

## Meals Partnership Coalition 2010 Nutrition Education Series Seminar 2

Pike Market Senior Center  
85 Pike Street #200  
Seattle, WA 98101

May 25, 2010  
1:00 – 3:00 PM

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### Introduction

#### Presenters

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Bridget Nichols, MSN student

Bastyr University Masters of Nutrition Program



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### Obectives

- We have split our discussions into 4 sections: today is lunch, the last discussion was about breakfast, and the next dinner followed by a fourth general discussion.
- During each session, we will discuss a different macronutrient such as carbohydrate, protein, or fat, certain disease states we feel are important to the clients you serve, micronutrients 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.

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## 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. We would like to help develop some nutritious and interesting meals you feel comfortable preparing and serving on a regular basis.

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## Homeless and Risk of Nutrition Related Diseases

Risk of health problems is 3 to 6 times greater for homeless persons

- Living conditions - tight quarters
- Poor hygiene
- High-risk behaviors
- Inadequate nutrition
- Lack of health insurance



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## 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.

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### 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

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### The Power of Food *“Food is Medicine”*

Researchers have found that nutrient-rich foods are important for the prevention of disease.

They contain a synergistic blend of nutrients including not only protein, carbohydrates, fiber, fat, vitamins and minerals, but they also contain over 8,000 phytonutrients.

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### The Power of Food *“Food is Medicine”*

The media gives a lot of attention to specific supplements for their health promoting benefits, but there is nothing more powerful than food itself

Examples:

- Apples – powerful antioxidant

1500 mg



RDA 90 mg



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### 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 reduce the risk of chronic disease – FOOD!



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### Discussion



1. What are some changes you'd like to see in your current lunch program?
2. Which foods can be served for lunch?
3. What are some possible ways to increase nutrient rich foods served for lunch?

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### Macronutrients

Macronutrients include Protein, Carbohydrates, and Fats

Today's Focus: Protein



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### Protein: the body's building blocks

The body uses protein to build, maintain, and repair tissue, and for the regulation of many chemical processes.

The recommended range of intake for adults is 10% to 35% of total calories each day.

Food sources: meat, poultry, pork, fish, eggs, dairy products, legumes, whole grains.

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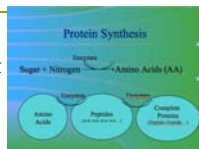
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### Protein – the Body's Building Blocks

The body needs 20 amino acids, 8 of which are essential (must come from dietary sources).



Some dietary sources of protein are "complete" and some are not

- Animal protein foods (complete)
- Plant protein foods (incomplete)

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### Protein – Important Functions

The body uses protein for many critical processes:

- **Enzymes** – All enzymes in your body are proteins.
- **Hormones** – Many hormones are made of proteins that regulate overall body functions including metabolic rate.
- **Immunity** – antibodies are manufactured from proteins.
- **Structural Elements** – For all new growth in the body, amino acids (the building blocks of protein) must constantly be re-supplied by food.

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## Protein – Important Functions

- ❑ **Fluid Balance** – Proteins attract water and help regulate the quantity of fluids in cell compartments to maintain fluid balance.
- ❑ **Acid-Base Balance** – proteins act as buffers to maintain normal pH.
- ❑ **Transport Proteins** – proteins specialize in moving nutrients and other molecules in and out of cells, or between cells of different organs.
- ❑ **Provides energy** – protein is a fuel source.
- ❑ **Lubrication** of joints.




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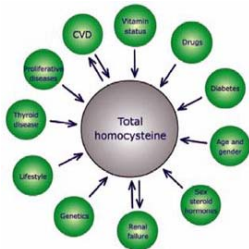
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## Protein – is too much harmful?

Methionine, an amino acid, is converted in the body to homocysteine.

Risk: An elevated level of homocysteine has been linked to an increased risk of heart disease.




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## Protein – is too much harmful?

A diet rich in folate, vitamin B6 and vitamin B12 will optimize the conversion of homocysteine to normal metabolites and prevent the build up of excess amounts.

Good food sources:

- ❑ **Folate** – Enriched breads, flour, pasta and other grain products, vegetables, mustard and turnip greens, citrus fruit juices and legumes.
- ❑ **Vitamin B6** – Lean meats, cereals, vegetables and milk.
- ❑ **Vitamin B12** – Fish and seafood, meats, eggs, chicken and milk.

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### Discussion

1. What are some of the protein rich foods that you typically serve in your facilities?
2. Do you think that the meals you provide balance animal protein with folate, B6 and B12 foods?



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### Fluids

Adequate hydration is essential for life. The human body is approximately 55-60% water. Fluids are necessary to regulate body temperature, transport nutrients, comprise body fluids, and make waste products soluble for elimination.



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### Fluids

Daily fluid requirements for healthy individuals is 30 to 35 ml per kg of body weight (For 180 lb person = 87 to 93 oz/day)

Requirements vary based on age, activity level, and medical condition.



Food and beverages contribute water to the diet each day – fruits and vegetables contribute the most from foods.

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## Fluids - Dehydration



Signs of mild dehydration include thirst, loss of appetite, dry skin, skin flushing, dry mouth, fatigue and chills.

If water is not replenished, symptoms become more serious:

- ▣ Increased heart rate and respiration
- ▣ Increased body temperature
- ▣ Extreme fatigue and muscle cramps
- ▣ Headaches, nausea
- ▣ Tingling of the limbs

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## Risk of Disease



Today's focus: **Dental Problems**

Oral cavity or esophageal infections cause:

- ▣ Pain
- ▣ Lesions
- ▣ Altered ability to eat
- ▣ No moistening power
- ▣ Food accumulation on teeth

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## Dental Problems

Disease states that cause dental/oral problems include:

- ▣ HIV/AIDS
- ▣ Diabetes
- ▣ Drug addiction
- ▣ Fungal infections

Everyone agrees that it is a problem, but what can be done to help?

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## Methamphetamine



The toxic ingredients involved in making meth including ammonia, lithium, and lighter fluid are very acidic and cause very aggressive erosion of enamel, decay formation, destructive to both tooth structure, gums and oral tissues.

