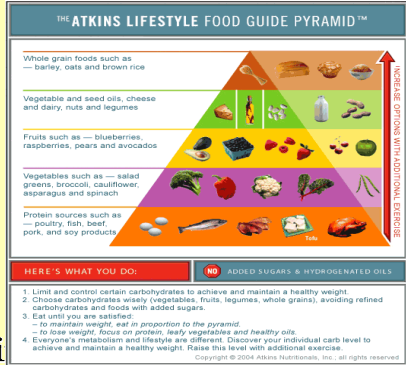
Verbalogy
Verbalogy is symbolized by the 8 color bands representing the 8 food groups of the Pyramid and also. This illustrates that foods from all groups are needed each day for good health.

Gradual Improvement
Gradual improvement is encouraged by the steps. It suggests that individuals can benefit from taking small steps to improve their diet and lifestyle each day.

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Other Pyramids

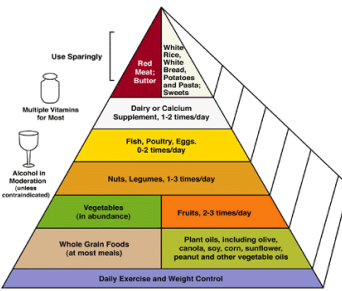
Click here to download.pdf



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Harvard's

Healthy Eating Pyramid



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Vegetarian & Asian

(Oldways at www.oldwayspt.org/)

The Traditional Healthy Vegetarian Diet Pyramid



The Traditional Healthy Asian Diet Pyramid



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Portion Awareness

Serving Sign Language

One of the best tools for gauging a proper serving size is your hand. Although it's not 100 percent perfect, it should provide a reliable rough estimate. The best part? It's customized to fit your needs. For instance, if you're a petite woman who requires fewer calories, your hand is probably smaller than that of a tall man who requires more. Follow this guide:

Cup of vegetables or piece of fruit	Ounce of cheese	Cup of dry cereal	Single serving of meat	Teaspoon of butter

FOOD LABELS

Nutrition Facts
Serving Size 3 cookies (34g/1.2 oz)
Servings Per Container About 5

Amount Per Serving		Calories from Fat 90	
		% Daily Value*	
Total Fat	10g		18%
Saturated Fat	3.5g		18%
Polysaturated Fat	1g		
Monounsaturated Fat	5g		
Cholesterol	10mg		3%
Sodium	90mg		3%
Total Carbohydrate	21g		7%
Dietary Fiber	1g		4%
Sugars	11g		
Protein	2g		
Vitamin A	0%	Vitamin C	0%
Calcium	0%	Iron	4%
Thiamin	0%	Riboflavin	4%
Niacin	4%		

*Percent Daily Values are based on a diet of other people's misdeeds.

Calories from Fat are now shown on the label to help consumers meet dietary guidelines that recommend people get no more than 30 percent of the calories in their overall diet from fat.

% Daily Value (DV) shows how a food in the specified serving size fits into the overall daily diet. By using the %DV you can easily determine whether a food contributes a lot or a little of a particular nutrient. And you can compare different foods with no need to do any calculations.


ERGOGENIC AIDS

- Calculating % of calories from fat:
 - Take grams of FAT x 9 cal/g.
 - Divide this number by Total Calories

For example @ left:

 - $10 \times 9 = 90$
 - $90 \div 180 = 50\%$

SUPPLEMENT ACT OF 1994: MANUFACTURERS CAN MAKE ANY CLAIM THEY WISH AS LONG AS IT DOES NOT CURE DISEASE!



ERGOGENIC AIDS

- Are there documented benefits?
- Do these benefits outweigh all risks involved?

FACT

- Half of Americans agree that CONVENIENCE is the key to the choices they make when grabbing a quick snack. (NPD Group)

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HOT TOPICS

- Omega 3: marine, flaxseed, fish, olive oil (2003 vs. 2004)
- Reduce high bp, anti-inflammatory, decrease triglyceride, reduce atherosclerosis
- whiter fish excepting tuna (haddock, cod, bream, trout, farmed sea bass)

HOT TOPICS

- Stanol/Sterol Esters
- Plant sterols from pine trees and stanols
- Sept 2000: FDA permission plant sterol/ stanol esters reduce CHD
- Stanols:** ***Benecol (McNeil) Stanol, Stanol + Sterol
- Sterols: Take Control (Lipton)
- FDA: sterols .65 g per serving and 1.7 g of stanol esters

