



## **Eco-Kashrut** **Amy Atkins**

**Subject Area:** Eco-Judaism

**Single/Multi-unit lesson plan:** Multi-unit

(Note: These three days are adapted from a 12 week curriculum to build a stand alone multi-unit plan. If you do not have time to do more, these three days give you a good idea of the issues around eco-Judaism and give a very concrete example of how these principles and issues work in the every day life of someone's food consumption. They can act as a stand alone introduction to eco-kashrut or can be paired with any number of other environmental issues for a semester-long curriculum. If you want to expand this lesson, you can take any of the food issues listed on day 2 and do a day or a few days on each. The lesson plan is extremely long because of lengthy appendices that provide background for the educator. They can be removed.)

**Target Age:** 7<sup>th</sup> grade to adult

**Objectives:**

- 1) Participants will understand the concept of Eco-Kashrut, how it differs from traditional Kashrut, and why it is an important way of living.
- 2) Participants will understand their own ecological footprint in relation to the broader issues of the environmental crisis.
- 3) Participants will learn how to cook tasty recipes that follow principles of eco-kashrut.
- 4) Participants will understand the concept of t'sar b'aleh chaim (kindness toward animals) as discussed in the Torah and other Jewish texts.
- 5) Participants will learn how to modify their behavior in accordance to the principles of eco-kashrut and t'sar b'aleh chaim.

**Text of lesson plans**

Each day of the lesson plan requires a fully equipped kitchen with utensils, pots, pans, stoves, ovens etc. Under each day's lesson, there is a list of materials needed beyond a standard kitchen.

### **Day 1 – You Are What You Eat**

- 1) **Define kashrut and briefly explain the rules for observance.**

(See Appendix A. Educators can also refer to Froma Falik's excellent lesson plan on Kashrut in the Chidush archives, if they need more background. The goal is to establish a baseline and not for students to have a detailed understanding of all of the rules, regulations etc.)

**2) Begin a discussion by asking these questions: (See Appendix B)**

- a. Why would G-d want us to keep kosher? (health, mindfulness, to elevate eating to a holy act etc.)
- b. How does traditional kashrut meet these needs? Are there gaps?

**3) Have everyone in the class take their ecological footprint online (including the teacher).**

<http://www.earthday.net/footprint/index.html>

Once everyone has taken the footprint, discuss the need for lowering your footprint.

Especially for students still living at home, your diet could be the easiest way to lower your footprint.

**4) Define Eco-Kashrut and introduce the concept of t'sar b'alech chaim. (See Appendix C)**

You can use the following questions to stimulate discussion.

- a. Could/how could the "certified organic" label be considered a "hekhsher"?
- b. What would be the benefits of eco-kosher? Do they address some of the gaps of traditional kashrut?
- c. What are the drawbacks?
- d. How does eco-kosher help us follow the principle of t'sar b'alech chaim (kindness to animals)?

**5) Talk about grocery store layouts, CSAs, farmers markets etc. (See Appendix D)**

Also refer to In Defense of Food by Michael Pollan and Judaism and Global Survival by Dr. Richard H Schwartz.

**6) Eggs**

Ask students to read the cartons of eggs.

- a. Discuss the concepts of factory farming, vegetarian fed, and free range as they apply to chickens. Why is it important to buy eggs that have these labels on the carton? (Educators can go into as much detail about factory farming as they wish. There are many books and videos one can use or show to go into more detail about the evils of factory farming. It just depends on how long you have to conduct the lesson.)
- b. Discuss the difference between brown and white eggs (White and brown eggs are not inherently different. The color differs because of the pigment in the hen itself. Eggs can also be colors other than white or brown i.e. green)
- c. In the laws of kashrut, an egg cannot have a blood spot. The blood spot rule dates back to when eggs were fertilized although modern kashrut laws still ask that you throw out eggs with blood spots because they are not that expensive and it's better to be safe. Have students crack eggs and check for blood spots.

**7) Use the eggs to make matzoh brie.**

**Materials**

Access to at least one computer with an internet connection. Ideally, you would have access to more than one computer.

1 carton brown, vegetarian fed, free range chicken eggs (non-styrofoam container)

1 carton white, vegetarian fed, free range chicken eggs (non-styrofoam container)

2 boxes matzoh

Butter

## **Day 2 – Mac and Cheese and French Fries Take on the Ecological Crisis**

The first day was about defining eco-kashrut and kashrut and setting a baseline of knowledge from which to work from on subsequent days. Day 2 begins to uncover the reasons why eco-kashrut is imperative based on the current environmental crisis and where the areas are that students can affect change. Day 2 will look at packaging and processing to begin to make this connection. Day 3 will look at Type of Diet, Travel and how your food is grown. To make Day 2 shorter (for a shorter time frame) you can make either French Fries or Mac and Cheese. If you have more time, you could make both.