### Issues of concern

- ❑ Tooth decay
- ❑ Gum disease due to blood vessel damage
- ❑ Cracks in teeth due to grinding or clenching
- ❑ Dry mouth (resulting in increased tooth decay)
- ❑ Increased sugar consumption due to cravings

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## Dental Problems

- ❑ Tooth loss and dentures have a negative impact on nutrition!

It is harder to eat:

- ❑ Protein
- ❑ Fiber
- ❑ Fruits and Vegetables (which impacts vitamin C, A, Potassium, and antioxidants)



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## Dental Problems and Diet

Obviously soft foods are preferred for these participants, but we need to maximize the nutrition in these types of food.

- ❑ Eggs
- ❑ Hot cereal
- ❑ Soups
- ❑ Potatoes
- ❑ Soft cooked vegetables



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## Dental problems



□ Nutrients important for tooth development  
Protein, calcium, vitamin D, phosphorus,  
vitamin C, fluoride.

There may be nothing we can do about oral hygiene of the diners, however, we can provide foods that are healthy and easy to eat that are high in nutrients for this population.

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## Risk of Disease

Today's focus: **Gastrointestinal Problems**

Common Problems:

- ✓ Gastroesophageal Reflux Disease (GERD or heart burn)
- ✓ Ulcers
- ✓ Gastritis (inflammation)
- ✓ Diarrhea or constipation
- ✓ Irritable bowel syndrome



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## Gastrointestinal Problems

The commonality among most of these ailments is inflammation.

Some foods that are anti-inflammatory include:

- Fruits: Berries, kiwi, apples, oranges
- Vegetables: Potatoes w/skin, brussels sprouts, broccoli, green beans, spinach, sweet potatoes and cauliflower
- Spices: turmeric, basil, rosemary, peppers, garlic, ginger, oregano, mint or parsley
- Olive oil

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### Gastrointestinal Problems

#### *Reduce Pro-inflammatory Foods*

A simple rule of thumb is to consider the following: If it contains flour, and/or sugar or other sweetener, it will be pro-inflammatory



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### Gastrointestinal Problems

For increased bowel motility (diarrhea), bland foods are best such as toast, cooked rice, and clear fluids.

For constipation, fiber, fluids and physical activity are the most effective relief. Foods with soluble fiber such as legumes, apples and oats help regulate the intestinal tract.

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### Gastrointestinal Problems

For heartburn, eat small meals, avoid spicy foods, tight clothing around the waist, and lying down after eating.



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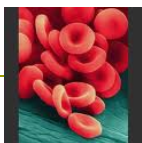
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### Risk of Disease



Today's topic: **Anemia**

Anemia is: a blood disorder that occurs when there is not enough hemoglobin in a person's blood or a deficiency in size or number of red blood cells.

(Hemoglobin is a substance in the red blood cells that makes it possible for the blood to transport oxygen through the body.)

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### Risk of Disease

Causes of Anemia are:

- Most commonly, a lack of iron in the body. This type of anemia is called **iron-deficiency anemia**. Your body uses iron to make hemoglobin. Without the needed amount of iron, your body cannot make hemoglobin.
- Inability to absorb B12 (**Pernicious anemia**)
- Lack of dietary folate (**Megaloblastic anemia**)
- Inherited disease (**Hemolytic or Sickle Cell anemia**)

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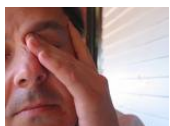
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### Risk of Disease

#### *Anemia*

Classic symptoms of anemia are:

- Feeling tired
- Difficulty breathing
- Dizziness
- Headache
- Feeling cold



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## Iron Deficiency Anemia

□ Anemia is the end product of long term, chronic iron deficiency. It affects many systems:

1. Inadequate muscle function
2. Neurological involvement (fatigue, anorexia)
3. Defects in structure and function of tissues such as tongue, nails, mouth, stomach
4. Difficulty in swallowing and eating
5. Gastritis and gastrointestinal problems

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## Risk of Disease

### Anemia

#### Iron-deficiency Anemia

Cause: lack of dietary protein, blood loss, or sickness.

Treatment: increase dietary protein and pair foods for optimal absorption (such as citrus)



Men need 8 mg/day  
Women need 18 mg/day (until menopause)

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## Iron-deficiency Anemia

□ Here is a list of Iron rich foods you could serve your participants:

- Red meat (beef) 3 oz=4 mg
- Poultry (turkey) 3 oz=3 mg
- Tofu 4 oz=2.3 mg
- Peanut butter 1 Tbs=0.3 mg
- Egg yolks 1 oz=1 mg
- Dark, leafy greens 1/2 cup=3 mg
- Dried fruit (raisins) 1/2 cup=3.4 mg
- Beans and lentil 1/2 cup=3.5 mg
- Iron-enriched cereals and grains




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## Iron-deficient anemia

Inhibits Absorption	Enhances Absorption
Coffee/Tea (phytates)	Vitamin C 
Milk (calcium) 	Include meat/poultry in meals throughout the day
Fiber 	Choose enriched cereals and grains 

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## Pernicious anemia

- ❑ **Pernicious anemia** is caused by a lack of acid and enzymes in the stomach that are required to digest B12 from food. Vitamin B12 deficiency is estimated to affect 10%-15% of individuals over the age of 60 (Linus Pauling Institute).
- ❑ Treatment includes B12 injection or high dose therapeutic oral treatment (1000 mcg/d). Your diners most likely don't have access to this treatment, so we will focus on food sources.

Other factors influencing B12 include:

- ❑ Those with pancreatic problems
- ❑ Alcoholics




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## Foods High in B12

- ❑ **Adults need 2-4 mcg a day!**
- ❑ Red meat (beef) 3 oz=2.1 mcg
- ❑ Poultry (turkey) 3 oz=.3 mcg
- ❑ Egg 1 =.6 mcg
- ❑ Salmon 3 oz = 2.4 mcg
- ❑ Milk 8 oz = .9 mcg



You may notice that all B12 vitamins come in the form of animal protein! That's because this vitamin is always found bound to certain proteins and must be cleaved free by enzymes and acids in the stomach. Further, vegans could seriously risk putting themselves in a B12 deficient state.

