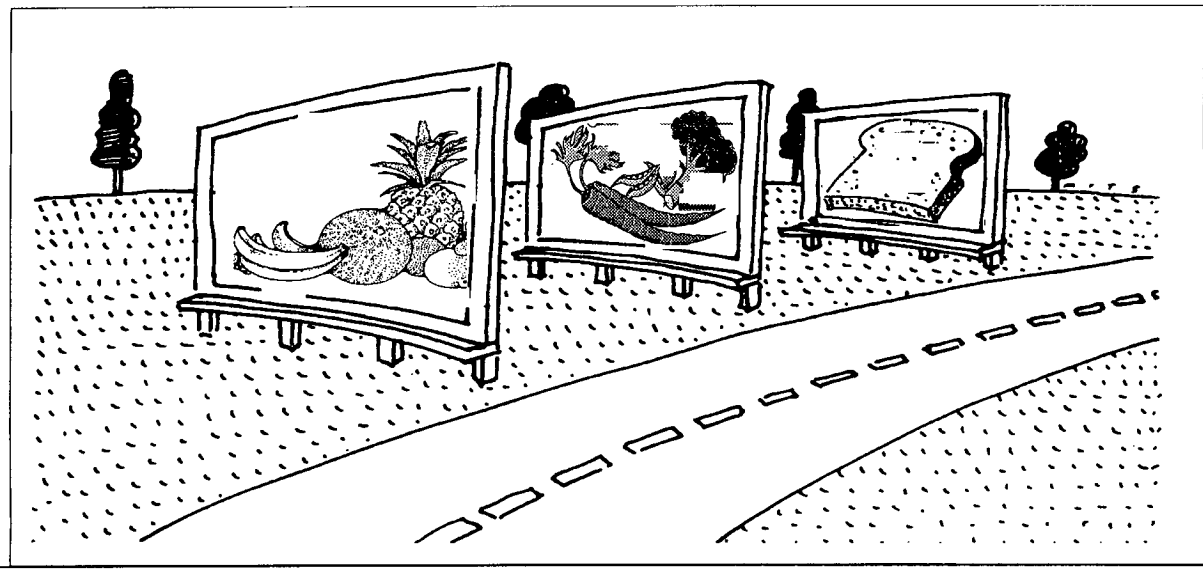
Spring 1999

Breast and Colon Cancer: The Diet Connection

During this session you will:

- *Identify personal risk factors for breast and colorectal cancer*
- *Understand the WHI Dietary Study's role in making decisions about how best to prevent breast and colorectal cancer*
- *Understand the potential role of dietary fat in breast and colorectal cancer*
- *Develop a plan to enhance your commitment and participation in WHI*



Goal Follow-Up

- **What foods did you increase or decrease to modify the type or amount of fat that you eat?**
- **How did your changes influence the amount of fat in a typical day (e.g., increased, decreased, no change in fat grams)?**

Assessing My Reasons For Change

The WHI Dietary Study is an important step in understanding the role of diet in breast and colorectal cancer. This session provides some of the science behind the WHI. In addition, it will help you understand the potential role of dietary fat in promoting cancer.

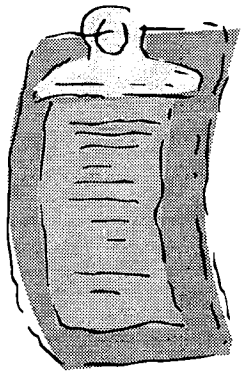
There is an old saying that to have a long life, you should choose your parents carefully. While having healthy parents may be a good start, there are still many factors that you can control yourself. For example, eating well and staying fit may have a greater impact on health and long life than your genes.

About 2/3 of all cancers are directly linked to the foods we eat, excercise and smoking.

Scientists know that cancer develops through a complex interaction of both family history and environmental influences (e.g., diet, exercise, smoking). However, most experts agree that only about 5-10% of all cancers can be explained by inheriting a 'cancer gene'.

On the other hand, about 2/3 of all cancers are directly linked to the foods we eat, exercise, and smoking. So, people do have control over many of the personal health triggers that may contribute to cancer.

Take a moment and assess some of your own risks for developing breast or colorectal cancer. Use the Spring-1 Worksheet (pg. 9). Check any factors that apply to you.



Breast and Colorectal Cancer

Breast cancer is the most common type of cancer among women in the United States (other than skin cancer). During the 1980s the number of women diagnosed with breast cancer increased. However, this has leveled off during the past few years.