### **1) Begin Day 2 with the following introduction.**

This can turn into a discussion of the definitions of each of these crisis issues and a further examination or examples of the various aspects of the diet. If you do not have as much time, just share the basics with the class. (Refer to all of the information in Appendix A to become more familiar with details around healthy food).

We will examine how changing your diet and eating habits can help minimize:

- a) Global Warming
- b) Habitat Loss
- c) Water Pollution/Conservation
- d) Air Pollution
- e) Energy/Resource Depletion
- f) Toxins
- g) Ocean Damage

By examining the following aspects of your diet, you can begin to lower your ecological footprint:

- a) Packaging and processing (food that takes a lot of energy to process it from its original state to its final form on the shelf, examining how many ingredients went into the production of one item of food, and food that has been wrapped in a lot of other resources i.e. paper, plastic etc)
- b) Type of Diet (omnivore, pescatarian, ovo-lacto, vegetarian, vegan and examining the impact of a meat based diet – you can expand this lesson more to touch on the kosher meat packing industry)
- c) Travel (eating local vs. eating food that takes a lot of resources to get from its source to your table)
- d) How your food is grown (pesticides on conventional produce vs. organic produce)

Judaism has a strong heritage of environmental conservation. Ba'al Taschit (a direct reference to the Jewish law of not cutting down trees in wartime, has been adopted by the modern Jewish

environmental movement to apply to any time where we are wasting G-d's resources i.e. trees or water). We can therefore look at the issues above as not only imperative issues for humanity but specifically as our duty as Jews. We were put on this earth, according to the Torah in B'reshit, "to till and to tend" although it seems we are spending more time destroying than taking care of the earth. How we eat, is a direct extension of these two directives from G-d. The concept of Tikkun Olam, repairing the world, gives us the mandate, here are the ways we can actually do it.

- 2) Today, we are going to unpack and examine packaging and processing by looking at two popular food items: Mac and Cheese and French Fries
- 3) Ask the participants how many times they have gone out for fast food in the last week, month, year.
- 4) Show "The Smoking Fry" U-tube video
- 5) Pre-heat the oven to 400 degrees
- 6) Hand out one potato to each student. Show half of the students how to cut their potato to make "chips" and the other half how to cut their potatoes to make "fries"
- 7) While students are cutting, tell the story of the man who spends his savings on a brand new car and then fills it with 50 cents per gallon water vs. \$2.00 per gallon gasoline. You wouldn't do that to your car, why do this to your body?
- 8) Have participants spray cookie sheets with olive oil from an atomizer. Place fries and chips on separate cookie sheets then spray with the olive oil. Place potatoes in the oven and have a student responsible for checking them after 10 minutes. Talk about the facts about the benefits of olive oil (Appendix B)
- 9) While the potatoes are baking, pull out a box of Kraft mac n cheese, Annie's Natural Mac n cheese, and a bag of pasta, milk (organic, soy or rice), flour, and rennet free cheese. Have a participant read the ingredients of the Kraft product. Have another participant read the Annie's ingredients. Open the boxes and look at the packaging.
- 10) Check the potatoes. Pull out the brown ones, flip the others.
- 11) While a student is putting 3 pots of water on to boil, talk about the life cycle of each of these products. Where do noodles start? Pull out the Northwest Environment Watch book "Stuff, The Secret Lives of Everyday Things" by John C. Ryan and Alan Thein Durning and go through each item (including the packaging) to talk about it's "real" cost.
- 12) When the water is boiling, pour in the noodles and follow the directions on each of the two boxes. For the third, when you drain the water, put the noodles back on the stove and add the milk, real cheese, butter and flour to create homemade mac and cheese. If you cannot do this alone, you can find a recipe online. Talk about the production of rennet that exists in most cheese. (Appendix C)

13) Check on the potatoes. Pull out the brown ones, flip the others.

14) At the end, feast on potatoes and mac and cheese. Talk about what tastes the best and how they feel about knowing what is going in their bodies.

