

FOOD – A Pillar to Health



Adapted from Prime of Our Lives by Pfizer

What is Food?

- Food is any substance, usually composed primarily of carbohydrates, fats, water and/or proteins, that can be eaten or drunk by an animal or human for nutrition or pleasure. ...

en.wikipedia.org/wiki/Food

Michigan Statistics



Adults who are Overweight or Obese, 2008

Michigan

65.3%

US*

63.1%

US does not include territories. Overweight or obese is defined as having a body mass index (BMI) greater than or equal to 25.0 kg/meters squared.

Source: www.statehealthfacts.org

*Gallup poll: 2009 US obesity rate up to 63.1%

Why Care About Types of Food?

- Food provides the fuel for our body to function in a healthy way and to ward off disease and infection.
- Different types and colors of foods provide vitamins, minerals, phytonutrients and fiber that helps our bodies operate at maximum efficiency.

What is a “Healthy Diet”?

- The Dietary Guidelines describe a **healthy diet** as one that
- Emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products;
- Includes lean meats, poultry, fish, beans, eggs, and nuts; and
- Is low in saturated fats, *trans* fats, cholesterol, salt (sodium), and added sugars.



University of Michigan
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<http://www.med.umich.edu/umim>



Healing Foods Pyramid™

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The Benefits of Good Nutrition

- Healthy weight
- Mental alertness
- Better sleeping patterns
- Improved mood
- Physically feel better
- Increased energy
- Improved immune system to fight diseases



Components of Good Nutrition: Antioxidants

Antioxidants combat the damage that free radicals make in our body.

- Antioxidants are found in blueberries, blackberries, cranberries, artichokes, beans and walnuts and other colorful fruits and vegetables
- Natural antioxidants include vitamins C and E.



Get Your Fiber



- Increase fiber to 20-35 gm/day. Most Americans only consume 10-13 gm/day. Start slowly to avoid gastrointestinal distress. Fiber is found in whole grains, beans, nuts, seeds, vegetables and fruits.
- Fiber plays an important role in maintaining our health by lowering LDL the “bad cholesterol”. It also decreases the risk of colon cancer since it promotes waste removal from our intestinal tract.

Fiber Sources

- Eat products with the word “whole grain”
- Substitute beans for meat
- Have fruit for dessert. Eat at least five to nine servings of fruits and vegetables (4 ½ cups) per day, six to eleven servings of starches and whole grains per day.
(Tip: try smoothies and juicing to get the required amount)



The Omegas

- Include Omega 3's and Omega 6's in your diet. Omega 3's have been shown to decrease coronary artery disease.
- Eat two portions of fatty fish per week. (wild salmon, tuna, herring and sardines). Eat a few walnuts daily. Include olive oil, avocado's and flaxseed (ground or oil) in your diet.



Know Your Vitamins

Source	Benefit
<i>Vitamin A:</i> Green leafy and dark yellow vegetables, carrots, sweet potatoes, milk	Antioxidant; stored in the liver; important in vision and for a healthy immune system RDA 2300iu/day
<i>Vitamin C:</i> Citrus fruits, strawberries, broccoli, tomatoes, potatoes	Antioxidant; low levels have been linked to cancer, heart disease, and cataracts; low levels may be linked to memory loss RDA 75 – 110mg/day
<i>Vitamin D:</i> Fortified milk, fish liver oils, sunlight	Makes possible the absorption of calcium RDA 800iu – 1000iu/day

Know Your Vitamins

Source	Benefit
<i>Vitamin E:</i> Vegetable oils, whole grains, nuts, green leafy vegetables	Antioxidant; may lower incidence of coronary artery disease in midlife women RDA 15 mg/day
<i>Folic acid:</i> Green leafy vegetables, oranges, strawberries, legumes, nuts	Low levels may be a risk factor for heart disease, stroke, and dementia; during child-bearing years, can prevent certain birth defects RDA 400mcg/day