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### Why does it matter?

- ❑ Pernicious anemia affects the blood, gastrointestinal tract and nervous system.
- ❑ Symptoms include: numbness and tingling in the hands and feet, poor muscular coordination, memory loss and hallucinations.
- ❑ A high-protein diet can help with liver function and blood regeneration in these patients.

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### Folic Acid Deficiency Anemia (Megaloblastic Anemia)

- ❑ Without folic acid, the body cannot create functional red blood cells!
- ❑ B12 and folate deficiency can go hand in hand and megaloblastic anemia can also be caused by a lack of absorption in alcoholics.

- Symptoms include:
- Weak muscles
  - Numbness and tingling in hands and feet
  - Fatigue
  - Nausea/anorexia/decreased appetite
  - Irritability
  - Diarrhea
  - Smooth and tender tongue




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### Food sources of folic acid

❑ Here is a list of folate rich foods you could serve your participants:

- ❑ Tuna                    3 oz=3.5 mcg
- ❑ Poultry (turkey)    3 oz=7.9 mcg
- ❑ Milk                    1 c=13 mcg
- ❑ Orange                1=40.0 mcg
- ❑ Egg                     1=23 mcg
- ❑ Baked Potato        1 mid=22 mcg
- ❑ Whole wheat bread 1 slice=14 mcg
- ❑ Banana                1 cup=22 mcg
- ❑ Iron-enriched cereals and grains up to 400 mcg



Adults need 400 mcg/day

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## Hereditary Anemias

### Hemolytic anemia:

- ❑ Inherited and autoimmune
- ❑ "Hemolysis" is a premature breakdown in red blood cells.
- ❑ Symptoms include fatigue, shortness of breath, and jaundice.

FYI: these patients need medical help and may require blood transfusions or medication. Nutrition will not affect them like other anemias.

### Sickle Cell Anemia:

- ❑ An inherited disease most common in African Americans or Hispanic-Americans.
- ❑ Irregular shaped red blood cells die very quickly.
- ❑ Can cause blockages in the vascular system leading to severe pain, infection and organ damage.



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## Portion sizes

- ❑ Here is a reminder about portion sizes

1 cup = baseball

3 oz chicken or meat=deck of cards/palm

1 ½ oz cheese=3 stacked dice

1 portion bread/cereal=a fist



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## Discussion

1. What kinds of foods you currently serve are accessible to those with dental/oral problems?
2. Do you get any special requests relating to gastrointestinal problems?
3. What are the most significant challenges you face in providing a diet which would prevent anemia (iron, folic acid, B12)?

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## BREAK

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Please return in 15 minutes for the rest of our discussion



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## Micronutrients

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

Today's Focus:

- Iron
- B12 and B6
- Zinc
- Folate

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## Micronutrients – Iron

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- Essential component of protein and enzymes
- Important in oxygen carrying and storage (part of the structure of "heme")
- Antioxidant
- Important for energy production and muscle integrity

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## Iron



How could a woman get 18 mg/day?

6 oz beef	4.64 mg
6 oz tuna	2.6 mg
Baked potato	1.87 mg
1 cup lentils	6.6 mg
2 boxes raisins	1.62 mg
+ _____	
	17.33 mg

Note: 1 bowl of fortified raisin bran can yield 6-18 mg/day. This may be an important source for your participants!




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## Micronutrients – Vitamin B6

- Must be obtained from food
  - Deficiency can cause red blood cells to appear small and pale
  - Alcohol can impair its function in the body
  - Absorbed well from vegetables, meat, fish and dairy
- Requirements: men 1.5 mg/day  
women 1.3 mg/day

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## B6 foods

How could a man get to 1.5 mg/day?

1 banana	.43 mg
1 potato	.70 mg
3 oz chicken	.51 mg
+ _____	
	1.64 mg




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### Micronutrients – Vitamin B12

- ❑ Cannot be absorbed with lack of stomach acid and pancreatic enzymes
- ❑ Lack of B12 can cause neurological disturbances or Megaloblastic anemia.

**Symptoms of vitaminB12 deficiency**

- ❑ Numbness and tingling of the arms or legs
- ❑ Difficulty walking
- ❑ Memory loss
- ❑ Disorientation/dementia
- ❑ Tongue soreness
- ❑ Appetite loss
- ❑ Constipation




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### Vitamin B12

- ❑ How could a man get to 2.4 mcg/day

1 egg	.6 mcg	
3 oz beef	2.1 mcg	
+ _____	2.7 mcg	

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### Micronutrients – Zinc



- ❑ Zinc is important for growth and development, immune response, neurological function and reproduction.
- ❑ Foods rich in zinc include seafood, red meat, poultry, dairy products, whole grains, nuts, and seeds.
- ❑ Recommended Dietary Allowance is 11 mg/day for adult men and 8 mg/day for adult women.

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**Micronutrients –  
Zinc**

- ❑ Zinc plays a fundamental role in the activity of genes, forming what is called “zinc fingers” because of their shape.
- ❑ Zinc also plays a role in cell signaling and has been found to influence hormone release and nerve impulse transmission.
- ❑ Zinc is found in nearly 100 specific enzymes in the body. For example, superoxide dismutase is one of the most potent antioxidants in the body.

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**Micronutrients –  
Zinc**



Food	Serving	Zinc (mg)
Oysters	6 medium (cooked)	76.3
Crab, Dungeness	3 ounces (cooked)	4.7
<b>Beef</b>	<b>3 ounces (cooked)</b>	<b>6.0</b>
<b>Pork</b>	<b>3 ounces (cooked)</b>	<b>2.2</b>
<b>Chicken (dark meat)</b>	<b>3 ounces (cooked)</b>	<b>1.8</b>
<b>Turkey (dark meat)</b>	<b>3 ounces (cooked)</b>	<b>3.8</b>
Yogurt, fruit	1 cup (8 ounces)	1.8
<b>Cheese, cheddar</b>	<b>1 ounce</b>	<b>0.9</b>
<b>Milk</b>	<b>1 cup (8 ounces)</b>	<b>1.8</b>
Beans, baked	1/2 cup	1.8

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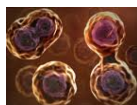
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**Micronutrients – Folate**

- ❑ Folate, or folic acid, is a water soluble B-complex vitamin.
- ❑ Certain conditions such as pregnancy or cancer result in increased rates of cell division and metabolism, causing an increase in the body's demand for folate.