### **Materials**

Computer with internet access

Oven

1 potato per participant

At least two cookie sheets

Olive oil/atomizer

1 Box Kraft Mac N Cheese

1 Box Annie's Natural Mac N Cheese

Bag of macaroni pasta

Milk (organic, rice or soy)

Butter (organic)

Rennet free cheese i.e Tillamook Medium or Sharp Cheddar

Recipe for homemade mac and cheese (if necessary)

### **Day 3 - There's Always Room for Chocolate, we should be grateful**

Begin the lesson by making the cake. It takes 45 minutes to cook, and while it is cooking, the educator will essentially work backwards with the discussion points. If you have more than 1 hour for the lesson, you could begin with the discussion, then make and bake the cake. If you have less time, cut out the lesson on chocolate. Just bake the cake and talk about vegetarianism and Judaism and then do the food meditation when the cake is done. Or bake the cake one lesson and eat it the next.

**1) Follow the recipe below to make the cake and put it in the oven.**

**2) While cooking, begin the discussion with the benefits of a vegetarian and/or vegan lifestyle (our cake is made entirely without using animal products).**

This discussion can go in a number of different directions depending on the knowledge of the educator. An easy article to understand is: 22 Reasons to Go Vegetarian Right Now - benefits of vegetarian diet found in the April 1999 issue of the Vegetarian Times by Norine Dworkin. This can be found reprinted online. In a more liberal religious school, you can also bring up the issues within the kosher meat packing industry regarding the use of the "hoist and hang" method that has been banned in all other meat packing with the exception of "religious" meat packaging plants. Vegetarianism is also a very Jewish practice. We can reference t'sar ba'alech chaim and other Jewish laws. See [www.jewishveg.com](http://www.jewishveg.com) or check out

Richard H. Schwartz's book Judaism and Vegetarianism. There are also references on the Aish web site.

**3) Then talk about the various types of chocolate one can buy.**

Pass around a Hershey bar and a variety of organic/fair trade milk and dark chocolate. Explain the differences between white, dark and milk chocolate. (white – void of actual cocoa, only cocoa butter; milk chocolate – the addition of milk and sugar; dark chocolate – actual unadulterated chocolate in certain percentages). Ideally, one of the bars will be endangered species chocolate. Read the ingredients and talk about where chocolate comes from. Discuss the degradation of the rainforests where the cocoa plant is grown and the practices the organic, fair trade chocolate uses to sustain habitat and life.

**4) Demonstrate a “food meditation” – another word for prayer.**

Hold up a piece of chocolate. Have each student hold a piece of chocolate, look at it, but not eat it. Talk about the life cycle of the chocolate – where it comes from, what resources were used in its creation, what energy and fossil fuels were used in its production and give thanks to each of these sources. Talk about the midrash that tells of the spark of G-d that is in each living thing based on the bubble of G-d that burst when Adam and Eve bit from the forbidden fruit. When the bubble shattered, tiny sparks of G-d went into each living thing and continue to be born into each living thing upon its birth. Share how our bodies know how to get the vitamins and minerals from the food but that we must stop for a moment to be able to obtain the spark inherent in the food we are about to eat. Say a quick blessing (the blessing over mizonot would work here). Take a deep breath and have everyone take a small bite of chocolate. Savor the flavor.

**5) At this point, you can conduct blind taste tests of each of the chocolate options and have students record which was their favorite.**

**6) If there is still time, you can talk about sweeteners. Appendix A**

Bring in agave, beet sugar (if you can find it), honey, stevia, white sugar (often whitened using bleach or animal bones), pure cane sugar, turbinado, and brown sugar. Talk about the origin and life cycle of each one. Students can taste each one to see which they like best. For a blind taste test, you can melt the same amount of each sugar in a small amount of water (so students cannot tell the type of sugar based on texture).

**7) When the cake comes out of the oven, you can ice it and enjoy.**

**Materials**

Ingredients for chocolate cake recipe listed below

Chocolate bars – Hersheys and Organic Chocolate – milk, dark and white

If you can find endangered species chocolate, bring at least 1 bar

If you are doing the sweetener addition, you will need the following:

Agave

Beet Sugar

Honey

Stevia  
White Sugar  
Pure Cane Sugar  
Turbinado AKA Raw Sugar or Sugar in the Raw  
Brown Sugar

### **Vegan Chocolate Cake Recipe**

1 1/2 cups flour  
1 cup sugar  
1/4 cup cocoa  
1 tsp vanilla  
1/2 tsp salt  
1/3 cup oil  
1 tsp white vinegar  
1 tsp baking soda  
1 cup cold water

Mix all together till smooth grease and flour a loaf pan bake 45 minutes at 350. This is a good recipe to double and put in a bundt pan, I take it to work all the time. You can also add chocolate chips and, or nuts. Also if you prefer, use carob powder in place of cocoa.

