



American Institute
for Cancer Research

MORE FOOD, FEWER CALORIES

THE SCIENCE OF
CALORIE DENSITY

100 Calories



100 Calories



100 Calories



Our Vision

The American Institute for Cancer Research (AICR) helps people make choices that reduce their chances of developing cancer.

Our Heritage

We were the first cancer charity:

- To create awareness of the relationship between diet and cancer risk
- To focus funding on research into diet and cancer prevention
- To consolidate and interpret global research to create a practical message on cancer prevention

Our Mission

Today the American Institute for Cancer Research continues:

- Funding research on the relationship of nutrition, physical activity and weight management to cancer risk
- Interpreting the accumulated scientific literature in the field
- Educating people about choices they can make to reduce the chances of developing cancer



American Institute
for Cancer Research

Table of Contents

Introduction: “What Is Calorie Density?” . . . 2

Diets Don’t Work. 4

Some Important Definitions 4

*Eating Low Calorie-Dense Foods
Does Work. 6*

6 Tips for Reshaping Your Meals 7

Improving Meals and Snacks 16

*Physical Activity and Eating Smart:
The Other Parts of the Equation 18*

*AICR Recommendations for
Cancer Prevention 22*

Introduction: What Is “Calorie Density”?

Weight-control techniques like counting calories and fretting over fat grams are difficult enough. Is this a whole new thing people have to worry about?

Worry about? No. In fact, understanding what calorie density is helps take the worry out of watching your weight, maintaining your health and even preventing cancer. Calorie density – also known as energy density – is the “big-picture” approach to the way you eat; it’s a way to feel full on fewer calories.

Here’s the definition:

Calorie density: The amount of calories in a specific weight of food.

That may sound technical, but it becomes easy to understand once you see it put to work on your plate. Think of it this way: Ounce for ounce, high calorie-dense foods have more calories than low calorie-dense foods.

Why is a cancer organization talking about calorie density? Because studies show that diets high in calorie-dense foods promote overweight and obesity. **And excess body fat is a primary cause of cancer,**

according to an expert panel of 21 world-renowned scientists who authored the landmark report, *Food, Nutrition, Physical Activity, and the Prevention of Cancer: a Global Perspective*, published by the American Institute for Cancer Research.



Keep reading, and you’ll learn everything you need to know to keep your

weight in check by choosing low calorie-dense foods that reshape your plate, and your entire eating pattern, for better health.

Feeling Full on Fewer Calories

If you choose foods that have fewer calories bite-for-bite than high calorie (calorie-dense) foods, you'll be able to eat more of those foods and lose weight with less chance of going hungry.

Many people think of excess body fat as an inert mass that makes their clothing tighter. But bulging waistlines aren't just unattractive. Inside the body, extra fat cells cause constant inflammation and overproduction of hormones. This sets the stage for cancer. Eating meals low in calorie density helps prevent obesity and, in turn, prevent cancer.



The average American gains one to two pounds a year throughout much of adulthood. The creep of weight gain is so slow that it may go unnoticed until middle age; by then, bulging waistlines are often seen as "normal" because so many people have them – two-thirds of Americans, according to the Centers for Disease Control and Prevention. But big bellies are a health problem that can lead to serious illnesses.

Diets Don't Work

You probably already know that diets don't work. For lasting weight control, you must permanently change your eating behaviors. "Diets" tend to leave us feeling deprived. They exclude entire food groups,

emphasize foods we don't like or

require supplements that are unnecessary and expensive.



Instead of focusing on the bathroom scale,

focus on the kinds of foods you're eating.

The ones that can help you lose weight are the same ones AICR recommends for cancer prevention – fruits, vegetables, whole grains and beans. They serve double duty by also helping you control your weight.

Some Important Definitions

Calorie is a term we hear often, but do we really understand what it is? Simply, a calorie is a unit of energy (just as an inch is a unit of length). Our bodies need the calories we get from food and drink to function. Excess calories that are not burned by our bodies as fuel are stored mostly as fat.