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### Micronutrients – Folate

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The available scientific evidence shows that adequate folate intake:

- ▣ prevents neural tube defects
- ▣ is helpful in lowering the risk of some forms of cancer
- ▣ may lower the risk of cardiovascular diseases

The Linus Pauling Institute recommends that adults take a 400 mcg supplement of folic acid daily, in addition to folate and folic acid consumed in the diet.

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### Micronutrients – Folate

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- ▣ Folate is stored in the liver, and it would take about 3-4 months to deplete stores.
- ▣ After 4-5 months, symptoms such as weakness, fatigue, headache and irritability would occur due to abnormal cell division and impaired synthesis of DNA.
- ▣ With a folate deficiency, megaloblastic anemia develops due to impaired synthesis of red blood cells.

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### Menu Development - Lunch

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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.

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## Menu Development - Lunch

Day 1	Day 2	Day 3	Day 4
Tuna pasta salad	Beef Taco Salad with beans and salsa	Chicken Stir Fry with rice	Turkey Chili with Baked Potato
Fresh fruit		Orange	Apple sauce
Milk	Juice	Milk	Milk

Day 5	Day 6	Day 7
German Potato Cheese Soup	Tuna Melt sandwich	Meatloaf
Toasted Bread	Green salad w/carrot, radish and cucumber	Mashed Potato
Juice	Fresh Fruit	Asparagus
	Milk	Milk

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## Nutrition Content

Nutrient	Chicken Stir Fry	Turkey Chili	Tuna Melt	Meatloaf
Protein	49 g 33%	33 g 24%	40 g 32%	54 g 34%
Carbohydrate	72 g 48%	78 g 57%	49 g 40%	62 g 38%
Fiber	8 g	12 g	8 g	6 g
Fat	13 g 19%	11 g 18%	16 g 28%	19 g 27%
Fluids	669 g	642 g	570 g	642 g
B6 (mg)	<b>1.33 103%</b>	0.77 59%	0.69 53%	0.62 48%
B12 (mcg)	1.65 69%	1.17 49%	<b>3.73 156%</b>	<b>5.91 246%</b>
Folate (mcg)	94.79 24%	89.49 22%	146.91 37%	<b>189.05 47%</b>
Iron (mg)	2.56 32%	4.51 56%	3.06 38%	<b>5.89 74%</b>
Zinc (mg)	3.46 31%	2.22 20%	3.01 27%	<b>9.98 91%</b>

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## Questions and Discussion

Do you have any specific questions about the materials presented?

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




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Thank you for your participation!

We hope to see you at our discussion on "Dinner"

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Recipe: Beef Taco Salad \*

Beef Taco Salad

Number of Servings: 100 (503.97 g per serving)

Weight: 50396.63 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Beef, ground, hamburger, bkd, 5% fat	18 3/4	Pound	58110
Beans, pinto, cnd	4 3/4	Gallon	7822
Spice, chili pepper, pwd	8 1/2	Tablespoon	26002
Salt, table	4 1/4	Tablespoon	26014
Spice, pepper, black	4 1/4	Tablespoon	26016
Salsa	6 1/4	Quart	53676
Juice, lime, fresh	3	Cup	3072
Lettuce, green leaf, fresh, shredded	4 3/4	Gallon	5086
Avocado, avg, fresh	25	Each	3016
Tomatoes, red, fresh, year round avg, med, 2 3/5"	50	Each	5169
Onion, red, fresh, chpd	3	Quart	7498

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	26.68
Calories (kcal)	397.45	Vitamin D - IU (IU)	--
Calories from Fat (kcal)	124.67	Vitamin D - mcg (mcg)	--
Calories from SatFat (kcal)	32.23	Vitamin E - Alpha-Toco (mg)	1.99
Protein (g)	30.06	Folate (mcg)	70.50
Carbohydrates (g)	32.65	Folate, DFE (mcg)	70.50
Dietary Fiber (g)	9.67	Vitamin K (mcg)	65.27
Soluble Fiber (g)	0	Pantothenic Acid (mg)	1.38
Total Sugars (g)	8.19	Minerals	
Monosaccharides (g)	2.88	Calcium (mg)	37.48
Disaccharides (g)	0.26	Chromium (mcg)	2.84
Other Carbs (g)	14.79	Copper (mg)	0.22
Fat (g)	13.85	Fluoride (mg)	0.02
Saturated Fat (g)	3.58	Iodine (mcg)	2.29
Mono Fat (g)	7.22	Iron (mg)	7.60



Recipe: Beef Taco Salad \*

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Poly Fat (g)	1.31	Magnesium (mg)	47.77
Trans Fatty Acid (g)	0.14	Manganese (mg)	0.28
Cholesterol (mg)	62.09	Molybdenum (mcg)	5.68
Water (g)	419.96	Phosphorus (mg)	227.15
<b>Vitamins</b>		Potassium (mg)	1435.66
Vitamin A - IU (IU)	2813.13	Selenium (mcg)	19.48
Vitamin A - RAE (RAE)	140.66	Sodium (mg)	1403.41
Vitamin A - Carotenoid RE (RE)	281.31	Zinc (mg)	6.37
Vitamin A - Retinol RE (RE)	0	<b>Other Fats</b>	
Beta-Carotene (mcg)	1625.17	Omega 3 Fatty Acid (g)	0.12
Vitamin B1 - Thiamin (mg)	0.12	Omega 6 Fatty Acid (g)	1.16
Vitamin B2 - Riboflavin (mg)	0.26	<b>Other Nutrients</b>	
Vitamin B3 - Niacin (mg)	6.13	Gram Weight (g)	503.97
Niacin Equivalents (mg)	8.78	Alcohol (g)	0
Vitamin B6 (mg)	0.56	Caffeine (mg)	0
Vitamin B12 (mcg)	2.13	Choline (mg)	93.49
Biotin (mcg)	5.49		

Notes

1. In a large skillet, cook beef over medium heat. Drain well and return to pan. Mix in beans, chili powder, salt, and pepper; cook for 1 minute. Stir in approximately 1/2 of the salsa and heat through.
  2. Mix together remaining salsa and lime juice; set aside. Divide lettuce among serving bowls. Add meat mixture, avocado, tomato, red onion, and salsa mixture. Finish by topping each salad with a handful of tortilla strips.
- \*note - substitutions can be made to alter the recipe! Different types of beans and vegetables can be added in when necessary.