### **Resources for Day 1**

#### **Appendix A: Information Sources for Defining Kashrut:**

Kashrut is the body of Jewish law dealing with what foods we can and cannot eat and how those foods must be prepared and eaten. "Kashrut" comes from the Hebrew [root](#) Kaf-Shin-Resh, meaning fit, proper or correct. It is the same root as the more commonly known word "kosher," which describes food that meets these standards. The word "kosher" can also be used, and often is used, to describe ritual objects that are made in accordance with Jewish law and are fit for ritual use. Food that is not kosher is commonly referred to as treyf (lit. torn, from the commandment not to eat animals that have been torn by other animals).

Everything in life has a cost. The only question is if one believes that the payoff is worth the investment. A person is going to do what a person believes is in his/her best interest. Cost can be time, money, environmental considerations.

#### **Appendix B: Examples of why we should keep kosher:**

1. Environmental considerations.

- A camel (which is not kosher) is more useful as a beast of burden than as a source of food.
- In the Middle Eastern climate, the pig consumes a quantity of food that is disproportional to its value as a food source.

2. Designed as a call to holiness. ("To Be a Jew" by Rabbi Hayim Halevy Donin)

- The ability to distinguish between right and wrong, good and evil, pure and defiled, the sacred and the profane, is very important in Judaism.

- Imposing rules on what you can and cannot eat ingrains that kind of self control, requiring us to learn to control even our most basic, primal instincts.

### 3. Elevates the simple act of eating into a religious ritual. (Donin)

- The Jewish dinner table is often compared to the Temple altar in rabbinic literature.

### 4. Because kosher stands for quality, purity, whole-someness and truth. (Jewish Celebrations web site)

### 5. Health.

- No USDA to ensure that pigs are healthy and don't have trichinosis
- Proper draining of blood (improper draining is a medium for the growth of bacteria)
- Forbids eating animals that have abscesses in their lungs or health problems
- Shellfish, mollusks, lobsters and stone crabs spread typhoid and are a source for urticaria (a neurotic skin affliction)
- Milk and meat digest at an unequal rate and are difficult for the body
- Birds of prey – tension and hormones produced make the meat unhealthy

### 6. God says so.

- There is a God who created the world, sustains and supervises it.
- God entered into a covenant with the Jewish people, and gave the Torah, obligating Jews to uphold and fulfill its commandments. The kosher laws are a part of that covenant.

### 7. Morally better.

- We are taught to be sensitive to others' feelings -- even to the feelings of animals. A mother and her young are forbidden to be slaughtered on the same day, and of course "don't boil a kid (goat) in its mother's milk."
- The Torah prohibits cruelty to animals. We must not remove the limb of an animal while it is still alive (a common practice, prior to refrigeration). When we slaughter an animal, it must be done with the least possible pain; there is a special knife that is so sharp that even the slightest nick in the blade renders it impermissible.
- And we are reminded not to be vicious, by the prohibition to eat vicious birds of prey.

### 8. National reasons.

- The Jewish people have a mission of Tikkun Olam, repairing the world. A special diet reminds us of our mission and keeps us together as a people to fulfill it.
- A Jew who observes the laws of kashrut cannot eat a meal without being reminded of the fact that he is a Jew.

### 9. Mystical reasons.

- The Torah calls the Jews a "holy people" and prescribes a holy diet (see Deut. 14:2-4).
- You are what you eat. Kosher is God's diet for spirituality. Jewish mysticism teaches that non-kosher food blocks the spiritual potential of the soul.
- Kosher animals properly slaughtered and prepared have more "sparks of holiness" (according to the Kabbalah) which are incorporated in our being.

- The blood must be drained and buried, because the life is in the blood and must be returned to the earth.

#### 10. Personal discipline.

- If a person can be disciplined in what and when he eats, it follows that he can be disciplined in other areas of life as well.
- Kashrut requires that one must wait after eating meat before eating milk products and we may not eat certain animals or combinations of foods. (Even when you're hungry!) All of this instills self-discipline.