Calorie density describes the amount of calories in a specific amount of food. Different foods can provide very different amounts of calories even when the amount of food on the plate is the same. Ounce for ounce, high energy-dense foods have more calories than low calorie-dense foods.

High calorie-dense foods have a lot of calories per bite (like chocolate cake, French fries and cheeseburgers). It's easy to consume too many calories from high calorie-dense foods unless the portion is small. (See Fats, page 10.) High calorie-dense foods typically have a high fat and/or a low water content, which raises the calorie density.

Low calorie-dense foods have few calories per bite (like an apple). These foods have a high water content, which dilutes the calories, and/or a low fat content. They can control your appetite by making you feel full with fewer calories. The lower the calorie density, the better for weight control.

Processed foods can range from low to high in calorie density. Technically, green beans that have simply been harvested, packaged, frozen or canned have been "processed." But this kind of minimal processing has few additives like fat and sugar, leaving a food close to its fresh and natural state. Plant-based foods, lean meat and low fat dairy products tend to remain low in calorie density during processing. However, snack foods, packaged baked goods, chicken nuggets and processed meats like sausage are usually high calorie-dense foods.



Eating Low Calorie-Dense Foods Does Work

Calorie-dense foods are fairly easy to recognize. They pack a lot of calories per bite and tend to be heavily processed, low in fiber and high in fats or added sugars. Fat alone, when you add it as oil in a dressing or butter on toast, for example, provides 9 calories per gram – more than twice the calories provided by either protein or carbohydrate.

Some examples of high calorie-dense foods are:

- Fatty meats like sausage and prime rib
- Butter, margarine and lard
- Snacks like fatty chips and dry pretzels
- Typical fast foods such as cheeseburgers and French fries
- Sweets and packaged baked goods

On the other hand, low calorie-dense foods have few calories per bite. Typically, low calorie-dense foods include foods like strawberries, oranges and other whole fruits and vegetables. Vegetables, fruits, whole grains and beans have high water and low fat content, making them low in calorie density. Water adds bulk to a food for few, if any, calories, so you will get more bites for the calories. Frequently vegetables, fruits, whole grains and beans are digested more slowly, creating a more satisfied, full feeling and longer lasting energy.

The main influences on calorie density are a food's (1) water content and (2) fat content.

Swapping a high calorie-dense food with a low calorie-dense choice helps you

trim calories without wrestling with hunger pangs. You can indulge in a very small slice of cheesecake for about 320 calories. Or you can have about 30 small strawberries – at double the weight of the cheesecake for a miniscule 70 calories. You'll get better nutrition, more disease-fighting substances, many more bites and 250 fewer calories.

Very Low Calorie-Dense Foods

Includes most fruits and vegetables, skim milk and broth-based soups.

Low Calorie-Dense Foods

Includes many cooked grains, breakfast cereals with low fat milk, low fat meats, beans and legumes, low fat mixed dishes and salads.

Medium Calorie-Dense Foods

Includes meats, cheeses, high fat mixed dishes, salad dressings and some snack foods.

High Calorie-Dense Foods

Includes crackers, chips, chocolate candies, cookies, butter and oil, bacon, full fat mayonnaise.

Adapted from *Volumetrics* by Barbara J. Rolls, Ph.D., and Robert A. Barnett, HarperTorch, 2000.

6 Tips for Reshaping Your Meals

How did calorie density become a tool for healthy weight management? As overweight and obesity became widespread in the U.S., researchers began examining people's eating habits. A team at Pennsylvania State University observed that volunteers in several studies ate approximately the same weight of food day after day, even when the calories from those foods were vastly different.

That's why making some easy changes – adding more plant-based foods and decreasing foods that are high in fat and sugar and highly processed – can lower your caloric intake while allowing you to eat the same amount of food that normally satisfies you.

Start modifying your food choices slowly by using some of the suggestions that follow.