Know Your Minerals

Source	Benefit
Calcium: Dairy products, sardines (with bones), salmon, dark green leafy vegetables, tofu	Essential for building bones and teeth, and maintaining bone strength; important in muscle function RDA 1000 – 1200 iu/ day
Copper: Whole grains, nuts, liver, oysters	Essential for making hemoglobin and collagen; essential for healthy functioning of the heart; helps in energy production; helps in absorption of iron from digestive tract

Know Your Minerals

Source	Benefit
<i>Iron:</i> Meat, poultry, fish, dried beans, nuts, dried fruits, whole-grain and enriched-grain products	Helps in energy production; helps carry oxygen in the bloodstream and to transfer oxygen to muscles
<i>Potassium:</i> Fruits, vegetables, nuts, grains, seeds	Essential for maintaining balance of body fluids, transmitting nerve signals, and producing energy
<i>Zinc:</i> Meat, poultry, oysters, eggs, legumes, nuts, milk, yogurt, whole-grain cereals	Essential for cell reproduction, normal growth and development in children, and wound healing (tissue repair and growth)

Know What You Are Eating

- Food is a pillar of your health - it can heal or harm you
- Much of our food today has been irradiated; genetically modified; injected with hormones and/or antibiotics; sprayed with harmful chemicals or has had coloring and preservatives added.



Types of Foods

- Natural foods - minimally processed, contain no refined sugars or grains, hydrogenated oils, flavorings or food colorings
- Whole foods - minimally processed. Examples of whole foods include unpolished grains; fruits and vegetables; unprocessed meat, poultry, and fish; and non-homogenized milk.

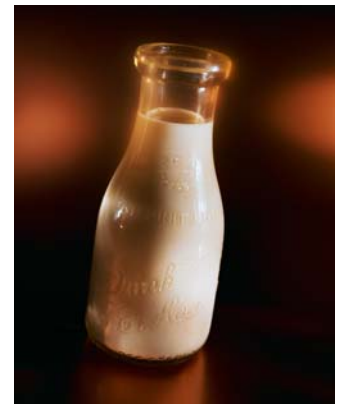
http://en.wikipedia.org/wiki/Whole_foods



Types of Foods

Raw Foods

- Usually equated with eating only raw plant foods such as fruits, vegetables, seeds, nuts, and eggs, raw milk, raw yogurt and raw cheese (non-pasteurized)
- Some raw foodists include raw animal foods



Organic Foods – How They Can Help

Look for this Seal



What Does Organic Mean?

- Organic foods simplest definition: organic agriculture is farming without synthetic chemicals. www.organicconsumers.org
- Organic foods have higher levels of essential nutrients and lower levels of pesticides, antibiotics and other contaminants



What Does the Organic Label Mean?



The food product

- has not been irradiated
- does not contain genetically modified ingredients
- does not contain pesticides or fertilizers
- if processed, must contain 95% organic ingredients to be considered as organic

Why Buy Organic?

- Some studies have shown that organic fruit and vegetables and organic milk contain between 40 – 60 percent more antioxidants than the conventional equivalent.



Organic Food

Organic food sales are expected to increase an average of 19 percent each year from 2007 to 2010.

Organic food sales continue to rise:

- as consumers demand fresher and healthier foods.
- as organic foods are more available in grocery stores, internet/mail orders and farmer's markets.



Pesticide Loads in Conventionally Grown Fruits and Vegetables

- In 2007, the Environmental Working Group (EWG), a non-profit research and advocacy group, released a list of pesticide residues for 44 fruits and vegetables compiled from data collected by the FDA on 43,000 samples between 2000 and 2005.