Appendix A & B taken in part from: Judaism 101, Rabbi Kalman Packouz author of Shabbat Shalom Internet Weekly

#### **Appendix C: Resources for defining eco-kashrut:**

Partially from: <http://www.ecojew.com/ecokashrut/>

- Eco Kashrut is a concept that says that the products that we use need to be healthy to ourselves and to the world. In the Jewish tradition, there is an understanding that the physical world is a vessel for holiness and that our role as humans is to honor and elevate the physical and bring it into divine service.
- Incorporating this wisdom into daily life adds a spiritual dimension to consumerism, by affirming that the food we eat and the products we use are in accord with our values and ethics.
- Our goal is to build a culture that acknowledges the impact we have on the environment, and takes responsibility for seeking to balance our needs with the needs of a healthy global ecosystem.
- Judaism contains an ecological and social consciousness that can sustain and empower our efforts to address present-day issues from a place of connecting with the wisdom of the Torah. The mitzvot, or commandments, speak to the issues that challenge us today.
- Kosher laws teach that eating is a sanctified act, subject to restrictions in order to maintain spiritual holiness. This principle can be used to guide all of our consumption to accord with social and environmental values. The practice of Eco Kashrut helps sanctify consumption, so we can elevate the physical world by acknowledging the holiness of our relationship to God's world.

Keeping Eco-kosher = Asking questions and making conscious choices about the food we eat leads to greater awareness

- Our relationship with eating is one of our most intimate experiences of the earth. When we eat, we take another life into our own. We consume life in order to live. How do we do this with respect? How do we take life, and yet maintain our sensitivity to life?
- To include global environmental and social issues which the Rabbis of two thousand years ago did not face. In conversation with Jewish people in many communities, we have developed the following tentative guidelines for a *Kashrut* which speaks to our planetary concerns.

1. ***We are concerned about the earth as a living being, including the soil, water, air and all the planet's living systems.*** It is important to choose foods which are produced, transported and packaged in a way that is sustainable and not harmful to the earth. For us this means buying organic foods even when they cost more, and we also try to choose foods grown locally - or grow our own! This minimizes transportation and connects us to the earth's natural cycles.

2. ***We are concerned not only with how animals are slaughtered, but also how they are raised.*** Animals are often treated as commodities, to be "manufactured" as efficiently as possible for maximum profit. The resulting "factory farms" are appalling places, filled with unspeakable suffering. Upon reading John Robbins' description of them in *Diet for A New America*, we decided to avoid all animal products that have not been raised humanely and respectfully.

3. ***We are concerned about the health of our bodies.*** We are responsible for taking good care of the bodies that God has given to us. Too much food can be destructive to our systems - especially if it is full of fat and sugar. Tobacco, alcohol, caffeine and other drugs can also be harmful. We eat mostly whole grains, fresh fruits and vegetables, legumes and nuts. We try to pay attention to how our bodies feel about the food we are eating and to make our meals as nourishing and pleasing as possible.

4. ***We are concerned about the people who produce and prepare our food.*** We have extended Kashrut to include concern for how the people who grow and harvest it are treated. We use our food dollars to support growers and producers who demonstrate concern for their workers (and we avoid, for example, commercially produced grapes in response to the United Farm Workers' boycott). We also use the Council for Economic Priority's guide *Shopping For A Better World* to identify and support socially responsible producers.

5. ***We are concerned that all people have enough to eat.*** This concern motivated both of us to become vegetarians years ago. We learned from Frances Moore Lappé's book, *Diet for A Small Planet*, that animals are an extremely wasteful source of protein: more food would be available for everyone if people ate much less meat. The increasing production of nonessential foods for export from many Third World countries also contributes to the lack of basic foods for their inhabitants, so we try to avoid specialty items such as coffee and summer fruits out of season.

6. ***We are concerned that our dietary practice should not separate us from other people.*** While our system of *Kashrut* is very important to us, so are our connections with people. We try to balance our commitment to keeping kosher with an openness to breaking bread with others. There are some foods we aren't willing to eat, like meat - but we try to remain flexible for the sake of community. We communicate our guidelines to people who invite us into their homes, and we enjoy sharing the meaning of our dietary practices with people who come into ours.

Traditional *Kashrut* offers people clear and consistent rules to live by. Today, however, we are not in a position to formulate rules for a planetary *Kashrut*. Instead we need to articulate the questions to be asked, the issues to be considered. These questions do not always lead to clear answers - in the real world, we must often weigh one concern against another. But asking questions and making conscious choices about the food we eat leads to an awareness of our

relationship to the life around us. Our practice of *Kashrut* continues to teach us much about our ties to the living world, and the sanctity of all life.

