

**Meals Partnership Coalition
2010 Nutrition Education**

Seminar 3

June 30, 2010
1:00 pm

The Millionair Club
2515 Western Avenue
Seattle, WA 98121

Introduction

Presenters:

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Bastyr University Masters of Nutrition Program


Bastyr University

- A naturopathic university based on treating the body as a whole instead of in parts.
- Our nutrition program is nationally accredited and focused on the importance of whole foods.

Objectives

- This is the third of four sessions, each based on different needs of the population you serve.
- We believe it is relevant to discuss different parts of nutrition such as:
 - macronutrients (carbohydrate, protein, or fat)
 - disease states affected by food and nutrition
 - vitamins and minerals in foods that are important to sustain health
- We have prepared menus and recipes for each meal that may meet nutrient needs as well as be appealing to the clients and easy for us all to prepare in the kitchens.

Objectives



- Lecture vs. discussion
- Questions are welcome and encouraged
- Our objectives are to present real, concrete information to you that you can use to serve your clients better. Nutrition education can make a difference to our community!

Homeless and Risk of Nutrition Related Diseases

Homeless adults eat fewer meals and a smaller variety of foods per day.

Nutrients for which more than a third of diet recalls were below 2/3 of 1989 RDAs were:

- zinc (66 percent)
- vitamin B6 (51 percent)
- vitamin A (49 percent)
- calcium (34 percent)

In a national study of homeless adult outpatients, nutritional deficiencies were 20 times more prevalent among the homeless than among housed ambulatory health care users.

Homeless and Risk of Nutrition Related Diseases

Certain health problems common among homeless adults have a nutritional component in their etiology or treatment:

- Alcoholism
- Anemia
- Dental problems
- Gastric ulcers
- Other gastrointestinal complaints
- Cardiovascular disease
- Hypertension
- High cholesterol
- Acute and chronic infectious diseases (upper respiratory, skin, TB, AIDS)
- Nutritional deficiencies
- Neurological diseases

Current Trends in the Homeless Population

In January 2010, the Seattle King County Coalition for the Homeless conducted their annual "One Night Count," which includes a street count throughout the county and a survey of homeless shelters and transitional programs throughout King County.

Current Trends in the Homeless Population

Household composition
Homelessness affects all segments of the population – including children.

The One Night Count survey reports the following breakdown among households living in emergency shelter and transitional housing programs:

- > 55% families with children
- > 33% single adult men
- > 11% single adult women
- > Less than 1% unaccompanied youth



The Power of Food "Food is Medicine"

For the homeless population that you serve, food is not just a means to reduce hunger.

You provide the one key element they need to maintain their health and prevent the development of chronic disease – FOOD!



Macronutrients

Macronutrients include Protein, Carbohydrates, and Fats

Today's Focus: Fat



Fat



Types:

- Saturated (solid at room temperature)
- Unsaturated (polyunsaturated, monounsaturated; liquid at room temperature)
- Hydrogenated ("trans"; solid at room temperature)

The human body can synthesize most fatty acids but cannot make the health promoting polyunsaturated omega-6 and omega-3 fatty acids



Why is Fat so important?

- ✓ Fat is the most efficient form of storing energy.
- ✓ Fat is used to form other important substances in the body, including **cholesterol** necessary to produce bile, **phospholipids** important for cell membrane function, and **hormones** responsible for growth and male and female characteristics.
- ✓ Fat provides padding for our bones and vital organs, and helps regulate body temperature.



Why is Fat so important?

- ✓ Fatty acids synthesize **chemical messengers** called prostaglandins, leukotrienes, and thromboxanes that are essential for normal body function. These messengers are involved in inflammatory responses, smooth muscle contraction, and blood clotting.
- ✓ Cholesterol is important for forming steroid hormones, bile and vitamin D.
- ✓ Fat contains essential fatty acids (omega-3 and omega-6) necessary for the synthesis of other health promoting substances in the body.



Fat – Recommended Intake

The recommended range of fat intake for adults is 20% to 35% of total calories each day.

For a 2,000 calorie diet, this is 45 – 75 grams per day.

1 tablespoon of butter or olive oil has 14 grams of fat.



What about type of fat?



Saturated fats should make up no more than about 10% of your calorie intake. In excessive quantities saturated fat has been shown to clog arteries and cause other cardiovascular health problems.

Saturated fats are mainly in animal foods, such as beef, pork, lamb, butter, cheese, cream, ice cream and other full-fat and low-fat dairy products. It's also found in tropical palm and coconut oils.

What about type of fat?

Monounsaturated fat helps protect against heart disease by lowering LDL (bad cholesterol) and raising HDL (good cholesterol).

The best source is extra virgin olive oil. Other good sources include olives, almonds, peanuts, pecans, hazelnuts, avocados and pumpkin and sesame seeds.



What about type of fat?



Polyunsaturated oils are the source of essential fatty acids.

Most people get way too much polyunsaturated omega 6 fat in the form of highly refined vegetable oils. This throws off their optimum balance of omega 3 to omega 6 oils.

What about type of fat?



Omega 3 with EPA and DHA is considered to be in a class by itself – even though it's technically polyunsaturated.

This is because of their potential health benefits, which include reducing risk of heart disease, type 2 diabetes, some kinds of cancers, arthritis, depression and protection against many other painful and serious diseases.

The best sources of omega 3 with EPA and DHA are salmon, mackerel, herring, tuna, trout, anchovies and good quality omega 3 fish oil capsules. (Note: plant sources of omega 3 do NOT have EPA and DHA.)

What about type of fat?

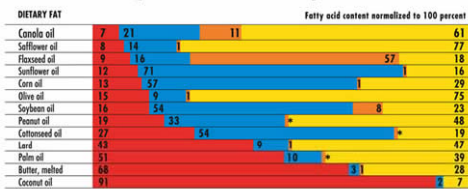
Trans fat is created when processed vegetable oils are hydrogenated or partially hydrogenated.

Trans fatty acids are the real bad fat boys. Since trans fats have been shown to raise artery-clogging LDL (bad) cholesterol and cause breast cancer, they should be totally eliminated from your diet.

Food sources include candy, cakes, pies, cookies, pastries, crackers, biscuits, cereals, deep fried foods, soups, margarine and some salad dressings.



Comparison of Dietary Fats



Canola Info canola.info.org

www.mcgarcanola.org/food_oil101.html

Discussion

1. What are some sources of healthful fats that you typically serve in your facilities?
2. Are there any problems with the types of fat your clients consume?



Risk of Disease

Today we will cover:

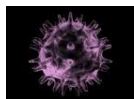
- > Immune compromised diners
(including HIV, TB, Hepatitis, Pneumonia)
- > Alcoholism
(including nutrient deficiencies)

Risk of Disease

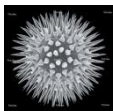
Today's focus: Immune Compromised

Diseases associated with lowered immunity:

- ✓ HIV/AIDS
- ✓ Tuberculosis (TB)
- ✓ Hepatitis/liver disease
- ✓ Flu/pneumonia



What is Immunity?



In a nutshell: **protection against infections!**

We have a system of cells and molecules that defend our body against microbes in our environment.

Major components: Skin, gastrointestinal tract, respiratory tract.

What Lowers Immunity?

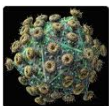
Immune deficiency can be caused by a virus (HIV) or may result secondary to a condition (infection, malnutrition, autoimmune disease).

Your clients may experience

- Being exposed to the elements
- Chronic illness
- Poor nutrition or hydration status



HIV/AIDS



- In short, HIV/AIDS is an immune deficiency that occurs secondary to a viral infection.
- It is characterized by infection and depletion of CD4+ T lymphocytes which leads to extreme immunosuppression and opens the patient to opportunistic infections that could not usually occur with a healthy immune system.

HIV/AIDS

- During the 2008 One Night Count, 107 people accessing shelter and transitional programs were reported as HIV-positive or having AIDS. It should be noted that this is almost certainly an undercount and does not include any people who were homeless and not able to access shelter/housing during the One Night Count. (Seattle Public Health)

HIV/AIDS

Two percent (2%) of the 6,283 King County residents living with HIV or AIDS were reported as homeless at the time of diagnosis. (2008 Seattle Public Health)


Organs affected by HIV/AIDS

- GI tract (diarrhea)
- Kidney
- Neurological
- Bone

HIV/AIDS Patient Needs

You wouldn't necessarily know if your client had this virus, but there are some things to consider:

- > Food safety!! (covered later)
- > Increased protein needs
- > Increased energy needs (with weight loss)
- > Increased fluid needs (diarrhea, medication)
- > Consider oral cavity comfort



Tuberculosis (TB)



TB is caused by a bacteria, "mycobacterium tuberculosis", that is spread in tiny droplets through the air when a person with active TB coughs. Close contact over a period of time is generally necessary for transmission. TB commonly infects the lungs, but it also can spread to other parts of the body like the brain or spine.