<http://articles.mercola.com/sites/articles/archive/2009/03/14>

Vegetables Aren't as Good for You as They Used to Be



The Dirty Dozen



- Conventional crops with the HIGHEST pesticide loads

-peaches

-apples

-sweet bell peppers

-celery

-nectarines

-strawberries

-cherries

-lettuce

-grapes (imported)

-pears

-spinach

-potatoes

Consistently Clean



- Conventional crops with the LOWEST pesticide loads

-onions

-avocados

-sweet corn (frozen)

-pineapples

-mangoes

-sweet peas (frozen)

-asparagus

-kiwi

-bananas

-cabbage

-broccoli

-eggplant

Reasons to Buy Locally Grown Food

- Fresher and therefore higher in nutrients
- Food dollars go directly to support the local farmers.
- Chance to know your farmers and their farming practices. Food travels less distance and uses less energy therefore supports greening of the environment



Locally Grown Foods

- Able to eat in season
- Able to pick your own food at the farm
- Cheaper



Sustainable Agriculture

- Sustainable agriculture involves food production methods that are healthy, do not harm the environment, respect workers, are humane to animals, provide fair wages to farmers, and support farming communities.

<http://www.sustainabletable.org/intro/>





Superfoods


















Superfoods

- Superfoods are foods that are so dense in nutrients they can help prevent cancer, heart disease and other illnesses.
- Superfoods are whole foods

Some Superfoods for Women

Food	Benefit
Wild blueberries 	High in antioxidants/ anti-inflammatory. Memory food
Wild Alaskan Salmon 	High in omega 3's – heart health
Spinach 	Great source of folate (B vitamin) and lutein (eye health)
Curry (tumeric) 	Antioxidant/ anti-inflammatory
Fresh Ginger 	Relieves nausea during pregnancy
Beans (black, pinto, red, garbanzo) 	Rich in fiber and nutrients, regulate blood sugar
Cabbage 	Cancer-fighting enzymes

Some Superfoods for Women

Food	Benefit
Pomegranate Juice 	Slow aging, fight heart disease and cancer
Yogurt (live and active cultures) Kefir 	Probiotics, protein, calcium and potassium
Walnuts (8-10 per day) 	Omega 3's – heart health
Green Tea 	Powerful antioxidants- fights cancer
Kiwi Fruit – most nutrient dense of all fruits 	Almost twice the vit. C as an orange. Fights cancer and heart disease
Oatmeal (raw or cooked) (no instant) 	Low glycemic index, weight control, heart health

Irradiated Foods

The Radura symbol

The Radura is the international symbol indicating a food product has been irradiated. It is usually green.



US FDA version



International version

Irradiated Foods



- Food is irradiated using radioactive gamma sources, such as cobalt 60 or cesium 137, or high energy electron beams.
- The gamma rays break up the molecular structure of food which forms free radicals.

Irradiated Foods



- Advantages

FDA approved this process to help reduce food-borne illnesses and ensure that harmful organisms are not in the food we buy.

The radiation kills harmful bacteria, controls insects, parasites, reduces spoilage and inhibits ripening and sprouting.

Irradiated Foods



- Disadvantages

Irradiated foods can lose 5 – 80% of many vitamins (A,C,E,K and B complex), depending on the dose and length of radiation.

- Science has not proved that a long-term diet of irradiated foods is safe for human health.

www.organicconsumers.org/Irrad/irradfact.cfm

Irradiated Foods



- In the U.S. foods irradiated must carry the Radura logo to the first purchaser. Many times this is not the consumer. The logo does not apply to restaurants or processed foods.
- The European Community relies exclusively on labeling irradiated ingredients down to the last molecule. The labeling is required on restaurant foods.

Genetically Modified Foods (GMO's)

Genetically modified means that a special set of technologies have been used to alter the genetic makeup of organisms such as animals, plants or bacteria.

First GM food crop was the tomato which was made resistant to rotting by a California company in 1994. <http://en.wikipedia.org>

Examples of GMO's

- Scientists have genetically modified sweet corn so that it produces a poison which kills harmful insects. This means the farmer no longer needs to fight insects with insecticides. The genetically modified corn is called Bt-corn, because the insect-killing gene in the plant comes from the bacteria *Bacillus thuringiensis*.