Much of the article from: Nahum is the Rabbi of Congregation Shir Hadash in Los Gatos, CA. Shelley is a health educator and serves on the Board of Directors of Shomrei Adamah (Guardians of the Earth, a national Jewish environmental organization).

#### **Appendix D: Boulder Resources for Community Supported Agriculture**

- [Abbondanza Organic Seeds & Produce](#) - Abbondanza Organic Seeds and Produce offers the Front Range's most diverse CSA program!. (Boulder)
- [Stewardship Community](#) - Guidestone CSA Farm and Center for Sustainable Living is a project of TSC. (Loveland)
- [Happy Heart Farm CSA](#) - Community supported Biodynamic produce farm and Education Center. (Fort Collins)
- [Cure Organic Farm](#) - Family Farm in Boulder offering high quality produce through CSA and direct sales. (Boulder)

#### **Abbondanza Organic Seeds and Produce**

Boulder Farmer's Market and Thomas Open Space near Baseline & Hey 287.

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

#### **Windsor Dairy**

delivering their shares in conjunction with Abbondanza

<http://www.windsordairy.com/>

#### **Red Wagon Farms**

Boulder Farmer's Market and 95th & Arapahoe

<http://www.redwagonorganicfarm...>

#### **Jay Hill Farm**

Boulder Farmer's Market and @ the Farm, 5367 Jay Rd and online orders :)

<http://www.jayhillfarm.com/abo...>

#### **Cure Organic**

Boulder Farmer's Market and 75th and Valmont  
(fruit and veggie shares)

<http://www.cureorganicfarm.com/>

#### **Community Roots Boulder with Kipp Nash**

Boulder Farmer's Market

<http://www.communityrootsbould...>

#### **Pachamama Organic Farm**

Boulder Farmer's Market and 10771 North 49th. Street

<http://www.pachamamafarm.com/h...>

## **Father Earth Organic Farm**

(new and small, only 25 shares, \$500 or \$450 with a little volunteer labor)  
email hodjelodje@comcast.net

## **Resources for Day 2**

Stuff, The Secret Lives of Everyday Things by John C. Ryan and Alan Thein Durning. You can order on a used bookstore web site with the following ISBN: 1-886093-04-0.

### **Appendix A**

Breakdown of the family where mealtime is no longer considered a necessity. If a family eats meals together, this promotes the ability to connect and have conversations with family members to strengthen family relationships and improve the emotional health of everyone involved. Driving through fast food on your way to an activity means you lose this precious time.

Going through a drive through and eating in the car does not promote healthy digestion as you are normally eating quickly as a matter of necessity before getting to your next location as opposed to chewing properly and eating slowly. If it takes 20 minutes for your body to register that you are full, and the portion sizes and energy density of fast food are exaggerated, one would most likely eat more calories and food than was necessary before the 20 minutes it takes to register that you were full.

Getting your food handed to you through a window in a paper sack further removes your connection to where your food came from and the amount of energy, fossil fuels and resources that went into preparing and packaging your food. You don't have to see the destroyed rainforests and displaced animals that occurred to make grasslands for cattle or the paper sack that the food comes in.

Furthermore, sitting in your car and eating on the run does not leave much room for being grateful for the fact that you have food in your life. Even if it is brief, saying a small prayer of gratitude forces you to stop and take stock of the food you are about to eat and the good fortune of being able to have this food in your life.

**(Notes from Amy Atkins, MS Environmental Education, Colorado State University)**

### Appendix A – Source 2

1. Fast food has a very high energy density. About 65 percent higher than a typical diet and twice as high as recommended healthy diets which makes us eat more than we otherwise would. Energy density refers to the amount of calories an item of food contains in relation to its weight. Foods with a high energy density confuse the brain's control systems for appetite, which are based solely on portion size.

2. British researchers from the Medical Research Council Human Nutrition Center and the London School of Hygiene and Tropical Medicine have determined that repeated eating at McDonald's or KFC or Burger King, people are more likely to gain weight and become obese.

This is because fast food not only contains many more calories than traditional food, but also is more likely to undermine normal appetite control systems.

3. By eating a Big Mac and fries, the body consumes almost twice as many calories as you would if you ate the same weight of pasta and salad. Fast Food restaurants feed the obesity epidemic by getting people to eat many more calories than they need through persistent advertising.