Recipe: Chicken Stir-Fry \*

Chicken Stir-Fry

Number of Servings: 100 (299.43 g per serving)

Weight: 29943.29 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Chicken, broiler/fryer, breast, w/o skin, raw	33 1/3	Pound	15054
Cornstarch	3	Cup	30000
Sauce, soy, low sod, f/soy & wheat	2 1/8	Cup	90035
Spice, ginger, ground	8 1/4	Teaspoon	26023
Spice, garlic, pwd	4 1/4	Teaspoon	26007
Oil, vegetable, low saturated fat, USDA	3	Cup	44975
Broccoli, florets, fresh	3	Gallon	5556
Celery, fresh, diced	4 1/4	Quart	5054
Carrots, fresh, strips/slices, USDA	4 1/4	Quart	15298
Onion, yellow, fresh, sliced	4 1/4	Quart	7808
Water, tap, municipal	4 1/4	Quart	20041
Bouillon, chicken, dehyd	5 1/2	Tablespoon	90245

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	36.82
Calories (kcal)	271.94	Vitamin D - IU (IU)	0
Calories from Fat (kcal)	77.10	Vitamin D - mcg (mcg)	0
Calories from SatFat (kcal)	9.37	Vitamin E - Alpha-Toco (mg)	1.01
Protein (g)	36.83	Folate (mcg)	45.12
Carbohydrates (g)	10.33	Folate, DFE (mcg)	45.12
Dietary Fiber (g)	2.28	Vitamin K (mcg)	21.05
Soluble Fiber (g)	0.36	Pantothenic Acid (mg)	1.56
Total Sugars (g)	2.27	Minerals	
Monosaccharides (g)	1.13	Calcium (mg)	54.29
Disaccharides (g)	0.95	Chromium (mcg)	0.13
Other Carbs (g)	5.01	Copper (mg)	0.11
Fat (g)	8.68	Fluoride (mg)	0.03

Recipe: Chicken Stir-Fry \*

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Saturated Fat (g)	1.04	Iodine (mcg)	0.39
Mono Fat (g)	1.98	Iron (mg)	1.68
Poly Fat (g)	4.79	Magnesium (mg)	60.08
Trans Fatty Acid (g)	0.21	Manganese (mg)	0.24
Cholesterol (mg)	87.74	Molybdenum (mcg)	4.58
Water (g)	240.53	Phosphorus (mg)	343.64
<b>Vitamins</b>		Potassium (mg)	650.50
Vitamin A - IU (IU)	4596.69	Selenium (mcg)	28.47
Vitamin A - RAE (RAE)	237.32	Sodium (mg)	380.59
Vitamin A - Carotenoid RE (RE)	456.49	Zinc (mg)	1.48
Vitamin A - Retinol RE (RE)	9.07	<b>Other Fats</b>	
Beta-Carotene (mcg)	1764.99	Omega 3 Fatty Acid (g)	0.58
Vitamin B1 - Thiamin (mg)	0.16	Omega 6 Fatty Acid (g)	4.16
Vitamin B2 - Riboflavin (mg)	0.22	<b>Other Nutrients</b>	
Vitamin B3 - Niacin (mg)	17.62	Gram Weight (g)	299.43
Niacin Equivalent (mg)	24.76	Alcohol (g)	0
Vitamin B6 (mg)	0.96	Caffeine (mg)	0
Vitamin B12 (mcg)	0.58	Choline (mg)	117.36
Biotin (mcg)	1.74		

Notes

Cut chicken into 1/2 inch strips; place in resealable plastic bag. Add cornstarch and toss to coat.

Combine soy sauce, ginger, and garlic powder; add to bag and shake well. Refrigerate for 30 minutes.

In a large skillet, heat 2 tablespoons of oil and stir fry chicken until no longer pink, about 3-5 minutes. Remove and keep warm.

Add remaining oil to the skillet; stir fry broccoli, celery, carrots, and onion for 4-5 minutes or until tender-crisp.

Add water and bouillon. Return chicken to pan. Cook and stir until thickened and bubbly.

Serve hot.

Adapted from [www.recipezaar.com](http://www.recipezaar.com).

Recipe: Meatloaf

Meatloaf

Number of Servings: 6 (296.23 g per serving)

Weight: 1777.36 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Onion, yellow, fresh, chpd	1 1/2	Cup	7499
Oil, olive, extra virgin	1	Tablespoon	8361
Salt, table	1	Teaspoon	26014
Spice, pepper, black	1/2	Teaspoon	26016
Herb, thyme, leaves, dried	1/4	Teaspoon	15401
Sauce, worcestershire	8	Teaspoon	53099
Broth, chicken, low sod, cnd	6	Tablespoon	92184
Tomato Paste, cnd	3/4	Teaspoon	6286
Beef, ground, extra lean, raw	2.5	Pound	47445
Bread Crumbs, plain, grated, dry	11 1/2	Tablespoon	42004
Eggs, whole, raw, lrg	1 1/2	Each	19501
Ketchup	6	Tablespoon	27000

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	6.39
Calories (kcal)	346.67	Vitamin D - IU (IU)	4.38
Calories from Fat (kcal)	107.52	Vitamin D - mcg (mcg)	0.11
Calories from SatFat (kcal)	30.80	Vitamin E - Alpha-Toco (mg)	0.66
Protein (g)	41.03	Folate (mcg)	29.55
Carbohydrates (g)	18.83	Folate, DFE (mcg)	36.93
Dietary Fiber (g)	1.39	Vitamin K (mcg)	2.55
Soluble Fiber (g)	0.01	Pantothenic Acid (mg)	0.31
Total Sugars (g)	6.85	<b>Minerals</b>	
Monosaccharides (g)	5.06	Calcium (mg)	52.68
Disaccharides (g)	0.94	Chromium (mcg)	0.96
Other Carbs (g)	10.59	Copper (mg)	0.11
Fat (g)	11.95	Fluoride (mg)	0.00
Saturated Fat (g)	3.42	Iodine (mcg)	7.43
Mono Fat (g)	5.79	Iron (mg)	4.57