Breast cancer deaths have also decreased in the past few years. The most likely reasons for this decrease may be increased screening in women leading to detection of cancers at an earlier stage and more effective treatments.

Colorectal cancer is also common in the U.S. Many people think of this cancer as a man's disease, but it is the third most common form of cancer in women.

Look at the information you checked on the Spring 1 Worksheet.

By eating less fat and more fruits, vegetables and grains, you are helping scientists understand the role of diet in the prevention of cancer.

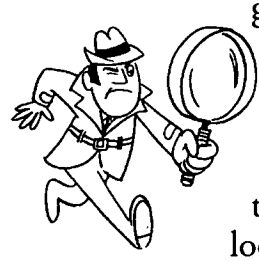
Notice that breast and colorectal cancer share many of the same risk factors, such as age, diet, and obesity.

Some of these risk factors such as a person's age or family history cannot be changed. However, factors that are related to personal choices such as diet may be changed.

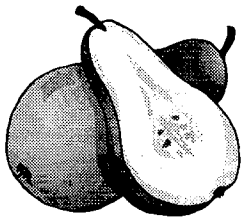
As a WHI participant, you have already made dietary changes to eat less fat and eat more fruits and vegetables. Your continued commitment and participation in the WHI Dietary Study will help scientists understand the role of diet in the prevention of breast and colorectal cancer.

Diet and Cancer Connection.

You may be wondering why scientists believe that diets high in fat and low in fruits, vegetables and grains could be related to breast and colorectal cancer. Let's take a brief look at some background research.



The Diet and Cancer Connection and the Role of WHI



Consider the following observations made by scientific researchers studying breast and colorectal cancer. They will help you begin to see a potential link between diet and cancer.

- Rates of breast and colorectal cancer vary widely from one country to another. For example, countries, like the U.S. have high rates of both types of cancer, while less-industrial ized nations, like Asia and South Africa have very low rates.

- People who move from a country with a low rate of breast or colorectal cancer, such as Japan to a country with a higher rate, such as the U.S. usually develop the higher cancer rate of their new country.

- Studies show that cancer rates may change significantly over time within a country as the dietary intake of fat and fruits and vegetables changes. For example, cancer rates in Japan have increased over the last 20 years as their diet has changed.

Medical science relies on controlled clinical trials, like the WHI to reach conclusions about how best to prevent and treat cancer.

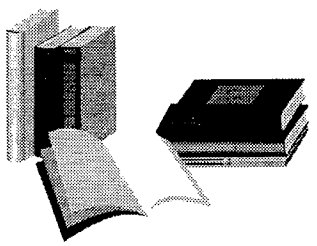
So what do scientists think all these observations mean? Scientists think that they suggest that something in the environment, such as what we eat, influences cancer.

It is reasonable to suspect that diet may play a key role in the development of breast and colorectal cancer. But how can scientists discover more about how to prevent and treat cancer?

How Scientists Study Cancer.

Scientists use several different methods to further our knowledge about cancer and its causes:

- Animal and laboratory studies
- Population studies
- Clinical controlled trials



Animal studies and other laboratory studies make it easier to look at specific factors and their effects, however the results may not apply directly to humans.

Population studies help scientists look at various factors, such as diet and smoking and relate them to the cancer rates among certain groups of people.

However, while population studies help to establish associations between certain factors and disease (like dietary fat and cancer), it is difficult for these studies to make definite statements about cause or effect.

Why is it difficult for a population study to determine cause? Mainly, because people who eat different foods or amounts of food may also differ in other characteristics. And, these other characteristics may be the ones responsible for the development of cancer.

On the other hand, controlled clinical trials, like the WHI let scientists actively change a specific factor and study the effect. For example, in the WHI Dietary Study the factor being changed is what women eat.

WHI is a landmark study. It has the ability to answer the question: Will a low-fat diet, high in fruits, vegetables and grains effectively reduce the risk of breast and colorectal cancer?

A controlled clinical trial, like the WHI, places participants by chance into one of two groups, a Dietary Change or a Comparison group. This random assignment helps equalize any

differences between the two groups that might affect the study's results, such as age or family history. The random assignment also helps make the data from controlled clinical trials much stronger than the data from population studies.

For this reason, medical science relies on controlled clinical trials, like the WHI to reach conclusions about how best to prevent and treat diseases, such as cancer.

The WHI is a landmark study because as a controlled clinical trial it has the ability to answer the question that no other study has addressed:
Will a low-fat diet, high in fruits, vegetables and grains effectively reduce the risk of breast and colorectal cancer in postmenopausal women?