The body's immune system usually walls off the TB germs and protects the body from developing active infection but if immunity is suppressed it can become active with symptoms of severe, chronic cough, fever and weight loss.

www.metrokc.gov/health/tb (Seattle Public Health TB site)

TB among the homeless

- Homeless TB patients approximately doubled during the past year to 29%, or nearly one-fifth of all cases.
- Health officers say the homeless are particularly vulnerable because many have impaired immune systems from battling other illnesses. They also often congregate in close quarters where the disease can spread.

Seattle Times, by Warren King January 28, 2010

TB and nutrition




TB patients need good nutrition including:

- > Increased protein needs
- > Increased vitamin needs:
B6, A, C, iron, calcium (due to medications such as Isoniazid)

Mostly, these patients need balanced nutrition to help support their immune system and protect them from developing active TB.

Hepatitis: a virus that causes liver inflammation



Hep A: Spread by contaminated water or food (virus is spread in the stool for several weeks during infection). The person can recover once they get over their jaundice.


Hep B: Spread via blood or bodily fluids. Can develop into chronic liver disease. (There is an A/B vaccine)

Hep C: 40% of US cases are spread via intravenous drug use. Has a high rate of progression to chronic liver disease. Is the most common reason for liver transplant in the US.

Progression includes:

1. Asymptomatic acute infection
2. Acute hepatitis (jaundice)
3. Chronic hepatitis (may or may not lead to cirrhosis)
4. Cirrhosis (liver is overcome with scar tissue and is destroyed)


Liver disease and nutrition



Because the liver is the body's "hub" for processing food and nutrients, there are special considerations when a person has liver inflammation or disease:

- Ensure adequate A, D, E, K (fat soluble vitamins)
- Zinc (especially if the patient has diarrhea or is drinking alcohol)
- Iron (to support the liver and in case of internal bleeding)
- Calories to prevent malnourishment and support healing
- Hepatitis may cause fluid retention, so limiting sodium may be important as well.

Influenza/Pneumonia



- The flu, which can progress to pneumonia, are leading causes of sickness and death in the homeless population.
- The flu is a contagious respiratory illness—those with compromised immune systems are at greater risk for contraction.
- Pneumonia is an infection of the lungs that could result as a complication of the flu.

Influenza/Pneumonia

"Homeless persons experience high rates of pneumonia and related death. This outcome indicates that the homeless also have high rates of influenza because pneumonia is a common complication of influenza. Depending upon patient's age and sex, death rates attributed to pneumonia or influenza among homeless adults range greatly"

(Bucher SJ, Brickner PW, Vincent RL. 2006)
<http://www.cdc.gov/ncidod/EID/vol12no07/06-0217.htm>

Nutrition and lung infections

- Because the flu and pneumonia can cause inflammation, foods that lower inflammation could be helpful (omega 3, fruits and vegetables).
- Because of fever, increasing fluids may be necessary.
- A diet adequate in protein and calories can help boost immunity and fight infection.



Discussion

- Are you aware that these immune related diseases affect your clients?
- What kinds of food that you serve would be healthful to those with weakened immune systems?



Alcoholism Risk of Nutrition Deficiency

Alcoholism is one of the health problems common among homeless adults that has a negative nutritional impact and warrants special consideration.

Several factors contribute to malnutrition common in alcoholics:

- Alcohol frequently replaces food in the diet.
- Alcohol's toxic effect on the gastrointestinal tract also promotes poor nutrition.
- Vitamin and mineral deficiencies result from reduced intake of food and alterations in absorption, storage and ability to convert the nutrients to their active forms.



Alcoholism Risk of Nutrition Deficiency

Thiamin (vitamin B1) – is the most common deficiency among alcoholics

- Alcoholics have an increased requirement for thiamin due to liver damage (impairs formation of thiamin metabolite TDP) and alcohol inhibits the absorption of thiamin and traps thiamin in intestinal cells, so even if it is absorbed the body may not be able to use it.
- Thiamin is essential for helping body cells obtain energy from food, helps keep nerves healthy, and promotes good appetite and digestion.
- Thiamin deficiency is responsible for a condition called **Wernicke's Encephalopathy**. Symptoms include staggering, confusion, loss of short-term memory and uncontrollable random eye movement.

Alcoholism Risk of Nutrition Deficiency

How can your meal planning help prevent a thiamin deficiency?

Include foods rich in thiamin such as meat (especially pork), poultry, legumes (beans and peas), and fortified or enriched flour and cereal. The daily requirement is 1.2 mg/d and there is no upper limit.

Examples of foods rich in thiamin:

- > 3 oz. cooked pork (.6 mg to 1.1 mg)
- > 1 cup enriched white rice (1.2 mg)
- > ½ cup cooked peas or beans (.2 mg)
- > 1 cup Kellogg's corn flakes (.5 mg)
- > 1 cup enriched pasta (.5 mg)



Alcoholism Risk of Nutrition Deficiency

Riboflavin – alcohol impairs digestion and absorption; is vital for energy production and antioxidant function.

- Foods rich in riboflavin include milk and eggs. In addition, foods rich in thiamin in are also good sources of riboflavin.

Vitamin B6 (pyridoxine) – alcohol can impair conversion of vitamin B6 to its active form in the body and may increase metabolism and excretion. Deficiency can result in fatigue, depression, confusion, anemia and neurological problems.

- Foods rich in vitamin B6 include meat, poultry, legumes, eggs, bananas and potatoes.

Alcoholism Risk of Nutrition Deficiency

Folate – alcohol decreases absorption. The liver stores a 2-3 month supply of folate, but liver damage in alcoholics may impair the storage capacity. Deficiency symptoms include anemia, weakness, fatigue, headache, irritability, tingling in hands and feet, depression or dementia.

- Foods rich in folate include enriched flour, rice and cereals, dark green leafy vegetables, broccoli, and legumes.

Vitamins A, D, E and K – Alcoholics are at risk due to impaired fat absorption from damaged intestinal tract and impaired liver function.

BREAK

Please return in 15 minutes for the rest of our discussion



Micronutrients

Micronutrients include all of the vitamins and minerals found in food.

Today's Focus:

- Vitamin A
- Vitamin D
- Vitamin E
- Vitamin K



Micronutrients – Vitamin A



- Vitamin A supports good vision, immune function, gene expression and reproductive function, growth and development and red blood cell production.
- Deficiency is the leading cause of blindness in the world!

Food sources of Vitamin A

Vitamin A rich foods you could serve your participants:

- Milk 1 cup = 500 IU
- Raw carrot 1 whole = 9,000 IU
- Peas ½ cup = 1,000 IU
- Egg 1 = 303 IU
- Pumpkin (canned) ½ cup = 3000 IU
- Fortified cereal 1 serving = 500-750 IU
- Cantaloupe ½ medium melon = 1555 IU



Daily need: 900 RAE (3000 IU) males/700 RAE (2333 IU) females

RAE: including beta-carotene and other dietary sources of A which represent vitamin A activity as retinol which is the form used by the body.

Vitamin A

- How could a man get 900 IU/day?

1 egg 303 IU
1 cup milk 500 IU
+ ½ cup broccoli 200 IU
 1000 IU

- Note: 1 serving of fortified raisin bran can yield 500-750 IU/day. This may be an important source for your participants!



Micronutrients – Vitamin D



Vitamin D is essential for calcium absorption and bone health. It is also being discovered that its function goes well beyond that to help us with our immunity, cell differentiation, blood pressure regulation and insulin Secretion among others. Deficiency can lead to muscle weakness or osteoporosis and has even been linked to the development of certain cancers or Autoimmune diseases. (Linus Pauling Institute)
Requirements: adults 200-400 IU/day

Vitamin D Controversy




Deficiency is very common, especially in those with limited sun exposure (latitude, skin pigmentation, clothing worn, sunscreen, breastfed infants, aging adults).

Recommendations are currently being revisited and will likely increase in the near future. If you visit your doctor, they may prescribe 1000-2000 or more IU a day depending on your blood levels.