4. McDonald's, KFC, and Burger King menu items using nutritional data from the fast food restaurants' Web sites, found that when we eat high energy density foods, we don't reduce the portion size so we get a lot more calories than we need. Our current society possesses a weak innate ability to recognize foods with a high energy density. Food intake is assessed by the size of the portion, yet a fast food meal contains many more calories than a similar sized portion of a healthy meal. The conclusion is we are all being fooled into eating too much food.

5. People get fat eating regular portion sizes, but since the food has a high energy density, people gain weight. In evolutionary terms, the human appetite was designed for low energy density foods. In other parts of the world where these foods are still the dietary staples, obesity is virtually non-existent. Our bodies were never designed to cope with the high energy dense foods consumed in the West. That is a major reason why fast food is contributing to the major rise in obesity.

6. Another fact is that fast food may speed up people's risk of clogged arteries that can lead to heart attacks. Researchers at the Veterans Administration Medical Center in San Francisco have demonstrated that a certain type of fat, called oxidized fat, can accelerate the buildup of plaque in arteries. And many types of fast food such as hamburgers, pizza and French fries are loaded with oxidized fat. The conclusion is fast food meals are high in saturated fat and low quality carbohydrates, white bread and lots of soda. Our bodies require fiber and more healthful types of fats. Fast food represents a dietary pattern that is the opposite of what is recommended for a healthy body.

**Notes from: Glenn Freiboth, a Certified Health Advisor in Naperville, Illinois**

### **Appendix A – Source 3**

Through unhealthy menus, poor working conditions, and aggressive advertising, fast food restaurant chains negatively impact their community's vitality and their residents' health.

- While many communities are affected by fast food, multi-ethnic, low-income communities are aggressively targeted by fast food and often have a higher density of fast food restaurants in their communities [1].
- Pervasive fast food advertising towards children is common practice. One study found that 83 percent of foods advertised during TV shows heavily viewed by children were for packaged snack foods, fast foods, and sweets [2].
- Aggressive marketing towards children is not just limited to advertising, fast food restaurants often cluster around schools, making it easy for youth to access unhealthy food [3].

- Many fast-food jobs are part time, low wage, lack benefits, and have a high turnover rate.

Community efforts to support policies such as formula restaurant ordinances, menu labeling laws, and limiting child advertising can reduce the harmful impact of fast food.

### **Strategic Alliance web site out of Oakland, CA**

#### **Appendix B. Information on the health benefits of olive oil vs. traditional oils or other fats.**

Extra virgin olive oil is nothing but fruit juice extracted mechanically from olive fruit. There is no heat or chemicals used in the extraction process.

Nutritional Value - vitamins E, K, and A as well as polyphenols, squalene, oleocanhol, triterpenes and hundreds more micronutrients make olive oil a healthy choice. Anti-inflammatory, Anti-oxidant that helps reduce blood pressure, Inhibit the growth of some cancers, Benefit people at risk for or with diabetes, Lessen the severity of asthma and arthritis, Actually help your body maintain a lower weight

It's great for your skin, keeps your arteries supple, and great for hair.

6. Heart Health and Cholesterol - extra virgin olive oil is high in polyphenols (a powerful antioxidant) and monounsaturated fat which contributes to lowering bad cholesterol.

7. Cancer - diet rich in olive oil has been shown to reduce the incidence of colon., breast and skin cancers.

8. Blood Pressure - Studies now indicate that extra virgin olive oil may help to lower blood pressure. Patients were able to reduce or eliminate the need for medications when olive oil was consumed on a regular basis.

9. Alzheimers - this disease is associated with the clogging of arteries caused by cholesterol and saturated fat. Replacing other fats with olive oil will reduce the risk.

10. Gallstones - Olive oil promotes the secretion of bile and pancreatic hormones naturally and lowers the incidence of gallstones.

#### **Appendix C. Facts about the production of natural calf rennet**

Natural [calf](#) rennet is extracted from the inner [mucosa](#) of the fourth stomach chamber (the abomasum) of young calves. These stomachs are a [by-product](#) of [veal](#) production. If rennet is extracted from older calves ([grass](#)-fed or [grain](#)-fed) the rennet contains less or no chymosin but a high level of pepsin and can only be used for special types of [milk](#) and [cheeses](#). As each [ruminant](#) produces a special kind of rennet to digest the milk of its own [mother](#), there are milk-specific rennets available, such as kid goat rennet especially for [goat](#)'s milk and [lamb](#) rennet for

sheep milk. Rennet or digestion enzymes from other animals, like swine-pepsin, are not used in cheese production.