Tip 1: Enjoy Soup and Salad First

Broth-based, non-cream soups and salads that are not swimming in dressing and covered with high-fat items like bacon and cheese are water-rich and are often a good source of fiber. Having them before meals is one strategy that will help you eat less because it helps fill you up so you have less room for high-calorie foods.

Researchers tested this out. When they gave women broth-based chicken and rice soup before their meals, the women ate fewer calories in the total meal than when they were given a more calorie-dense first course of chicken and rice casserole.

A similar study was conducted with salad. Again, the women ate fewer calories during the whole meal when first eating a large, low calorie-dense salad of mostly vegetables, a small amount of cheese and fat-free dressing compared to women having salads with generous amounts of cheese and full-fat salad dressing.

Try these tricks:

- Soup and salad options are endless. Use any and every favorite fruit and vegetable.
- Prepare a chopped salad, tossed salad, vinegar-marinated vegetable salad or fruit salad.
- For soups, your best choices are broth-based or tomato-based soups – not cream-based soups.

- In soups, use lots of vegetables, some whole grains like barley or rice and only a small amount of meat, fish or skinless poultry, if any.
- On a cold day, warm up with a cup of minestrone, and in the summer, cool down with a bowl of cold gazpacho.

Tip 2: Lower Fat to Reduce Calorie Density

You can begin lowering the calorie density by reducing the amount of fat in your foods. Fat is calorie-dense, with a lot of calories in every bite. If you use less oil in your cooking, spread less butter on your bread and switch from whole milk to low fat milk, you'll automatically reduce the calorie-density of your diet and save calories without even changing your normal portion size.

Use low fat and fat-free dairy products. By choosing fat-free skim milk instead of whole milk (or low fat soy milk that is fortified with calcium and vitamin D), you'll save 60 calories in every cup. Using a slice of reduced-fat cheese on your sandwich instead of regular cheese shaves off about 40 calories. Choose low fat or fat-free yogurt, cream cheese and sour cream too. This is important for heart health as well, because dairy fat and most other animal fats are highly saturated; saturated fats can raise blood cholesterol and increase your risk of heart disease and possibly cancer.

Trim visible fat from your meats. Remove poultry skin and cook with ground meats that are at least 93 percent lean.

Choose only lean sandwich meats. Fill sandwiches with skinless chicken or turkey instead of corned beef and bologna. Red and processed meats are linked to colorectal cancer, so AICR recommends that you limit red meat to 18 ounces per week and avoid

processed meats like ham, sausage, hot dogs and bologna.

Use reduced-fat cooking methods. Microwaving, steaming, stewing, braising and roasting are all healthier than deep frying. Sauté your fish and poultry in a small amount of heart-healthy oil like olive or canola oil. Drain the fat from ground meats after browning them. Chill soups and stews overnight, and then skim off and discard the fat that's hardened on the surface.

Be careful with condiments. Calorie-dense toppings like full-fat mayonnaise, creamy salad dressings, sour cream, butter and cheese sauces will surely pack on the calories and pounds. Try lower fat versions such as light mayonnaise or use only small, measured portions (1 tablespoon of fat equals approximately 100 calories). Learn to flavor your foods with herbs and spices, lemon juice, mustard and fancy vinegars instead of butter, gravy and creamy sauces.

A Note on Fat

Low calorie-dense eating doesn't mean trying to exclude fat altogether. All fats are calorie dense; however, choosing healthy fats like olive and canola oils, and **eating them in limited amounts** is vital to good health.

To feel full, eat a little healthy fat from:

- unsaturated oils
- nuts
- low fat dairy
- lean meat

Some high-fat, calorie-dense foods – like nuts, oils, seeds and avocados – carry important nutrients and disease-fighters, including fat-soluble vitamins and many antioxidant phytochemicals. Small amounts of fat also help the body absorb a number of vital nutrients. Preparing meals with small amounts of healthful fats has not been linked to weight gain; the key is portion control.

By the same token, foods that are labeled "fat-free" are not necessarily low calorie density. It's still possible to

gain weight while eating a low fat diet if you eat portions that are too large or foods that are high in sugar and low in water.