Food sources of Vitamin D


Vitamin D rich foods you could serve your participants:

- Canned salmon 3 oz = 530 IU
- Fortified cow milk 8 oz = 100 IU
- Fortified soy milk 8 oz = 100 IU
- Egg yolk 1 = 20 IU
- Fortified orange juice 8 oz = 100 IU




D foods

How could a diner get 400+ IU/day?

1 scrambled egg	20 IU	
12 oz milk (fortified)	150 IU	
1 cup cereal (fortified)	45 IU	
8 oz oj (fortified)	100 IU	
+ salmon (3 oz)	500 IU	
	815 IU	

Vitamin E



Vitamin E is a fat soluble vitamin present in fats. The most biological active form is called alpha-tocopherol. It is an essential nutrient that must be provided by foods.

Deficiency of vitamin E has been linked to degenerative disorders like cancer and heart disease.

Vitamin E - Function

One of the most important roles of vitamin E is its **strong antioxidant activity**. It protects cell membranes from damage by harmful free-radicals generated by normal metabolism and by our environment.

Other important functions of vitamin E include:

- > Inhibits conversion of nitrites in cured foods to nitrosamines, which are linked to tumor promotion, especially stomach cancer.
- > Promotes normal growth and development.
- > Acts as an anti-blood clotting agent by decreasing platelet adhesion.
- > Protects LDL from oxidation in blood vessels.
- > Promotes normal blood cell formation.
- > Decreases inflammation.
- > Promotes healing of skin and protects it from UV radiation.

Vitamin E - Requirements

The recommended dietary allowance for adults is 15 mg/d (22.5 international units), but higher doses are typically recommended to optimize health.

Your body stores some vitamin E in adipose tissue but it is not an exchangeable source, so daily intake is important. The tolerable upper limit is 1,000 mg/d.


Symptoms or problems seen with deficiency include dry skin and hair, bruising, PMS, eczema, cataracts, slow wound healing, muscle weakness, or sterility.

Vitamin E – Food Sources




The richest sources of vitamin E are vegetable oils, nuts and avocado. Foods of animal origin are generally low in vitamin E.

Scientists at the Linus Pauling Institute feel there exists credible evidence that taking a supplement of 200 IU (134 mg) of natural source α -tocopherol daily with a meal may help protect adults from chronic diseases, such as heart disease, stroke, neurodegenerative diseases, and some types of cancer.



Vitamin E – Food Sources

Food	Serving	Alpha-tocopherol (mg)
Olive oil	1 tablespoon	1.9
Soybean oil	1 tablespoon	1.1
Corn oil	1 tablespoon	1.9
Canola oil	1 tablespoon	2.4
Safflower oil	1 tablespoon	4.6
Sunflower oil	1 tablespoon	5.6
Almonds	1 ounce	7.4
Hazelnuts	1 ounce	4.3
Peanuts	1 ounce	2.4
Spinach	½ cup, raw	0.3
Carrots	½ cup, raw chopped	0.4
Avocado (California)	1 fruit	2.7



Vitamin K

Vitamin K is a fat-soluble vitamin. The "K" is derived from the German word "koagulation." It is important for blood clotting and bone mineralization.

There are two naturally occurring forms of vitamin K.


- Phylloquinone – synthesized by plants, also known as vitamin K₁.
- Menaquinone – synthesized by bacteria in our intestinal tracts, however this is not a significant source of our daily needs.

Vitamin K – Special Considerations

Regular dietary intake of vitamin K rich foods is important.

- Although vitamin K is a fat-soluble vitamin, the body stores very little of it.

If someone is taking an anti-coagulant drug such as **warfarin**, it is recommended that they maintain a *consistent intake of vitamin K* since their dose is typically adjusted to their normal intake.



Vitamin K - Requirements



There is no RDA for vitamin K, but instead an adequate intake (AI) based on intake of normal healthy adults of 120 mcg for men and 90 mcg for women.

Leafy greens such as kale, swiss chard, parsley, spinach, and broccoli are rich sources of vitamin K.

Vitamin K – Food Sources



Food	Serving	Vitamin K (mcg)
Olive oil	1 Tablespoon	8.1
Soybean oil	1 Tablespoon	25
Canola oil	1 Tablespoon	16.6
Mayonnaise	1 Tablespoon	3.7
Broccoli, cooked	1 cup (chopped)	220
Kale, raw	1 cup (chopped)	547
Spinach, raw	1 cup	145
Leaf lettuce (green), raw	1 cup (shredded)	62.5
Swiss chard, raw	1 cup	299
Watercress, raw	1 cup (chopped)	85
Parsley, raw	1/4 cup	246

Vitamin K - Hydrogenation



Intake of vitamin K via fat in snack foods may be detrimental to health.

One study showed that youth who consumed a significant quantity of trans fat, which includes a hydrolyzed form of vitamin K, had lower bone densities compared to youth who consumed the non-hydrogenated form.

The hydrogenation of fat alters the form of vitamin K, resulting in less absorption and utilization in the body.

Food Safety – why is it important?

Because this population is at greater risk for lowered immunity, diseases, and infections and the fact that they rely on others for their food on a daily basis, it is important to understand and practice optimal food safety practices.



Food Safety

Common food illnesses include

- ✓ **Hepatitis A** (a hand-washing issue)
causes liver inflammation and jaundice
- ✓ **E.Coli** (undercooked meat-especially beef)
causes severe diarrhea and vomiting – can lead to kidney failure!
- ✓ **Salmonella** (raw egg or contaminated produce)
causes diarrhea, vomiting, stomach cramps, fever and dehydration
- ✓ **Campylobacter** (undercooked poultry)
a common illness that causes vomiting, diarrhea and stomach cramps



Food Safety



Please make sure yourself and others:

- Wash hands and surfaces often and thoroughly
- Keep hot foods hot and cold foods cold
- Separate foods to prevent cross contamination
- Know the correct cooking temperatures
- Potentially dangerous foods: raw sprouts, undercooked eggs or meat, unpasteurized juice or dairy, bagged salad or vegetables.

Menu Development – Dinner

Our approach to developing menu plans included the following:

- Include a variety of options throughout a week.
- Select foods that are satiating and high in vitamins and nutrients.
- Limit consumption of refined carbohydrates.
- Include whole foods as available.
- Select items adaptable to feeding large groups.

Menu Development - Dinner

Day 1	Day 2	Day 3	Day 4
Middle-Eastern inspired Chicken with dried/frozen fruit and rice Salad Milk	Lasagna with Squash and Kale French Bread Salad Milk	Extreme Veggie Flatbread Salad Baked Apple Dessert Milk	Bean Cassoulet Brown Rice Salad Milk
Day 5	Day 6	Day 7	
Pasta with Chicken and Thai Peanut Sauce Cucumber Salad Milk	Chicken with onion-apple sauce Roasted Potatoes Spinach Milk	Herb & Lemon Roast Chicken Rice Salad with Kale Milk	

Cooking with Fat Alternatives

Applesauce: can replace up to ¼ of the shortening in many recipes. Add with the liquid ingredients and reduce sugar in recipe if the applesauce is sweetened.

Prune Puree: can replace up to ¼ of the shortening in many recipes; it works especially well with chocolate. Add with the liquid ingredients.

Mashed Bananas: you can substitute for the original measurement – especially in baked goods such as muffins.

Yogurt: consider using plain yogurt instead of cream cheese or full fat dairy in dressings or recipes.



Nutrition Content

Nutrient	Lasagna w/Squash and Kale	Chicken Peanut Pasta	Chicken w/Apple Onion Sauce	Herb Chicken with Rice Salad
Protein	40 g 19%	41 g 25%	48 g 36%	54 g 37%
Carbohydrate	111 g 52%	69 g 43%	52 g 39%	47 g 32%
Fiber	12 g	5 g	5 g	4 g
Fat	28 g 29%	23 g 32%	15 g 25%	20 g 31%
Vitamin A (RAE)	1785 198%	320 36%	632 70%	373 41%
Vitamin D (mcg)	3.17 63%	3.17 63%	3.34 67%	3.17 63%
Vitamin E (mg)	4.23 28%	2.73 18%	3.30 22%	3.37 22%
Vitamin K (mcg)	531 442%	37 31%	448 373%	274 228%

Questions and Discussion

Do you have any specific questions about the materials presented?

What other information would you find useful in planning dinner options in your facility?



Thank you for your participation!

We hope to see you at our next discussion later this summer.