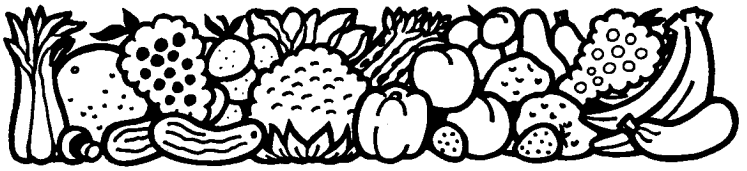
Potential Role of Dietary Fat

Currently, scientists do not understand how dietary fat promotes breast or colorectal cancer. However, scientists feel that there is probably more than one mechanism working at a time. Some of the current theories are:

- A diet high in fat or high in calories may lead to increased body fat. The increased body fat may increase the circulating levels of certain hormones, which in turn may affect the development of breast cancer.

- Dietary fat may affect the immune system in some way and make it less capable of fighting cancer cells.

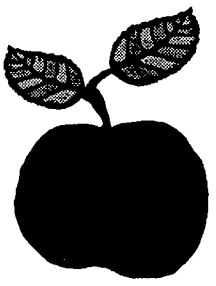
- In colon cancer, evidence suggests that excess bile acids may cause cancerous changes in the cells lining the large bowel. The more fat you eat, the more bile acids your body creates.



We also know that as people eat more fat, they tend to decrease their intake of fruits and vegetables.

Fruits and vegetables may be protective because of their fiber content, as well as a variety of compounds that appear to have cancer prevention properties. These compounds are called phytochemicals.

There are literally thousands of phytochemicals in plant foods. In upcoming group sessions, we will talk more about the importance of plant foods and the protective compounds that they contain.



Summary

The WHI is collecting a broad range of information that will help to increase our knowledge about women's health. But, the success of WHI depends on our partnership. We need your continued commitment and active participation to be able to answer importants questions about breast and colorectal cancer, as well as heart disease.

- **In what way does knowing more about the link between dietary fat and cancer help rekindle your interest in WHI?**

Remember you're in charge of your own health. WHI helped you begin changing behaviors. But, it's important that you maintain your new behaviors (e.g., doing breast self-exams, eating less fat and red meat, eating more fruits and vegetables, and getting annual checkups).

- **What health and/or food behaviors have you added, modified or deleted since joining WHI?**

Each of you joined WHI for your own specific reasons. Take a moment to think about your participation in WHI.

Question for thought:

- **What steps could I take to improve or maintain my continued participation in WHI?**

My Plan

Area(s) I will work on during the next three months:

Think about what you've learned in this session. Then write down and carry out a plan that would help you improve or maintain your continued participation in WHI. If you need some ideas, look at the suggestions provided below:

- Develop a plan to increase or maintain my attendance at group meetings during 1999.
- Develop a plan to increase or maintain my self-monitoring during 1999.
  - Try a new self-monitoring tool.
  - Record the foods eaten on both 'good' and 'not-so-good' days.
  - Keep track of eating patterns more frequently.
- Identify ways to increase the variety of low-fat foods I serve in my meals (e.g., different fruits and vegetables, more whole grains, new low-fat recipes featuring international cuisines).
- Develop a cancer screening plan. Use the Spring Resource - *Cancer Tests Checklist for Women* at the back of this session (pg. 16) to think about my current health check-ups.

My Plan: _____

Evaluation: Before the next session, think about the plan you tried and how it helped rekindle your commitment and participation in WHI. Come to the next meeting ready to share your thoughts and ideas.

My Notes: _____

_____

_____

What Risk Do I Have?