### Traditional method

Dried and cleaned [stomachs](#) of young calves are sliced into small pieces and then put into saltwater or [whey](#), together with some [vinegar](#) or [wine](#) to lower the pH of the solution. After some time (overnight or several days), the solution is filtered. The crude rennet that remains in the filtered solution can then be used to coagulate milk. About 1 gram of this solution can normally coagulate 2000 to 4000 [grams](#) of milk.

Today this method is used only by traditional cheese-makers in central [Europe](#): [Switzerland](#), [Jura](#), [France](#), [Romania](#), and Alp-Sennereien in [Austria](#).

### Modern method

Deep-frozen [stomachs](#) are milled and put into an enzyme-extracting solution. The crude rennet extract is then activated by adding [acid](#); the enzymes in the [stomach](#) are produced in an inactive preform and are activated by the [stomach acid](#). After [neutralization](#) of the acid, the rennet extract is filtered in several stages and concentrated until reaching the required potency: about 1:15000 (1 kg of rennet would have the ability to coagulate 15000 [litres](#) of milk).

What are the ingredients used to make Tillamook cheese? - Tillamook web site

The ingredients used to make Tillamook cheddar cheese include cultured milk, enzymes, salt, and annatto. All of our cheeses are made with a microbial/vegetable based enzymes, which has Kosher and Halal certification, and is approved for vegetarian products, with the exception of Tillamook Vintage White Medium Cheddar Cheese and Tillamook Vintage White Extra Sharp Cheddar Cheese, which use a traditional rennet

## Resources for Day 3

### Appendix A – Information about Sugar

Turbinado sugar crystals are much larger, and are made at an earlier period in the sugar cane processing method. It retains some of the flavor of [molasses](#), a natural byproduct of the sugar process, which makes it a desirable addition to [tea](#) or coffee.

The first pressing of the sugar cane yields Turbinado sugar. It looks notably different from granulated sugar because it has much larger crystals and is golden to brown in color. It also is considered by some to be “healthier” since it receives less processing than does white sugar.

Unlike granulated sugar, Turbinado sugar tends to hold more moisture, and is lower in calories. A basic teaspoon of Turbinado sugar contains 11 calories, while granulated sugar contains 16. Because it is a little moister than white sugar, Turbinado sugar can become hardened if exposed

to too much air. Those who manufacture turbinado sugar recommend storing it, like [brown sugar](#), in an airtight container.

Some manufacturers refer to Turbinado sugar as [raw sugar](#). It can be packaged and sold under numerous names, but one of the most popular of these is "Sugar in the Raw." It is often sold in small single serving packages for use on restaurant tables, but with a little searching, one can find larger quantities of Turbinado sugar for sale. Source [www.wisegeek.com](http://www.wisegeek.com).

Agave is considered an extremely low glycemic sugar alternative. This means it is safe for diabetics to use as a sweetener; while at the same time being at least 4 times sweeter than everyday sugar. (Associated Content Lifestyle Section).

### Beet vs. Cane Sugar

It's true that both kinds are sucrose, but only 99.95 percent, and that minuscule 0.05 percent -- made up of trace differences in minerals and proteins -- can have an effect.

Much of the 0.05 percent difference comes from the fact that cane and beets are two different plants altogether. Beets are a root, growing below ground; cane is a grass, waving in the breeze. "That alone can account for mineral profile and content differences," says Charles Baker, vice president for scientific affairs for The Sugar Association, a nonprofit group focusing on sugar's role in diet and health. Other variations are the result of processing.

The beet versus cane controversy is a new development. Cane was once the dominant sugar in U.S. markets, but within the last few years beet has taken the lead. Beet now accounts for 55 percent of the 10 million tons of refined sugar consumed in the country each year. And, according to Ben Goodwin, executive manager of California Beet Growers Association, the percentage is expected to grow.

One reason is that beet sugar is generally cheaper to produce. It requires just one refining process at a single plant. Traditional cane refining demands two processes at two different facilities.

Beets can also thrive in a wider range of climates. This large, homely root -- not anything like a regular beet -- is cultivated in 12 states; cane grows in just four. And while total U.S. cane and beet acreage has declined dramatically over the last few years, cane has dropped most precipitously. Hawaii alone has lost more than 60 percent of its cane fields over the last five years -- victims of urbanization and conversion to better-paying crops like macadamia nuts and coffee, says Roehl Flores, director of marketing for C & H Cane Sugar Co.

Source SFGate Newspaper