Recipe: 3 Bean Cassoulet

3 Bean Cassoulet

Number of Servings: 100 (383.65 g per serving)

Weight: 38365.39 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Tomatoes, red, stwd, cnd	22 2/3	Pound	5474
Peas, garbanzo, mature, cnd	29.6875	Pound	7088
Beans, great northern, mature, cnd	24.2187	Pound	7131
Carrots, fresh, chpd	3	Quart	6772
Onion, white, fresh, chpd	3	Quart	5101
Garlic, cloves, fresh	25	Each	26005
Herb, parsley, dried	8 1/2	Tablespo...	26035
Herb, basil, dried, ground	8 1/2	Tablespo...	26001
Herb, thyme, ground	6 1/4	Teaspoon	26033
Salt, table	6 1/4	Teaspoon	26014
Spice, pepper, black	3 1/4	Teaspoon	26016

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	17.66
Calories (kcal)	328.97	Vitamin D - IU (IU)	0
Calories from Fat (kcal)	20.23	Vitamin D - mcg (mcg)	0
Calories from SatFat (kcal)	3.02	Vitamin E - Alpha-Toco (mg)	1.49
Protein (g)	16.19	Folate (mcg)	192.39
Carbohydrates (g)	63.80	Folate, DFE (mcg)	192.39
Dietary Fiber (g)	13.34	Vitamin K (mcg)	14.05
Soluble Fiber (g)	2.79	Pantothenic Acid (mg)	0.90
Total Sugars (g)	5.19	Minerals	
Monosaccharides (g)	4.41	Calcium (mg)	158.57
Disaccharides (g)	0.77	Chromium (mcg)	3.05
Other Carbs (g)	3.04	Copper (mg)	0.55
Fat (g)	2.25	Fluoride (mg)	0.00
Saturated Fat (g)	0.34	Iodine (mcg)	0.38
Mono Fat (g)	0.41	Iron (mg)	5.41
Poly Fat (g)	0.98	Magnesium (mg)	113.52

Recipe: 3 Bean Cassoulet

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Trans Fatty Acid (g)	0	Manganese (mg)	1.42
Cholesterol (mg)	0	Molybdenum (mcg)	185.11
Water (g)	295.90	Phosphorus (mg)	305.74
Vitamins		Potassium (mg)	928.93
Vitamin A - IU (IU)	2821.59	Selenium (mcg)	9.16
Vitamin A - RAE (RAE)	141.08	Sodium (mg)	791.86
Vitamin A - Carotenoid RE (RE)	282.16	Zinc (mg)	2.43
Vitamin A - Retinol RE (RE)	0	Other Fats	
Beta-Carotene (mcg)	1423.75	Omega 3 Fatty Acid (g)	0.12
Vitamin B1 - Thiamin (mg)	0.27	Omega 6 Fatty Acid (g)	0.86
Vitamin B2 - Riboflavin (mg)	0.16	Other Nutrients	
Vitamin B3 - Niacin (mg)	1.64	Gram Weight (g)	383.65
Niacin Equivalents (mg)	4.54	Alcohol (g)	0
Vitamin B6 (mg)	0.83	Caffeine (mg)	0
Vitamin B12 (mcg)	0	Choline (mg)	57.65
Biotin (mcg)	1.44		

Notes

1. In an ungreased 3-qt. baking dish, combine all ingredients. Cover and bake at 350 degrees F for 60-70 minutes or until vegetables are tender, stirring occasionally.

A Cassoulet is a traditional casserole from the South of France that contains meat and/or beans. If you would like to add meat, feel free to add a pound of cooked ground beef. Serve this dish over brown or white rice for a complete meal!

adapted from: All.Recipes.com (<http://allrecipes.com/Recipe/three-bean-cassoulet/Detail.aspx>)

Recipe: Baked Apple

Baked Apple

Number of Servings: 100 (179.42 g per serving)

Weight: 17942.30 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Apples, fresh, sml, 2 3/4", USDA	100	Each	3000
Sugar, brown, packed	6	Cup	25005
Butter, salted	6	Cup	8000
Nuts, almonds, slivered	2 1/8	Cup	4503
Spice, cinnamon, ground	1	Cup	26003

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	6.90
Calories (kcal)	241.84	Vitamin D - IU (IU)	7.63
Calories from Fat (kcal)	110.37	Vitamin D - mcg (mcg)	0.19
Calories from SatFat (kcal)	64.21	Vitamin E - Alpha-Toco (mg)	1.22
Protein (g)	1.06	Folate (mcg)	6.23
Carbohydrates (g)	35.08	Folate, DFE (mcg)	6.23
Dietary Fiber (g)	4.52	Vitamin K (mcg)	4.62
Soluble Fiber (g)	0.39	Pantothenic Acid (mg)	0.14
Total Sugars (g)	28.46	Minerals	
Monosaccharides (g)	12.76	Calcium (mg)	41.77
Disaccharides (g)	15.69	Chromium (mcg)	1.55
Other Carbs (g)	2.11	Copper (mg)	0.07
Fat (g)	12.46	Fluoride (mg)	0.01
Saturated Fat (g)	7.13	Iodine (mcg)	0.05
Mono Fat (g)	3.59	Iron (mg)	0.46
Poly Fat (g)	0.77	Magnesium (mg)	15.81
Trans Fatty Acid (g)	0.33	Manganese (mg)	0.33
Cholesterol (mg)	29.31	Molybdenum (mcg)	0.68
Water (g)	130.07	Phosphorus (mg)	32.10
Vitamins		Potassium (mg)	201.88
Vitamin A - IU (IU)	424.83	Selenium (mcg)	0.39
Vitamin A - RAE (RAE)	97.45	Sodium (mg)	83.87

Recipe: Baked Apple

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Vitamin A - Carotenoid RE (RE)	11.96	Zinc (mg)	0.17
Vitamin A - Retinol RE (RE)	91.47	Other Fats	
Beta-Carotene (mcg)	63.19	Omega 3 Fatty Acid (g)	0.06
Vitamin B1 - Thiamin (mg)	0.03	Omega 6 Fatty Acid (g)	0.71
Vitamin B2 - Riboflavin (mg)	0.07	Other Nutrients	
Vitamin B3 - Niacin (mg)	0.25	Gram Weight (g)	179.42
Niacin Equivalent (mg)	0.39	Alcohol (g)	0
Vitamin B6 (mg)	0.07	Caffeine (mg)	0
Vitamin B12 (mcg)	0.02	Choline (mg)	9.27
Biotin (mcg)	3.33		

Notes

1. Preheat oven to 350 degrees F.
2. Scoop out the core from top of the apple, leaving a well. Do not cut all the way through. Stuff each apple with brown sugar, butter, and nuts. Feel free to eliminate nuts or substitute any type you have available. Place in a shallow baking dish and sprinkle with cinnamon.
3. Bake in preheated oven for 15 minutes, until sugar begins to caramelize and apples are tender. Any type of apple you have available is fine.

adapted from: All.Recipes.com (<http://allrecipes.com/Recipe/baked-apples/Detail.aspx>)

Recipe: Bombay Chicken and Rice

Bombay Chicken and Rice

Number of Servings: 100 (381.04 g per serving)

Weight: 38103.80 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Rice, white, long grain, ckd	4 1/4	Quart	38013
Fruit, prunes apricots & pears, dried, pkg	6	Pound	3168
Onion, yellow, fresh, sml, whole	16 1/2	Each	90472
Sugar	8 1/2	Tablespo...	63412
Salt, table	5 1/2	Tablespo...	26014
Water, tap, municipal	8 1/2	Quart	20041
Chicken, broiler/fryer, breast, w/o skin, rstd	50	Pound	15004
Butter, salted	2 1/8	Cup	8000
Spice Blend, curry, pwd	1 1/3	Cup	26004
Spice, paprika	8 1/4	Teaspoon	26010

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	2.16
Calories (kcal)	521.71	Vitamin D - IU (IU)	2.70
Calories from Fat (kcal)	111.26	Vitamin D - mcg (mcg)	0.07
Calories from SatFat (kcal)	43.55	Vitamin E - Alpha-Toco (mg)	1.24
Protein (g)	72.10	Folate (mcg)	30.23
Carbohydrates (g)	27.69	Folate, DFE (mcg)	40.71
Dietary Fiber (g)	2.92	Vitamin K (mcg)	2.48
Soluble Fiber (g)	0.04	Pantothenic Acid (mg)	2.44
Total Sugars (g)	1.32	Minerals	
Monosaccharides (g)	0.42	Calcium (mg)	59.94
Disaccharides (g)	0.12	Chromium (mcg)	3.39
Other Carbs (g)	8.14	Copper (mg)	0.26
Fat (g)	12.43	Fluoride (mg)	0.08
Saturated Fat (g)	4.84	Iodine (mcg)	1.57
Mono Fat (g)	3.99	Iron (mg)	3.87
Poly Fat (g)	1.99	Magnesium (mg)	85.25