Recipe: Meatloaf

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Poly Fat (g)	1.53	Magnesium (mg)	15.49
Trans Fatty Acid (g)	0.83	Manganese (mg)	0.21
Cholesterol (mg)	152.87	Molybdenum (mcg)	4.13
Water (g)	220.05	Phosphorus (mg)	71.19
<b>Vitamins</b>		Potassium (mg)	233.77
Vitamin A - IU (IU)	220.12	Selenium (mcg)	7.51
Vitamin A - RAE (RAE)	25.54	Sodium (mg)	855.88
Vitamin A - Carotenoid RE (RE)	16.18	Zinc (mg)	7.97
Vitamin A - Retinol RE (RE)	17.45	<b>Other Fats</b>	
Beta-Carotene (mcg)	96.22	Omega 3 Fatty Acid (g)	0.05
Vitamin B1 - Thiamin (mg)	0.16	Omega 6 Fatty Acid (g)	0.63
Vitamin B2 - Riboflavin (mg)	0.16	<b>Other Nutrients</b>	
Vitamin B3 - Niacin (mg)	9.72	Gram Weight (g)	296.23
Niacin Equivalents (mg)	10.54	Alcohol (g)	0
Vitamin B6 (mg)	0.11	Caffeine (mg)	0
Vitamin B12 (mcg)	4.72	Choline (mg)	38.30
Biotin (mcg)	4.03		

Notes

Preheat oven to 325 degrees F.

In a saute pan over medium heat, cook the onions, olive oil, salt, pepper and thyme until the onions are translucent, approximately 10 minutes. Add the worcestershire sauce, chicken stock and tomato paste and mix well. Allow to cool to room temperature.

Combine the ground beef, bread crumbs, eggs, and onion mixture in a large bowl. Mix well and shape into a rectangular loaf on an ungreased sheet pan. Spread the ketchup evenly on top.

Bake for 1 1/2 hours until the internal temperature is 165 degrees F. Serve hot, at room temperature, or cold in a sandwich.

Adapted from The Barefoot Contessa Cookbook.

Recipe: Potato Cheese Soup

Potato Cheese Soup

Number of Servings: 100 (347.3 g per serving)

Weight: 34729.85 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Potatoes, peeled, ckd, med 2 1/4" to 3 1/4"	67	Each	90494
Carrots, fresh, chpd	8 1/2	Cup	6772
Celery, fresh, diced	8 1/2	Cup	5054
Onion, fresh, med	16 1/2	Each	7319
Broth, chicken, rts, cnd	6 1/4	Quart	50555
Salt, table	8 1/4	Teaspoon	26014
Milk, 1%, w/add vit A & D	2 1/2	Gallon	214
Butter, salted	3	Cup	8000
Flour, all purpose, white, bleached, enrich	3	Cup	38030
Herb, parsley, dried	1	Cup	26035
Spice, pepper, black	5 1/2	Tablespoon	26016
Cheese, cheddar, shredded	4 1/4	Quart	1008

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	16.30
Calories (kcal)	299.26	Vitamin D - IU (IU)	46.12
Calories from Fat (kcal)	117.62	Vitamin D - mcg (mcg)	1.15
Calories from SatFat (kcal)	73.95	Vitamin E - Alpha-Toco (mg)	0.34
Protein (g)	11.77	Folate (mcg)	26.22
Carbohydrates (g)	34.57	Folate, DFE (mcg)	30.27
Dietary Fiber (g)	3.44	Vitamin K (mcg)	11.16
Soluble Fiber (g)	0.93	Pantothenic Acid (mg)	0.73
Total Sugars (g)	8.02	Minerals	
Monosaccharides (g)	1.00	Calcium (mg)	292.11
Disaccharides (g)	0.72	Chromium (mcg)	0.21
Other Carbs (g)	23.11	Copper (mg)	0.23
Fat (g)	13.17	Fluoride (mg)	0.01
Saturated Fat (g)	8.22	Iodine (mcg)	10.75

Recipe: Potato Cheese Soup

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Mono Fat (g)	3.69	Iron (mg)	1.28
Poly Fat (g)	0.49	Magnesium (mg)	32.86
Trans Fatty Acid (g)	0.17	Manganese (mg)	0.28
Cholesterol (mg)	40.82	Molybdenum (mcg)	1.86
Water (g)	284.06	Phosphorus (mg)	164.07
<b>Vitamins</b>		Potassium (mg)	542.49
Vitamin A - IU (IU)	2447.81	Selenium (mcg)	4.47
Vitamin A - RAE (RAE)	191.78	Sodium (mg)	521.29
Vitamin A - Carotenoid RE (RE)	192.96	Zinc (mg)	1.03
Vitamin A - Retinol RE (RE)	95.30	<b>Other Fats</b>	
Beta-Carotene (mcg)	967.38	Omega 3 Fatty Acid (g)	0.10
Vitamin B1 - Thiamin (mg)	0.16	Omega 6 Fatty Acid (g)	0.38
Vitamin B2 - Riboflavin (mg)	0.14	<b>Other Nutrients</b>	
Vitamin B3 - Niacin (mg)	2.17	Gram Weight (g)	347.30
Niacin Equivalents (mg)	3.74	Alcohol (g)	0
Vitamin B6 (mg)	0.35	Caffeine (mg)	0
Vitamin B12 (mcg)	0.20	Choline (mg)	21.36
Biotin (mcg)	1.50		

Notes

1. In a large saucepan, bring cubed potatoes, chopped carrot, diced celery, chopped onion, chicken broth and salt to a boil. Reduce heat; cover and simmer until potatoes are just tender. Do not drain; mash slightly. Stir in milk.
2. In a small bowl, blend butter, flour, parsley and pepper; stir into potato mixture. Cook and stir over medium heat until thickened and bubbly.
3. Remove from heat; add cheese and stir until cheese is almost melted. Let soup stand for 5 minutes.