Tip 3: Increase Water Content by Piling on Vegetables and Fruits

The surest, quickest way to lower the calorie density of your meals is to eat more plant foods. Low calorie-dense (low calorie) meals can allow you to eat more of these disease-fighting foods while they help you lose weight. AICR recommends eating 5 or more servings of vegetables and fruits



a day. Slipping more vegetables and fruits into your usual meals will lower the calorie density of your diet; if you're also cutting down on high calorie-dense foods, you're really boosting your health.

Try these tricks:

- Stuff sandwiches with colorful bell pepper slices, cucumbers, spinach leaves, tomato and onion.
- Add zucchini, peppers, mushrooms, carrots and onions to spaghetti sauce.
- Toss broccoli and summer squash into pasta salads.



- Mix grapes, celery, red onion and grated carrots into chicken salad.
- Slice strawberries, peaches and other fruit into a small bowl of breakfast cereal.

- Cook up a vegetable omelet instead of

one with ham and cheese.

- Skewer more vegetables and less meat when making shish kebobs.
- Personalize your pizza with bell peppers, broccoli, spinach, mushrooms and onions. Leave off the meat and decrease the cheese by 10 or 20 percent.



- Start your meal with a broth-based soup or a vegetable-packed mixed salad. Don't let yourself get bored with the same chicken noodle soup and green leafy salad every day. Instead, use a wide variety of vegetables, fruits and grains. You'll find some delicious and easy recipes at www.aicr.org.

Tip 4: Be Prepared

The best intentions go awry if, suddenly, you get too busy and fast food too easily becomes an option. Here are some ways to back up your low calorie-dense eating plans:

- Each day, fill small plastic bags with single servings of cherries, grapes and carrot sticks ready to grab from your refrigerator.
- Keep frozen vegetables and healthful soups on hand.
- Bring a different piece of fruit to work each day. Have it for a snack instead of grabbing something in the office kitchen free-for-all.
- Eat a piece of fruit or sip some reduced-sodium tomato juice just before heading out to a restaurant.
- Buy pre-cut or pre-washed and bagged vegetables like broccoli, baby spinach and peppers or get them from the salad bar. You'll have a supply that's ready to toss into salads, stews or casseroles every night of the week.

Tip 5: Think Before You Drink

Most high calorie drinks like sodas and punches don't fill you up or signal your brain that it's time to stop eating and drinking. With 20-ounce bottles, super-size cups and endless refills, it's easy to drink more than you intend. Beverage calories add up quickly. Some research suggests that Americans consume approximately 20 percent or more of calories from beverages. So to control your weight, the AICR expert report recommends that you avoid sugary drinks such as soda, lemonade, fruit punches, sweet tea and specialty coffees. The best beverages for weight control are water and unsweetened tea and coffee.

Some beverages do satisfy hunger and are nutritious: nonfat or low fat milk, soymilk and reduced-sodium tomato juice are good choices.

What about 100 percent fruit juices? They're packed with cancer-fighting antioxidants and phytochemicals and count as one of the five or more daily servings of fruits and vegetables. But whole fruit offers more fiber and is more filling. Calories from juice, on the other hand, can add up quickly because it takes less time to swallow a glass of juice than it does to eat a whole fruit. Limit 100 percent fruit juice to 6 ounces daily.

Water is one component in food that enables you to feel satisfied for longer before you feel hungry again. However, drinking a glass of water alone is unlikely to help you eat less. The water will hydrate you and quench your thirst, but it won't satisfy your hunger or help you to eat less.



Tip 6: Control Your Portions of Calorie-Dense Foods

Low calorie-dense foods serve up fewer calories in a given amount, but they are not calorie-free. If you eat too much of healthful foods, you'll gain weight. Over the last few decades, portions have ballooned in restaurants, fast-food chains, snack bags and at our own kitchen tables. We tend to eat more when served more – even if we don't realize it.