Recipe: Bombay Chicken and Rice

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Trans Fatty Acid (g)	0.12	Manganese (mg)	0.30
Cholesterol (mg)	203.16	Molybdenum (mcg)	0.58
Water (g)	266.57	Phosphorus (mg)	559.17
Vitamins		Potassium (mg)	849.35
Vitamin A - IU (IU)	937.10	Selenium (mcg)	65.07
Vitamin A - RAE (RAE)	85.07	Sodium (mg)	588.11
Vitamin A - Carotenoid RE (RE)	78.14	Zinc (mg)	2.62
Vitamin A - Retinol RE (RE)	46.00	Other Fats	
Beta-Carotene (mcg)	63.28	Omega 3 Fatty Acid (g)	0.16
Vitamin B1 - Thiamin (mg)	0.22	Omega 6 Fatty Acid (g)	1.69
Vitamin B2 - Riboflavin (mg)	0.32	Other Nutrients	
Vitamin B3 - Niacin (mg)	32.11	Gram Weight (g)	381.04
Niacin Equivalents (mg)	45.96	Alcohol (g)	0
Vitamin B6 (mg)	1.46	Caffeine (mg)	0
Vitamin B12 (mcg)	0.78	Choline (mg)	196.54
Biotin (mcg)	1.73		

Notes

1. Preheat oven to 375 degrees F
2. In a 9x13 inch baking pan, mix rice, fruit, onion, sugar and salt. Pour in water. Arrange chicken parts over the rice mixture. In a small bowl, mix butter, curry powder and paprika. Brush butter mixture over chicken pieces. Cover pan tightly with aluminum foil.
3. Bake 1 hour in the preheated oven, until chicken juices run clear and rice is tender.

*dried or frozen fruit can be whatever is available! Apricot, blueberry, prune, raisins, etc. would all work.

*feel free to substitute whichever type of rice is available.

adapted from: All.Recipes.com (<http://allrecipes.com/Recipe/bombay-chicken-and-rice/Detail.aspx>)

Recipe: Cheesy Flatbread

Cheesy Flatbread

Number of Servings: 100 (231.54 g per serving)

Weight: 23154.03 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Cheese, mozzarella, whole milk, shredded	6	Pound	1056
Cream Cheese	12 1/2	Pound	1015
Garlic, cloves, fresh	50	Each	26005
Herb, basil, dried, ground	1 1/2	Cup	26001
Herb, chives, fresh	3	Cup	5359
Salt, table	8 1/2	Tablespo...	26014
Spice, pepper, black	8 1/2	Tablespo...	26016
Crust, pizza, classic, refrig dough	25	Package	16611
Flour, all purpose, white, bleached, enrich	1 1/2	Cup	38030
Onion, red, fresh, med, whole, 2 1/2"	25	Each	7805
Squash, zucchini, baby, m... fresh	25	Each	90604
Oil, olive, extra virgin	6	Cup	8361
Spice, chili pepper, red, crushed flakes	8 1/2	Tablespo...	4330

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	5.36
Calories (kcal)	658.24	Vitamin D - IU (IU)	0
Calories from Fat (kcal)	378.80	Vitamin D - mcg (mcg)	0
Calories from SatFat (kcal)	154.60	Vitamin E - Alpha-Toco (mg)	2.32
Protein (g)	17.72	Folate (mcg)	22.21
Carbohydrates (g)	54.36	Folate, DFE (mcg)	24.23
Dietary Fiber (g)	2.76	Vitamin K (mcg)	24.29
Soluble Fiber (g)	0.06	Pantothenic Acid (mg)	0.43
Total Sugars (g)	9.26	Minerals	
Monosaccharides (g)	1.14	Calcium (mg)	228.91
Disaccharides (g)	2.14	Chromium (mcg)	4.36

Recipe: Cheesy Flatbread

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Other Carbs (g)	42.28	Copper (mg)	0.06
Fat (g)	42.09	Fluoride (mg)	0.00
Saturated Fat (g)	17.18	Iodine (mcg)	10.08
Mono Fat (g)	17.06	Iron (mg)	3.82
Poly Fat (g)	2.32	Magnesium (mg)	21.60
Trans Fatty Acid (g)	0.58	Manganese (mg)	0.17
Cholesterol (mg)	83.87	Molybdenum (mcg)	3.97
Water (g)	74.10	Phosphorus (mg)	179.34
Vitamins		Potassium (mg)	214.70
Vitamin A - IU (IU)	1265.15	Selenium (mcg)	7.08
Vitamin A - RAE (RAE)	272.16	Sodium (mg)	1639.05
Vitamin A - Carotenoid RE (RE)	42.52	Zinc (mg)	1.27
Vitamin A - Retinol RE (RE)	250.90	Other Fats	
Beta-Carotene (mcg)	234.09	Omega 3 Fatty Acid (g)	0.50
Vitamin B1 - Thiamin (mg)	0.06	Omega 6 Fatty Acid (g)	1.87
Vitamin B2 - Riboflavin (mg)	0.18	Other Nutrients	
Vitamin B3 - Niacin (mg)	0.41	Gram Weight (g)	231.54
Niacin Equivalent (mg)	3.50	Alcohol (g)	0
Vitamin B6 (mg)	0.12	Caffeine (mg)	0
Vitamin B12 (mcg)	0.76	Choline (mg)	22.76
Biotin (mcg)	2.79		

Notes

1. Preheat the oven to 400 degrees F.
2. In a large bowl fold together the mozzarella, cream cheese, garlic and herbs. Season with salt and pepper.
3. Line a sheet tray with parchment paper and lightly flour a work surface. With a rolling pin, roll the dough into an oval shape that fits a half sheet tray and lay out on the parchment paper. If you do not have access to fresh dough, you can either make your own or use a pre-cooked pizza crust.
4. Spread dough with the cheese mixture, leaving a 1/2-inch edge. Arrange the red onion in a row, overlapping slightly. Repeat with the zucchini. Other vegetables you have available can be substituted for the zucchini.
5. Brush the red onion, zucchini, and crust with olive oil. Sprinkle with red pepper flakes and salt and pepper to taste. Bake in the oven for 25 minutes.
6. Remove from oven and using a pizza cutter, slice into thin strips for serving

adapted from: the Food Network

(<http://www.foodnetwork.com/recipes/patrick-and-gina-neely/ginas-cheesy-flat-bread-recipe/index.html>)

Recipe: Chicken Breast in Apple-Onion Sauce *

Chicken Breast in Apple-Onion Sauce

Number of Servings: 100 (235.1 g per serving)

Weight: 23509.79 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Chicken, broiler/fryer, breast, w/o skin, raw	31 1/4	Pound	15054
Flour, all purpose, white, bleached, enrich	3	Quart	38030
Oil, olive, extra virgin	3	Cup	8361
Onion, yellow, fresh, chpd	3	Quart	7499
Apples, fresh, chpd	3	Quart	14920
Garlic, minced, wet	8 1/2	Tablespoon	9473
Juice, apple, unswtnd, cnd/btl	6	Cup	3008
Vinegar, white wine	8 1/2	Tablespoon	53459
Raisins, golden, seedless, unpacked cup	3	Cup	3763
Spice, pepper, black	6 1/4	Teaspoon	26016
Salt, table	6 1/4	Teaspoon	26014
Herb, rosemary, fresh	1 1/2	Cup	26627
Milk, 2%, w/add vit A & D	6	Cup	2

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	4.25
Calories (kcal)	318.60	Vitamin D - IU (IU)	6.30
Calories from Fat (kcal)	82.43	Vitamin D - mcg (mcg)	0.16
Calories from SatFat (kcal)	14.88	Vitamin E - Alpha-Toco (mg)	1.07
Protein (g)	35.21	Folate (mcg)	38.64
Carbohydrates (g)	21.58	Folate, DFE (mcg)	54.84
Dietary Fiber (g)	1.40	Vitamin K (mcg)	1.13
Soluble Fiber (g)	0.27	Pantothenic Acid (mg)	1.33
Total Sugars (g)	7.11	Minerals	
Monosaccharides (g)	3.12	Calcium (mg)	46.04
Disaccharides (g)	1.37	Chromium (mcg)	0.16
Other Carbs (g)	12.79	Copper (mg)	0.11