Recipe: Pumpkin Turkey Chili \*

Pumpkin Turkey Chili

Number of Servings: 100 (293.63 g per serving)

Weight: 29363.48 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Oil, olive, extra virgin	3/4	Cup	8361
Onion, yellow, fresh, chpd	3	Quart	7499
Peppers, bell, green, sweet, fresh, chpd	6	Cup	5124
Peppers, bell, red, sweet, fresh, chpd	6	Cup	5128
Chili Peppers, green, diced, cnd	3 1/8	Pound	14984
Garlic, minced, wet	4 1/4	Tablespoon	9473
Turkey, ground, 99% fat free, raw	12 1/2	Pound	51133
Beans, kidney, all types, mature, cnd, USDA	11 1/2	Pound	15348
Tomatoes, diced, unsalted, cnd	11 1/2	Pound	9679
Pumpkin, solid pack, cnd	6 1/4	Quart	6298
Spice, chili pepper, pwd	1 1/8	Cup	26002
Spice, pepper, black	6 1/4	Teaspoon	26016
Spice, cumin, seeds, ground	6	Tablespoon	26503
Spice, chili pepper, cayenne, dried, ground	1 1/2	Teaspoon	82043
Salt, table	1 1/2	Teaspoon	26014
Cheese, cheddar, shredded	6	Cup	1008
Sour Cream, cultured	6	Cup	504

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	31.84
Calories (kcal)	224.94	Vitamin D - IU (IU)	0.81
Calories from Fat (kcal)	71.69	Vitamin D - mcg (mcg)	0.02
Calories from SatFat (kcal)	27.96	Vitamin E - Alpha-Toco (mg)	0.88
Protein (g)	20.69	Folate (mcg)	30.91
Carbohydrates (g)	19.72	Folate, DFE (mcg)	30.91



Recipe: Pumpkin Turkey Chili \*

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Dietary Fiber (g)	7.44	Vitamin K (mcg)	5.43
Soluble Fiber (g)	0.65	Pantothenic Acid (mg)	0.20
Total Sugars (g)	6.90	Minerals	
Monosaccharides (g)	1.28	Calcium (mg)	110.78
Disaccharides (g)	1.54	Chromium (mcg)	0.02
Other Carbs (g)	5.23	Copper (mg)	0.10
Fat (g)	7.97	Fluoride (mg)	0.00
Saturated Fat (g)	3.11	Iodine (mcg)	3.17
Mono Fat (g)	2.72	Iron (mg)	2.52
Poly Fat (g)	0.54	Magnesium (mg)	23.70
Trans Fatty Acid (g)	0.07	Manganese (mg)	0.17
Cholesterol (mg)	35.61	Molybdenum (mcg)	41.29
Water (g)	200.78	Phosphorus (mg)	109.15
Vitamins		Potassium (mg)	238.16
Vitamin A - IU (IU)	9928.14	Selenium (mcg)	1.91
Vitamin A - RAE (RAE)	526.32	Sodium (mg)	345.18
Vitamin A - Carotenoid RE (RE)	980.79	Zinc (mg)	0.60
Vitamin A - Retinol RE (RE)	35.92	Other Fats	
Beta-Carotene (mcg)	5556.40	Omega 3 Fatty Acid (g)	0.13
Vitamin B1 - Thiamin (mg)	0.09	Omega 6 Fatty Acid (g)	0.41
Vitamin B2 - Riboflavin (mg)	0.10	Other Nutrients	
Vitamin B3 - Niacin (mg)	0.50	Gram Weight (g)	293.63
Niacin Equivalents (mg)	1.51	Alcohol (g)	0
Vitamin B6 (mg)	0.17	Caffeine (mg)	0
Vitamin B12 (mcg)	0.09	Choline (mg)	24.66
Biotin (mcg)	1.22		

Notes

Heat olive oil in a large skillet over medium heat and saute the onion, green bell pepper, red bell pepper, green chilis and garlic until tender.

Stir in the turkey and cook until evenly brown. Drain, and mix in kidney beans, tomatoes, and pumpkin. Season with chili powder, cumin, cayenne pepper, and salt.

Reduce heat to low, cover, and simmer for 20 minutes.

Serve with cheddar cheese and sour cream.

Recipe: Pumpkin Turkey Chili \*

Notes cont.

Note: Serve on 1/2 baked potato for a boost of vitamin C and potassium.

Adapted from [www.allrecipies.com](http://www.allrecipies.com)

Recipe: Tuna Melt \*

Tuna Melt

Number of Servings: 100 (201.51 g per serving)

Weight: 20151.46 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Fish, tuna, light, w/water, drained, can	18 3/4	Pound	17026
Shallots, chpd, fresh	3	Cup	5427
Dressing, mayonnaise, light	3	Cup	44697
Juice, lemon, fresh	1 1/2	Cup	3068
Herb, parsley, fresh, chpd	1 1/2	Cup	26012
Salt, table	1	Tablespoon	26014
Sauce, pepper/hot, rts	1	Tablespoon	53470
Spice, pepper, black, dash	25	Serving	90212
Bread, multi grain, slice	100	Each	42047
Tomatoes, red, fresh, year round avg, med slices, 1/4", USDA	300	Piece	15335
Cheese, cheddar, shredded	3	Quart	1008

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	11.02
Calories (kcal)	261.11	Vitamin D - IU (IU)	1.63
Calories from Fat (kcal)	79.26	Vitamin D - mcg (mcg)	0.04
Calories from SatFat (kcal)	33.12	Vitamin E - Alpha-Toco (mg)	0.97
Protein (g)	29.30	Folate (mcg)	38.12
Carbohydrates (g)	15.58	Folate, DFE (mcg)	38.12
Dietary Fiber (g)	2.70	Vitamin K (mcg)	22.24
Soluble Fiber (g)	0.28	Pantothenic Acid (mg)	0.40
Total Sugars (g)	3.87	Minerals	
Monosaccharides (g)	2.80	Calcium (mg)	143.92
Disaccharides (g)	0.97	Chromium (mcg)	0.43
Other Carbs (g)	9.01	Copper (mg)	0.17
Fat (g)	8.81	Fluoride (mg)	0.02
Saturated Fat (g)	3.68	Iodine (mcg)	5.22
Mono Fat (g)	2.21	Iron (mg)	2.35