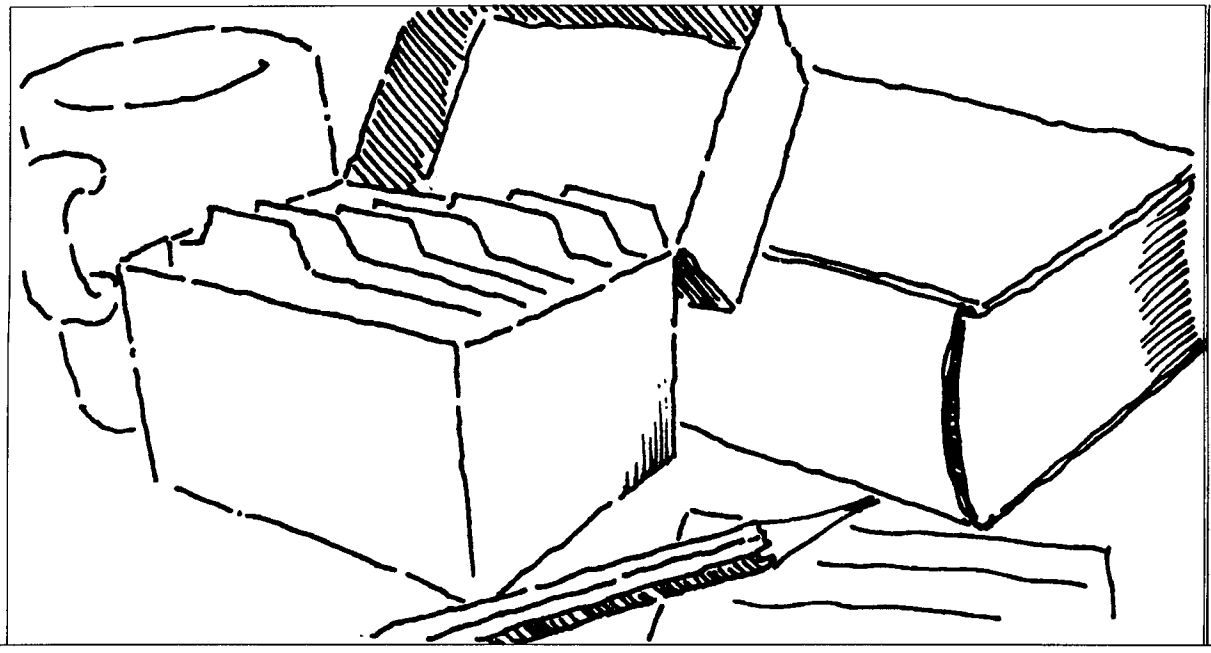
Read the risk factors listed under each type of cancer. Place a check next to those factors that you know are true for you. If you check two or more of the known risk factors listed under either category, you may be at higher than average risk for developing that specific type of cancer.

Breast Cancer:	Yes
Over age 50	
Personal or family history of breast cancer	
Never had any children or had first childbirth after age 30	
Menstral cycles began early (before age 12)	
Menopause began late (after age 55)	
Excessive exposure to radiation (medical or other)	
High-fat diet	
Obesity	

Colorectal Cancer:	Yes
Over age 50	
Personal or family history of colon and/or rectal cancer	
Personal or family history of colon and/or rectal polyps	
Personal history of inflamitory bowel disease (like ulcerative colitis)	
Diet high in fat and red meat	
Diet low in fruits, vegetables, whole grains, and legumes/beans	
Obesity	

Recipes

- *Orange and Cinnamon Pilaf with Chicken and Peas*
- *Two Bean Salsa*
- *Cool Cucumber Tomato Salsa*
- *Pineapple Salsa*
- *Spring Soup*



Orange and Cinnamon Pilaf Chicken and Peas

The texture of this simple dish is best when it is made with Basmati rice.

1 cup chopped onion
2 slices fresh peeled ginger (about 1/8-inch thick)
1 cinnamon stick (about 3 inches long)
1 tablespoon olive oil
12 ounces uncooked boneless, skinless chicken breasts, cut into 1-inch pieces
1-1/2 cups uncooked white Basmati rice
2 teaspoons finely chopped fresh orange rind
3 cups chicken broth, fat skimmed off
salt and pepper to taste
2 cups thawed frozen peas
4 thin orange slices

Combine the onion, ginger, cinnamon, and oil in a 10-inch non-stick skillet that has a tight fitting lid. Heat, stirring, until the onion is tender but not browned, about 5 minutes. Push the onion to the side of the pan and gradually add the pieces of chicken. Cook until lightly browned on both sides, but not cooked through. Sprinkle with salt and black pepper. Add the rice and orange rind. Stir to blend. Add the chicken broth and heat to boiling. Stir once, then cover and cook without stirring until the rice is tender and the liquid is absorbed, about 15 minutes. Uncover and quickly sprinkle the peas on the top. Cover and cook just to heat the peas, about 2 minutes. Garnish each serving with an orange slice.

Makes 4 servings

Fat: 6 grams per serving

Fruit/Vegetable Servings: 1-1/2 per serving

Grain Servings: 2 per serving

Recipe from: *American Institute for Cancer Research Newsleter, Winter 1998*

Two Bean Salsa

A meal by itself when served with whole grain rolls.