Recipe: Chicken Breast in Apple-Onion Sauce *

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Fat (g)	9.16	Fluoride (mg)	0.00
Saturated Fat (g)	1.65	Iodine (mcg)	3.90
Mono Fat (g)	5.71	Iron (mg)	1.95
Poly Fat (g)	1.10	Magnesium (mg)	50.25
Trans Fatty Acid (g)	0.04	Manganese (mg)	0.20
Cholesterol (mg)	83.38	Molybdenum (mcg)	1.25
Water (g)	165.79	Phosphorus (mg)	321.61
Vitamins		Potassium (mg)	496.08
Vitamin A - IU (IU)	81.20	Selenium (mcg)	30.83
Vitamin A - RAE (RAE)	17.78	Sodium (mg)	246.00
Vitamin A - Carotenoid RE (RE)	2.45	Zinc (mg)	1.36
Vitamin A - Retinol RE (RE)	16.56	Other Fats	
Beta-Carotene (mcg)	4.89	Omega 3 Fatty Acid (g)	0.10
Vitamin B1 - Thiamin (mg)	0.24	Omega 6 Fatty Acid (g)	0.92
Vitamin B2 - Riboflavin (mg)	0.25	Other Nutrients	
Vitamin B3 - Niacin (mg)	16.87	Gram Weight (g)	235.10
Niacin Equivalent (mg)	23.71	Alcohol (g)	0
Vitamin B6 (mg)	0.84	Caffeine (mg)	0
Vitamin B12 (mcg)	0.61	Choline (mg)	110.45
Biotin (mcg)	1.51		

Notes

Granny Smith apples work especially well in this recipe.

1. Wash chicken, pat dry and dredge in flour. Heat a heavy skillet to medium high and add olive oil. Place chicken in oil and gently brown, about 2 minutes per side. Note that chicken will finish cooking in the sauce in a later step. Remove chicken and set aside.
2. In the same pan, saute onion, apple and garlic until quite soft. Add apple juice, white wine vinegar, pepper and salt. Simmer for 5 minutes.
3. Add chopped rosemary and milk, stirring until well blended. Optional: Pour sauce in a blender to puree and return it to the pan.
4. Add chicken to the sauce, cover and simmer for 20 minutes on low heat.
5. Remove chicken to serving plate and pour sauce over chicken.

Adapted from Food and Wine in the Pacific Northwest by John Sarich.

Recipe: Easy Cucumber & Carrot Salad *

Easy Cucumber & Carrot Salad

Number of Servings: 100 (73.54 g per serving)

Weight: 7354.00 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Vinegar, white wine	2 1/8	Cup	53459
Oil, olive, extra virgin	2 1/8	Cup	8361
Herb, parsley, fresh, chpd	1	Cup	26012
Herb, dill weed, sprigs, fresh	1	Cup	26622
Garlic, minced, wet	5 1/2	Tablespoon	9473
Sugar, white, granulated	1	Cup	25006
Salt, table	5 1/2	Tablespoon	26014
Cucumber, w/o skin, fresh, sliced	8 1/2	Quart	7921
Carrots, fresh, grated, USDA	4 1/4	Quart	15297

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	3.27
Calories (kcal)	65.89	Vitamin D - IU (IU)	--
Calories from Fat (kcal)	44.62	Vitamin D - mcg (mcg)	--
Calories from SatFat (kcal)	6.11	Vitamin E - Alpha-Toco (mg)	0.73
Protein (g)	0.43	Folate (mcg)	10.26
Carbohydrates (g)	4.89	Folate, DFE (mcg)	10.26
Dietary Fiber (g)	0.83	Vitamin K (mcg)	15.22
Soluble Fiber (g)	0.22	Pantothenic Acid (mg)	0.15
Total Sugars (g)	3.46	Minerals	
Monosaccharides (g)	0.77	Calcium (mg)	13.11
Disaccharides (g)	0.67	Chromium (mcg)	0.09
Other Carbs (g)	0.43	Copper (mg)	0.04
Fat (g)	4.96	Fluoride (mg)	0.00
Saturated Fat (g)	0.68	Iodine (mcg)	--
Mono Fat (g)	3.67	Iron (mg)	0.19
Poly Fat (g)	0.45	Magnesium (mg)	7.46
Trans Fatty Acid (g)	0	Manganese (mg)	0.06
Cholesterol (mg)	0	Molybdenum (mcg)	0.94

Recipe: Easy Cucumber & Carrot Salad *

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Water (g)	56.82	Phosphorus (mg)	15.45
Vitamins		Potassium (mg)	118.97
Vitamin A - IU (IU)	3210.57	Selenium (mcg)	0.07
Vitamin A - RAE (RAE)	160.53	Sodium (mg)	397.81
Vitamin A - Carotenoid RE (RE)	321.06	Zinc (mg)	0.12
Vitamin A - Retinol RE (RE)	0	Other Fats	
Beta-Carotene (mcg)	1592.16	Omega 3 Fatty Acid (g)	0.03
Vitamin B1 - Thiamin (mg)	0.03	Omega 6 Fatty Acid (g)	0.40
Vitamin B2 - Riboflavin (mg)	0.02	Other Nutrients	
Vitamin B3 - Niacin (mg)	0.21	Gram Weight (g)	73.54
Niacin Equivalents (mg)	0.28	Alcohol (g)	0
Vitamin B6 (mg)	0.05	Caffeine (mg)	0
Vitamin B12 (mcg)	0	Choline (mg)	4.03
Biotin (mcg)	0.94		

Notes

1. Whisk together the vinegar, olive oil, parsley, dill, garlic, sugar, and salt in a bowl; add the cucumber and stir to coat. Cover and chill in refrigerator 4 to 8 hours. Stir well before serving.

Recipe: Herb & Lemon Roast Chicken *

Herb & Lemon Roast Chicken

Number of Servings: 100 (185.37 g per serving)

Weight: 18536.64 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Chicken, broiler/fryer, breast, w/o skin, raw	37 1/2	Pound	15054
Herb, rosemary, fresh	3	Cup	26627
Herb, oregano, leaves, dried	1 1/2	Cup	93509
Garlic, minced, wet	1 1/2	Cup	9473
Salt, table	8 1/2	Tablespoon	26014
Spice, pepper, black	6 1/4	Teaspoon	26016
Lemon Peel, fresh	1	Cup	3067
Juice, lemon, fresh	3	Cup	3068

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	7.25
Calories (kcal)	204.05	Vitamin D - IU (IU)	--
Calories from Fat (kcal)	23.48	Vitamin D - mcg (mcg)	--
Calories from SatFat (kcal)	5.50	Vitamin E - Alpha-Toco (mg)	0.37
Protein (g)	39.44	Folate (mcg)	10.96
Carbohydrates (g)	2.26	Folate, DFE (mcg)	10.96
Dietary Fiber (g)	0.62	Vitamin K (mcg)	5.03
Soluble Fiber (g)	0.03	Pantothenic Acid (mg)	1.41
Total Sugars (g)	0.25	Minerals	
Monosaccharides (g)	0.02	Calcium (mg)	35.99
Disaccharides (g)	0.01	Chromium (mcg)	0.04
Other Carbs (g)	0.61	Copper (mg)	0.08
Fat (g)	2.61	Fluoride (mg)	0.00
Saturated Fat (g)	0.61	Iodine (mcg)	--
Mono Fat (g)	0.53	Iron (mg)	1.66
Poly Fat (g)	0.53	Magnesium (mg)	51.34
Trans Fatty Acid (g)	0.04	Manganese (mg)	0.08
Cholesterol (mg)	98.66	Molybdenum (mcg)	--
Water (g)	137.80	Phosphorus (mg)	336.28

Recipe: Herb & Lemon Roast Chicken *

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Vitamins		Potassium (mg)	464.89
Vitamin A - IU (IU)	117.23	Selenium (mcg)	30.34
Vitamin A - RAE (RAE)	14.28	Sodium (mg)	704.12
Vitamin A - Carotenoid RE (RE)	8.15	Zinc (mg)	1.41
Vitamin A - Retinol RE (RE)	10.21	Other Fats	
Beta-Carotene (mcg)	30.10	Omega 3 Fatty Acid (g)	0.09
Vitamin B1 - Thiamin (mg)	0.12	Omega 6 Fatty Acid (g)	0.37
Vitamin B2 - Riboflavin (mg)	0.16	Other Nutrients	
Vitamin B3 - Niacin (mg)	19.11	Gram Weight (g)	185.37
Niacin Equivalents (mg)	26.77	Alcohol (g)	0
Vitamin B6 (mg)	0.95	Caffeine (mg)	0
Vitamin B12 (mcg)	0.65	Choline (mg)	125.55
Biotin (mcg)	0.03		

Notes

1. Preheat oven to 450 degrees F. Place chicken pieces in a large shallow baking dish.
2. Remove leaves from rosemary and place with oregano, garlic and salt on a wooden cutting board. Chop together until finely minced and put into a small bowl. Add pepper and lemon zest to bowl with herbs and mix. Coat both sides of each chicken piece with herb mixture, using a brush or by rubbing it on. Make sure the breasts are bone side up.
3. Put pan into oven and immediately lower temperature to 400 degrees F. Let chicken roast, uncovered, for 1 hour until meat is tender and skin has browned nicely. Remove from oven and sprinkle lemon juice over the meat before serving.