HOT TOPICS

■ SOY

- Can lower high blood chl by 10-15%
- 25g soy protein per day may lower cholesterol
- Approx: 1 c cooked soybeans
- ½ c roasted soy nuts
- 3 c soymilk

HOT TOPICS

■ CAFFEINE

- Can help release fat from adipose cells in small amounts

HOT TOPICS

LABELS:

- **FREE:** *“trivial, small”*
- **LOW:** *“low _____, specifically defined”*
- **REDUCED:** *at least 25% less fat, sfat, chol, or NA that comparable food*
- **HIGH:** *20% or greater than Daily Value*
- **GOOD SOURCE:** *10 to 19% of Daily Value*
- **LIGHT:** *1/3 fewer calories or 50% less fat*
- **HEALTHY:** *low in fat and sfat, 480 mg or less*
- **LEAN:** *less than 10g total fat, 4.5 g or less sfat*

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FACT

- Half of Americans agree that **CONVENIENCE** is the key to the choices they make when grabbing a quick snack. (NPD Group)

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NUTRITIONAL ANALYSIS SHEET

THE PERFECT MEAL???

CHO: WHOLE WHEAT FLOUR, AMARANTH, QUINOA, SOY,
100% BRAN FLAKES
CHO AS SWEETENER: MANGOS, OJ FROM CONCENTRATE
PRO: EGG WHITES, SPIRULINA, LITE SOY MILK (EMULSIFIER)
FAT: CANOLA OIL, GROUND SALTED PEANUT BUTTER
VITAMINS & MINERALS: SOY YOGURT
ANTIOXIDANTS & FLAVONOIDS: DECAF GREEN TEA EXTRACT,
(MANGO/OJ)
BAKING POWDER TO RAISE IT UP

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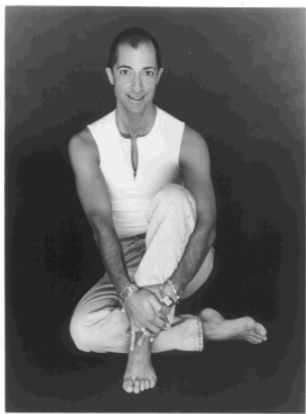
NUTRITIONAL BREAKDOWN: 20% FAT, 20% PRO
FUNCTIONAL, SUSTAINING, NUTRIENT DENSE SNACK SOURCE

FURTHER INFORMATION:

- www.findlawrence.com
- www.fda.gov The Food and Drug Administration
- vm.cfsan.fda.gov/~dms Food Safety Inspection Service
- www.eatright.org National Weight Control Association
- www.americanheart.org American Heart Association
- www.americancancer.org American Cancer Society
- www.foodallergy.org Non-profit Food Allergy Network
- www.nutritionnavigator.tufts.edu University Nutrition Navigator
- www.ers.usda.gov/fnic Food Pyramid Information

findLawrence.com

- Lawrence's "Alive & Well" MILLENNIUM MUFFINS
- 2.5 CUPS: WHOLE WHEAT FLOUR, 3 TBSPS AMARANTH, 3 TBSPS QUINOA, ½ CUP 100% BRAN FLAKES CEREAL
- ½ CUP CHOPPED MANGOS
- 1-1 ½ C OJ FROM CONCENTRATE AS NEEDED (DEPENDS ON HUMIDITY OF DRY INGREDIENTS: TRY 1 CUP OJ TO START)
- ¼ C LITE SOY MILK
- 6 -10 EGG WHITES, slightly beaten first
- 5 TBSPS SPIRULINA POWDER,
- 3 TBSPS CANOLA OIL,
- ¼- 1/2 CUP GROUND SALTED PEANUT BUTTER
- VITAMINS & MINERALS: SOY YOGURT
- 5 TSPTS DECAF GREEN TEA EXTRACT, (MANGO/OJ)
- 3 TBSPS BAKING POWDER
- TOP W/ SHREDDED MANGO OR CHOPPED NUTS OR BOTH. MIXTURE SHOULD BE LUMPY AND MOIST; ADD WATER OR SOYMILK AS NEEDED. BAKE 20-40 MINUTES (OR UNTIL TOOTHPICK INSERTED IN CENTER PULLS OUT CLEAN AND DRY) UNTIL GOLDEN BROWN AT 350 DEGREES
- NOTE: Mix shouldn't be too moist or dry; avoid overmixing ingredients. Add more or less flour depending on consistency and quality of your ingredients.
- COOL ON WIRE RACK



"Namaste"

Take-home message

Homework

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