GMO's - Advantages

- The farmer no longer has to use insecticide to kill insects, so the surrounding environment is no longer exposed and he doesn't need to wear protective clothing



GMO's - Disadvantages

- This corn will poison the insects over a longer period than if the farmer had sprayed. The insects can become resistant to the poison in which case the Bt-corn and crop spraying are ineffective.
- A variety of insects are at risk of being killed, including helpful insects. In the U.S. there is debate over the harmful effects on the Monarch butterfly

www.bionetonline.org/English/Content/ff_cont3.htm



GMO'S - Summary

- There are only a few dozen peer reviewed studies completed on the health effects of genetically modified foods.
- GMO's remain very controversial from a safety, ecological, environmental and ethical perspective. They are also associated with an increased incidence of food allergies.

How To Identify GMO's

- About 70 percent of the foods in the grocery store contain GM foods
- Clear labeling of GMO's is not legislatively required in the U.S.
- Look at the sticker on the produce and if there is a five-digit number that begins with an 8, that produce is genetically modified.



Eating On A Budget

- Buy in bulk and share with a friend or make extra portions and freeze
- Look for specials in the store, use coupons and buy generic brands
- Shop the perimeter of the store
- Limit alcohol, junk foods and processed foods



Eating On A Budget

- Buy less expensive cuts of meat and cook slowly
- Keep beans, pasta and rice on hand for quick easy meals
- Make soups
- Grow your own food when feasible
- Use seasonings for additional flavors and variety



Eating On A Budget

- Buy whole grain breads and pastas (they are more filling and nutritious)
- Plan your meals ahead of time
- Make a grocery list and stick with it
- Have fun trying new recipes and get creative. Get the kids to help



Wrapping it Up



- Eat fresh, locally grown food as much as possible (eating with the seasons)
- Choose organic for the “dirty dozen”
- Eat at least seven servings of fruits and vegetables daily (a rainbow of colors)
- Limit consumption of lean meats to 1– 3 servings weekly

Wrapping it Up



- Consume 1 - 2 servings of fatty fish weekly
- Eat 4 – 11 servings of grains/legumes daily
- Drink water (8 cups for women, 12 cups for men)

Thank- you!



References/Resources

- GMO's – Human Genome Project Information
www.ornl.gov/sch/techresources/Human_Genome/elsi/gmfood.shtml
- GMO's – Identifying GMO products
<http://articles.mercola.com/sites/articles/archive/2009/04/07/Monsantos-Roundup-Residue>

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References and Resources

Irradiated Foods – What’s Wrong with Food Irradiation

www.organicconsumers.org/Irrad/irradfact.cfm

www.fad.gov/opacom/catalog/irradbro.html

Healing Foods Pyramid

www.med.umihc.edu/UMIM/food-pyramid

click on each section for detailed information

References/Resources

Organic Foods

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- Catherine Paddock, Organic Food Is More Nutritious Say EU Researchers, Medical News Today, Oct. 2007
<http://www.medicalnewstoday.com/articles/86972.php>
- www.ota.com/organic/mt/business.html
- <http://www.organicconsumers.org>

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Raw Foods

http://en.wikipedia.org/wiki/Raw_foodism

SuperFoods

<http://www.superfoodsrx.com>

<http://en.wikipedia.org/wiki/Superfood>

<http://www.oprah.com> - Dr. Perricone's 10 Superfoods

<http://www.msnbc.msn.com/id/22313465> Elizabeth Somer

References/Resources

- Eating on a Budget

http://frugalliving.about.com/od/foodsavings/tp/Eating_Healthy_.htm

Cheapest Foods and Vegetables Month by Month

http://frugalliving.about.com/od/foodsavings/tp/Cheapest_Produce.htm?p=1

References/Resources

- Farmer's Markets in metro Detroit

http://www.freep.com/uploads/pdfs/2009/06/0604_farmer.pdf

:

or to find organic foods that are grown close to you (by zip code) visit

<http://www.localharvest.org/>

Recommended Reading

- **Anti-Cancer – A New Way of Life**
 - David Servan-Schreiber
Viking Penguin 2008
- **China Study**
 - T. Colin Campbell PhD; Thomas M. Campbell II
BenBella Books, Inc 2006
- **The 150 Healthiest Foods on Earth**
 - Jonny Bowden, Ph.D., C.N.S.
Fair Winds Press 2007