Recipe from Whole Foods Production by Cynthia Lair.

Recipe: Lasagna with Squash and Kale *

Lasagna with Squash and Kale

Number of Servings: 100 (458.62 g per serving)

Weight: 45861.68 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Oil, olive, extra virgin	3	Cup	8361
Onion, red, fresh, chpd	4 3/4	Quart	7498
Garlic, cloves, fresh	38	Each	26005
Tomatoes, crushed, cnd	21 7/8	Pound	6927
Herb, oregano, leaves, dried	4 1/4	Tablespoon	93509
Salt, table	4 1/4	Tablespoon	26014
Spice, pepper, black	4 1/4	Tablespoon	26016
Squash, butternut, bkd, cubes	4 3/4	Gallon	5317
Herb, thyme, leaves, dried	6 1/4	Teaspoon	15401
Cabbage, kale, fresh, chpd	12 1/2	Pound	5208
Pasta, lasagna, enrich, dry	6	Pound	91211
Cheese, ricotta, part skim	11 1/2	Pound	1024
Spice, nutmeg, ground	1 1/2	Teaspoon	26026
Cheese, mozzarella, rducd fat, shredded	6 1/4	Quart	1268

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	103.45
Calories (kcal)	439.17	Vitamin D - IU (IU)	--
Calories from Fat (kcal)	145.05	Vitamin D - mcg (mcg)	--
Calories from SatFat (kcal)	56.46	Vitamin E - Alpha-Toco (mg)	2.92
Protein (g)	23.00	Folate (mcg)	130.35
Carbohydrates (g)	56.73	Folate, DFE (mcg)	72.11
Dietary Fiber (g)	9.25	Vitamin K (mcg)	467.60
Soluble Fiber (g)	0.94	Pantothenic Acid (mg)	1.06
Total Sugars (g)	5.68	Minerals	
Monosaccharides (g)	1.06	Calcium (mg)	734.60
Disaccharides (g)	1.37	Chromium (mcg)	0.05
Other Carbs (g)	31.92	Copper (mg)	0.56
Fat (g)	16.12	Fluoride (mg)	0.00

Recipe: Lasagna with Squash and Kale *

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Saturated Fat (g)	6.27	Iodine (mcg)	0.61
Mono Fat (g)	6.47	Iron (mg)	4.59
Poly Fat (g)	1.12	Magnesium (mg)	111.15
Trans Fatty Acid (g)	0	Manganese (mg)	0.98
Cholesterol (mg)	31.17	Molybdenum (mcg)	6.75
Water (g)	356.75	Phosphorus (mg)	250.85
Vitamins		Potassium (mg)	1146.21
Vitamin A - IU (IU)	27405.30	Selenium (mcg)	10.93
Vitamin A - RAE (RAE)	1396.06	Sodium (mg)	726.19
Vitamin A - Carotenoid RE (RE)	2682.59	Zinc (mg)	1.81
Vitamin A - Retinol RE (RE)	54.77	Other Fats	
Beta-Carotene (mcg)	12368.99	Omega 3 Fatty Acid (g)	0.24
Vitamin B1 - Thiamin (mg)	0.50	Omega 6 Fatty Acid (g)	0.86
Vitamin B2 - Riboflavin (mg)	0.38	Other Nutrients	
Vitamin B3 - Niacin (mg)	4.85	Gram Weight (g)	458.62
Niacin Equivalent (mg)	6.80	Alcohol (g)	0
Vitamin B6 (mg)	0.56	Caffeine (mg)	0
Vitamin B12 (mcg)	0.15	Choline (mg)	11.35
Biotin (mcg)	2.91		

Notes

Notes: Mince 1/3 of the garlic and leave the other cloves whole for roasting with the squash. Pumpkin can be substituted for the squash; if used, mince all garlic and cook it with the onions as directed.

Preparation:

1. Preheat oven to 400°. Heat 2 tbsp. (per pot if cooking several or 1/2 of total amount for very large pots) olive oil in a large pot over medium heat. Add onion and minced garlic; cook, stirring occasionally, until onion is soft and translucent, 5 minutes. Add tomatoes, oregano, and 1/2 of salt and pepper. Reduce heat and simmer until thick and flavors are combined, about 30 minutes. Set aside.

2. While sauce is cooking, in a 12- by 15-in. baking pan, sprinkle squash with thyme, remaining olive oil, and salt and pepper to taste. Add garlic cloves and toss squash mixture to coat with oil. Bake until soft, 10 to 15 minutes. Meanwhile, bring 3 qts. salted water to a boil in a large pot.

3. Reduce oven temperature to 350°. Transfer squash and garlic to a food processor and purée until smooth. Note that canned pumpkin can be used instead with no baking and pureeing needed.

Recipe: Lasagna with Squash and Kale *

Notes cont.

4. Tear kale leaves from center ribs and discard ribs. Boil leaves until soft, 5 to 8 minutes. Drain; let cool. Squeeze out as much water as possible and chop finely.

5. In the same pot, bring another 3 qts. salted water to a boil. Add noodles and cook until tender to the bite, about 10 minutes. Drain; rinse with cold water.

6. In a bowl, mix ricotta, nutmeg, 1/2 of the mozzarella, and remaining 1/2 of salt and pepper.

7. Coat the bottom of a 9- by 13-in. pan with 1/3 of tomato sauce. Lay noodles in a single layer over sauce. Top noodles with squash, spreading evenly. Sprinkle 1/2 of kale evenly over squash. Arrange 3 more noodles on kale and top with ricotta, spreading evenly. Top with remaining kale and noodles. Cover noodles with remaining tomato sauce and sprinkle with remaining mozzarella.

8. Bake lasagna until juices are bubbling and cheese is melted, about 30 minutes. Let stand 10 minutes before slicing.

Adapted from www.myrecipes.com

Recipe: Pasta with Chicken and Thai Peanut Sauce *

Pasta with Chicken and Thai Peanut Sauce

Number of Servings: 100 (246.21 g per serving)

Weight: 24621.07 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Sauce, soy, low sod, f/soy & wheat	3	Cup	90035
Juice, lime, fresh	2 1/8	Cup	3072
Oil, olive, extra virgin	1	Cup	8361
Garlic, minced, wet	1 1/3	Cup	9473
Spice, ginger, ground	4 1/4	Tablespoon	26023
Chicken, broiler/fryer, breast, w/o skin, raw	16 2/3	Pound	15054
Sauce, soy, low sod, f/soy & wheat	5 1/2	Tablespoon	90035
Juice, lime, fresh	11 1/2	Tablespoon	3072
Peanut Butter, chunky	8 1/2	Cup	4626
Broth, chicken, low sod, cnd	4 1/4	Quart	92184
Honey, strained/extracted	8 1/4	Teaspoon	25001
Salt, table	8 1/4	Teaspoon	26014
Spice, chili pepper, red, crushed flakes	2	Teaspoon	4330
Pea Pods, Chinese, fresh, whole	8 1/2	Quart	13964
Pasta, spaghetti, enrich, dry	12 1/2	Pound	38296
Onion, scallions, tops & bulb, fresh, med, 4 1/8" long	50	Each	90483
Herb, cilantro, leaves, fresh	5 1/2	Cup	92175