Recipe: Tuna Melt \*

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Poly Fat (g)	2.25	Magnesium (mg)	55.52
Trans Fatty Acid (g)	0.01	Manganese (mg)	0.62
Cholesterol (mg)	42.27	Molybdenum (mcg)	6.76
Water (g)	146.75	Phosphorus (mg)	287.94
<b>Vitamins</b>		Potassium (mg)	445.82
Vitamin A - IU (IU)	833.96	Selenium (mcg)	79.07
Vitamin A - RAE (RAE)	83.59	Sodium (mg)	606.95
Vitamin A - Carotenoid RE (RE)	66.57	Zinc (mg)	1.66
Vitamin A - Retinol RE (RE)	50.31	<b>Other Fats</b>	
Beta-Carotene (mcg)	333.46	Omega 3 Fatty Acid (g)	0.47
Vitamin B1 - Thiamin (mg)	0.13	Omega 6 Fatty Acid (g)	1.75
Vitamin B2 - Riboflavin (mg)	0.16	<b>Other Nutrients</b>	
Vitamin B3 - Niacin (mg)	12.74	Gram Weight (g)	201.51
Niacin Equivalents (mg)	18.08	Alcohol (g)	0
Vitamin B6 (mg)	0.44	Caffeine (mg)	0
Vitamin B12 (mcg)	2.66	Choline (mg)	38.37
Biotin (mcg)	5.29		

Notes

Preheat broiler. Toast bread and set aside.

Combine tuna, shallot, mayonnaise, lemon juice, parsley, salt, hot sauce and pepper in a bowl.

Spread 1/4 cup of the tuna mixture on each slice of toast; top with 3 tomato slices and 2 tablespoons of cheese.

Place sandwiches on a baking sheet and broil until the cheese is bubbly and golden brown, 3 to 5 minutes.

Serve warm.

Recipe: Tuna Pasta Salad

Tuna Pasta Salad

Number of Servings: 100 (219.04 g per serving)

Weight: 21903.82 g

Recipe

Item Name	Quantity	Measure	ESHA Code
Pasta, farfel, dry	3	Gallon	38099
Fish, tuna, light, unsalted, cnd, w/water, drained	18 3/4	Pound	17157
Onion, red, fresh, chpd	6	Cup	7498
Peas, green, fzn, 10oz pkg	4 1/4	Quart	5280
Salad Dressing, Italian	4 1/4	Quart	44699
Spice, pepper, black	6 1/4	Teaspoon	26016
Spinach, baby, fresh	6	Gallon	9317

Nutrients

Nutrients	Per Serving	Nutrients	Per Serving
Basic Components		Vitamin C (mg)	8.13
Calories (kcal)	371.17	Vitamin D - IU (IU)	--
Calories from Fat (kcal)	107.82	Vitamin D - mcg (mcg)	--
Calories from SatFat (kcal)	14.21	Vitamin E - Alpha-Toco (mg)	0.01
Protein (g)	27.15	Folate (mcg)	17.31
Carbohydrates (g)	37.35	Folate, DFE (mcg)	17.31
Dietary Fiber (g)	3.52	Vitamin K (mcg)	6.61
Soluble Fiber (g)	0.10	Pantothenic Acid (mg)	0.32
Total Sugars (g)	1.55	<b>Minerals</b>	
Monosaccharides (g)	0.39	Calcium (mg)	33.61
Disaccharides (g)	1.16	Chromium (mcg)	0.02
Other Carbs (g)	2.69	Copper (mg)	0.08
Fat (g)	12.28	Fluoride (mg)	0.02
Saturated Fat (g)	1.58	Iodine (mcg)	0.19
Mono Fat (g)	0.15	Iron (mg)	2.45
Poly Fat (g)	0.93	Magnesium (mg)	30.10
Trans Fatty Acid (g)	0	Manganese (mg)	0.11
Cholesterol (mg)	25.51	Molybdenum (mcg)	4.51
Water (g)	120.77	Phosphorus (mg)	160.32
<b>Vitamins</b>		Potassium (mg)	292.09

Recipe: Tuna Pasta Salad

Nutrients cont.

Nutrients	Per Serving	Nutrients	Per Serving
Vitamin A - IU (IU)	1340.03	Selenium (mcg)	68.86
Vitamin A - RAE (RAE)	78.93	Sodium (mg)	580.60
Vitamin A - Carotenoid RE (RE)	129.24	Zinc (mg)	0.86
Vitamin A - Retinol RE (RE)	14.31	Other Fats	
Beta-Carotene (mcg)	767.73	Omega 3 Fatty Acid (g)	0.24
Vitamin B1 - Thiamin (mg)	0.09	Omega 6 Fatty Acid (g)	0.07
Vitamin B2 - Riboflavin (mg)	0.09	Other Nutrients	
Vitamin B3 - Niacin (mg)	11.70	Gram Weight (g)	219.04
Niacin Equivalent (mg)	15.91	Alcohol (g)	0
Vitamin B6 (mg)	0.33	Caffeine (mg)	0
Vitamin B12 (mcg)	2.54	Choline (mg)	6.75
Biotin (mcg)	0.34		

Notes

1. Fill a large pot 3/4 full with water and bring to a boil. Add the pasta and cook until al dente (tender), 10 to 12 minutes, or according to the package directions. Drain the pasta thoroughly and rinse under cold water. Different types of pasta can be substituted upon availability.
2. In a large bowl, combine the cooked pasta, tuna, onions, peas, salad dressing and pepper. Feel free to use whichever salad dressing you have available. Toss to mix well. Cover and refrigerate until well chilled, at least 2 hours.
3. To serve, place 1 cup of spinach on individual plates. Top each serving with 1/2 cup of the tuna salad and serve immediately. Spinach can be substituted by lettuce or other types of greens available!