1-1/2 cups corn (frozen/thawed, fresh or canned)
1 cup chopped tomatoes (seeded, if desired)
1/3 cup green onion, sliced
2 tablespoons cilantro, minced
2 tablespoons olive oil
3 tablespoons lime juice
3/4 teaspoon cumin
1/4 teaspoon salt
1 cup garbanzo beans
1 cup canned black or kidney beans
2 hot peppers, seeded and minced*

Mix well, cover and refrigerate 4-6 hours or overnight.

*Always wear rubber gloves when cutting hot peppers and never touch your skin or eyes. Wash the cutting board and knife before removing your gloves.

Makes 8 servings (1/2 cup each)

Fat: 4 grams per serving

Fruit/Vegetable Servings: 3/4 per serving

Grain Servings: 1/2 per serving

Recipe from: American Institute for Cancer Research Newsletter, Summer 1993

Cool Cucumber Tomato Salsa

Goes well with grilled fish, scallops, or shrimp, or as a dip for low-fat tortilla chips.

2 cups diced plum tomatoes (seeded, if desired)
1 medium cucumber, peeled, chopped (seeded, if desired)
1 jalapeno pepper, seeded and minced*
1 tablespoon red onion, minced
1 tablespoon fresh lemon juice
2 tablespoons cilantro, minced
1/4 teaspoon salt

Toss all the ingredients together, cover and refrigerate. Serve at room temperature.

*Always wear rubber gloves when cutting hot peppers and never touch your skin or eyes. Wash the cutting board and knife before removing your gloves.

Makes 5 servings (1/2 cup each)

Fat: 0 grams per serving

Fruit/Vegetable Servings: 1 per serving

Recipe from: *American Institute for Cancer Research Newsletter, Summer 1993*

Pineapple Salsa

An excellent choice with grilled chicken or turkey breast.

1 can (8 ounces) pineapple tidbits packed in juice, drained (or 1 cup fresh pineapple)
1/2 cup red bell pepper, chopped
2 tablespoons green onion, minced
1 tablespoon cilantro
2 jalapeno peppers, seeded, minced
1 tablespoon lime rind

Combine all the ingredients together.

*Always wear rubber gloves when cutting hot peppers and never touch your skin or eyes. Wash the cutting board and knife before removing your gloves.

Note: Salsas are also great scooped up with a variety of dippers like fresh vegetables, pita bread, whole grain bread, low-fat crackers or low fat tortilla chips.

Makes 4 servings (1/2 cup each)

Fat: 0 grams per serving

Fruit/Vegetable Servings: 1 per serving

Recipe from: *American Institute for Cancer Research Newsletter, Summer 1993.*

Spring Soup

A lighter version of minestrone soup. It has a delicate broth with tender, sweet-tasting vegetables. For an easy vegetarian spring meal, serve this soup with a whole grain roll or toast.

2 garlic cloves, minced or pressed
1 cup onions, chopped
1 small carrot, peeled and minced
1 celery stalk, minced
1 teaspoon dried thyme (or 1 Tbsp. fresh)
1 teaspoon dried basil (or 1 Tbsp. fresh)
1/4 cup water
6 cups vegetable broth (canned)
3 plum tomatoes, chopped (fresh or canned)
1-1/2 cups lima beans, fresh or frozen
1 package (8 ounces) frozen asparagus, or 1 pound fresh asparagus, cut into 1-inch lengths
1/4 pound spaghetti, broken into 2-inch lengths
1 tablespoon fresh lemon juice
1-1/2 cups peas, fresh or frozen

In a covered soup pot on low heat, cook the garlic, onions, carrots, celery, thyme, and basil in the water until the vegetables have softened, about 10 minutes. Add the vegetable broth and the tomatoes and bring to a boil. Add the lima beans and asparagus and return to a boil. Stir in the spaghetti and cook until al dente. Add the salt, lemon juice, and peas and cook for about 5 minutes. Serve hot.

Makes 8 (1 cup servings)

Fat: 1 gram per serving

Fruit/Vegetable Servings: 1-1/2 per serving

Grain Servings: 1/2 per serving

Recipe from: *Moosewood Restaurant Low-Fat Favorites*

CANCER TESTS CHECKLIST FOR WOMEN

Take this checklist to your doctor. Decide together which tests are right for you and how often they should be done. Then, each time you get a test, write the date in the boxes below.

Test	Potential Schedule	Date Test Completed							
Mammogram and Clinical breast exam	Yearly								
Breast self-exam	Keep track every month on your calendar								
Pelvic exam and Pap smear	Yearly								
Rectal exam	Yearly								
Guaiac stool test	Yearly								
Sigmoidoscopy or "Procto"	Every 3-5 years								
Skin exam	During regular checkup								