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	17.34
Calories (kcal)	478.34	Vitamin D - IU (IU)	--
Calories from Fat (kcal)	139.99	Vitamin D - mcg (mcg)	--
Calories from SatFat (kcal)	23.12	Vitamin E - Alpha-Toco (mg)	2.00
Protein (g)	32.14	Folate (mcg)	173.48
Carbohydrates (g)	52.31	Folate, DFE (mcg)	260.80
Dietary Fiber (g)	4.45	Vitamin K (mcg)	21.54

Recipe: Pasta with Chicken and Thai Peanut Sauce *

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Soluble Fiber (g)	1.57	Pantothenic Acid (mg)	1.31
Total Sugars (g)	5.18	Minerals	
Monosaccharides (g)	1.60	Calcium (mg)	49.23
Disaccharides (g)	2.34	Chromium (mcg)	0.83
Other Carbs (g)	42.04	Copper (mg)	0.38
Fat (g)	15.55	Fluoride (mg)	0.01
Saturated Fat (g)	2.57	Iodine (mcg)	0.15
Mono Fat (g)	7.52	Iron (mg)	3.69
Poly Fat (g)	4.04	Magnesium (mg)	97.07
Trans Fatty Acid (g)	0.02	Manganese (mg)	1.09
Cholesterol (mg)	43.85	Molybdenum (mcg)	1.07
Water (g)	142.17	Phosphorus (mg)	362.02
Vitamins		Potassium (mg)	608.17
Vitamin A - IU (IU)	348.24	Selenium (mcg)	51.44
Vitamin A - RAE (RAE)	21.15	Sodium (mg)	650.04
Vitamin A - Carotenoid RE (RE)	33.24	Zinc (mg)	2.19
Vitamin A - Retinol RE (RE)	4.54	Other Fats	
Beta-Carotene (mcg)	193.42	Omega 3 Fatty Acid (g)	0.08
Vitamin B1 - Thiamin (mg)	0.62	Omega 6 Fatty Acid (g)	3.92
Vitamin B2 - Riboflavin (mg)	0.37	Other Nutrients	
Vitamin B3 - Niacin (mg)	16.55	Gram Weight (g)	246.21
Niacin Equivalents (mg)	22.71	Alcohol (g)	0
Vitamin B6 (mg)	0.65	Caffeine (mg)	0
Vitamin B12 (mcg)	0.33	Choline (mg)	86.10
Biotin (mcg)	0.83		

Recipe: Pasta with Chicken and Thai Peanut Sauce *

Notes

1. In a medium, shallow glass dish or stainless-steel pan, combine the soy sauce, the lime juice (amounts listed first for each), olive oil, garlic, and ginger. Add the chicken; turn to coat. Let marinate at least 10 minutes.

2. Meanwhile, in a medium, stainless-steel saucepan, combine the remaining soy sauce and lime juice, the peanut butter, broth, honey, salt, and red-pepper flakes. Pour the marinade from the chicken into the saucepan and bring just to a simmer over moderate heat, whisking until smooth.

3. Heat a grill pan over moderate heat. Cook the chicken until browned and just done, 4 to 5 minutes per side. Remove the chicken from the pan and let it rest for 5 minutes. Cut crosswise into 1/4-inch slices. Alternatively, heat olive oil in a heavy frying pan or roast the chicken in the oven at 400 degrees until the internal temperature is 165 F. Slice the chicken in the same way.

4. In a large pot of boiling, salted water, blanch the pea pods for 1-2 minutes until bright green. Remove the pea pods and add the spaghetti. Cook the spaghetti until just done, about 12 minutes. Drain the pasta and toss with the peanut sauce, chicken, pea pods, and chopped scallions. Top with the chopped cilantro, if using.

Note: if fresh lime juice is not available, rice vinegar is a good substitute.

Adapted from www.myrecipes.com from Food & Wine magazine.

Recipe: Rice Salad with Kale *

Rice Salad with Kale

Number of Servings: 100 (206.29 g per serving)

Weight: 20629.30 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Oil, olive, extra virgin	1	Cup	8361
Onion, yellow, fresh, chpd	8 1/2	Cup	7499
Rice, brown, long grain, dry	4 1/4	Quart	38009
Broth, chicken, low sod, cnd	8 1/2	Quart	92184
Juice, lemon, fresh	4 1/4	Cup	3068
Oil, olive, extra virgin	4 1/4	Cup	8361
Garlic, minced, wet	5 1/2	Tablespoon	9473
Salt, table	4 1/4	Teaspoon	26014
Spice, pepper, black	4 1/4	Teaspoon	26016
Fennel, bulb, fresh, slices	8 1/2	Cup	5450
Peppers, bell, red, sweet, fresh, chpd	8 1/2	Cup	5128
Cabbage, red, fresh, chpd	8 1/2	Cup	6766
Herb, parsley, fresh, chpd	8 1/2	Cup	26012
Cabbage, kale, fresh, chpd	8 1/2	Quart	5208
Juice, lemon, fresh	5 1/2	Tablespoon	3068

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	61.67
Calories (kcal)	268.00	Vitamin D - IU (IU)	--
Calories from Fat (kcal)	121.78	Vitamin D - mcg (mcg)	--
Calories from SatFat (kcal)	18.14	Vitamin E - Alpha-Toco (mg)	2.10
Protein (g)	5.56	Folate (mcg)	33.88
Carbohydrates (g)	32.20	Folate, DFE (mcg)	33.88
Dietary Fiber (g)	2.67	Vitamin K (mcg)	274.06
Soluble Fiber (g)	0.32	Pantothenic Acid (mg)	0.61
Total Sugars (g)	2.07	Minerals	
Monosaccharides (g)	1.20	Calcium (mg)	60.57
Disaccharides (g)	0.18	Chromium (mcg)	0.14
Other Carbs (g)	25.46	Copper (mg)	0.22

Recipe: Rice Salad with Kale *

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Fat (g)	13.53	Fluoride (mg)	0.00
Saturated Fat (g)	2.02	Iodine (mcg)	0.40
Mono Fat (g)	9.64	Iron (mg)	1.56
Poly Fat (g)	1.59	Magnesium (mg)	62.28
Trans Fatty Acid (g)	0	Manganese (mg)	1.43
Cholesterol (mg)	0	Molybdenum (mcg)	3.20
Water (g)	153.36	Phosphorus (mg)	158.95
Vitamins		Potassium (mg)	381.01
Vitamin A - IU (IU)	4425.93	Selenium (mcg)	7.76
Vitamin A - RAE (RAE)	221.30	Sodium (mg)	145.26
Vitamin A - Carotenoid RE (RE)	442.59	Zinc (mg)	0.97
Vitamin A - Retinol RE (RE)	0	Other Fats	
Beta-Carotene (mcg)	2616.41	Omega 3 Fatty Acid (g)	0.15
Vitamin B1 - Thiamin (mg)	0.18	Omega 6 Fatty Acid (g)	1.40
Vitamin B2 - Riboflavin (mg)	0.11	Other Nutrients	
Vitamin B3 - Niacin (mg)	3.24	Gram Weight (g)	206.29
Niacin Equivalent (mg)	4.04	Alcohol (g)	0
Vitamin B6 (mg)	0.31	Caffeine (mg)	0
Vitamin B12 (mcg)	0.08	Choline (mg)	16.25
Biotin (mcg)	1.10		

Notes

1. Place chicken broth in a large pot and heat until hot but not boiling.
2. Heat olive oil in a large saucepan. Add onion and saute until soft. Add rice and saute 1-2 minutes until all grains are coated with oil. Add hot chicken broth and bring to a boil. Cover, lower heat and simmer 50-55 minutes until all water is absorbed. Then turn the heat off and let the rice rest for 10 minutes.
2. In a large bowl, combine lemon juice, olive oil, garlic, salt and pepper.
3. Chop fennel, red pepper, cabbage, and parsley; add to bowl, don't toss. Add finely chopped greens (kale, chard or collard greens), don't toss.
4. Once rice is fully cooked, cool until it quits steaming but is still warm, than place on top of chopped greens, spread like a blanket over vegetables. The warm rice will wilt the greens to soften slightly. When rice stops steaming toss the vegetables and rice with the dressing. Taste the salad and adjust seasonings, some extra salt and/or lemon may be required.

Adapted from Feeding the Whole Family by Cynthia Lair (Sasquatch Books, 2008).

Recipe: Rice Salad with Kale *

Notes cont.

Note: The original recipe was prepared using wild rice and can also be make using quinoa or couscous.