Most popular foods – from cheeseburgers and soft drinks to muffins and cookies – have gotten bigger. A bagel 20 years ago had 140 calories and was about 3 inches in diameter. Today the typical bagel has swelled to about 6 inches and 350 calories. That 210-calorie difference adds up to a bigger waist, even if it's a healthy whole-grain bagel.

Here's some help for controlling portions:

- Use smaller bowls and plates. Smaller portions of food will look bigger.
- When reading Nutrition Facts labels, check serving size first; that's what all the other figures on the label apply to. Some packages look like a single serving, but actually have 2 or 3 servings.

Nutrition Facts	
Serving Size 1 cup (228g)	
Servings Per Container 2	
Amount Per Serving	
Calories 250	Calories from Fat 110

- Forget super-sized and value meals. They have no value in weight control.
- Restaurant meals and bakery items are usually oversized, so save half in a doggie bag before you begin or plan to share with a dining companion.

- Use measuring cups to see what amount really goes on your plate or bowl. Compare your portions to the standard servings defined by the U.S. Department of Agriculture, below.

Standard Serving Sizes

Food	Serving	Looks Like
Chopped Vegetables	½ cup	½ baseball or rounded handful for average adult
Raw Leafy Vegetables (such as lettuce)	½ cup	1 baseball or fist for average adult
Fresh Fruit	1 medium piece	1 baseball
	½ cup chopped	½ baseball or scant handful for average adult
Dried Fruit	¼ cup	1 golf ball or scant handful for average adult
Pasta, Rice, Cooked Cereal	½ cup	½ baseball or rounded handful for average adult
Ready-to-Eat Cereal	1 oz. which varies from ¼ cup to 1¼ cups (check label)	
Meat, Poultry, Seafood	3 oz. (boneless cooked weight from 4 oz. raw)	Deck of cards
Dried Beans	½ cup cooked	½ baseball or rounded handful for average adult
Nuts	⅓ cup	Level handful for average adult
Cheese	1½ oz.	4 dice

Source: U.S. Department of Agriculture

Improving Meals and Snacks

An easy rule of thumb for eating mostly low calorie-density foods is: Cover $\frac{2}{3}$ (or more) of your plate with vegetables, fruits, whole grains and beans and $\frac{1}{3}$ (or less) with lean meat, poultry or fish or low fat dairy foods. AICR calls this the New American Plate model for healthy eating. Eat two vegetables with every meal and fruit for dessert. Have high-fiber whole grains or legumes with most meals.



Here are some examples of meals and snacks that have been changed to have lower calorie density. Note that the portions of food remain the same, although the calories have been reduced significantly.

Instead of This

Try This

Breakfast

Toaster pastry

High fiber cereal with low fat or fat-free milk

Fruit juice

Sliced or whole fruit

Morning Snack

Cheese and crackers

Reduced-fat cheese and an apple

Restaurant Lunch

Chips and dip appetizer

Vegetable or bean soup

Fried fish

Baked fish

French fries

Baked potato with reduced-fat sour cream

Sweetened iced tea

Unsweetened iced tea

Bagged Lunch

Sandwich on white bread with 3 slices of turkey and 2 slices of cheese with full-fat mayonnaise

Pretzels

2 cookies

Sweetened beverage

Sandwich on whole-wheat bread with 2 slices of turkey and 1 slice of low fat cheese with reduced-fat mayonnaise and veggies on whole-wheat bread

Grapes and strawberries

1 cookie

Unsweetened beverage

Afternoon Snack

Chips

Pear or apple slices and 6-oz. low fat yogurt

Fruit punch

Water, tea or coffee

Home-Cooked Dinner

Large (8 oz.) baked chicken breast with the skin

Small (3 oz.) baked chicken breast without the skin

1 cup mixed lettuce with ranch dressing

1 cup mixed lettuce and ½ cup chopped tomatoes, bell peppers, onions and cauliflower with 1 Tbsp. homemade oil and vinegar dressing

1 cup white rice pilaf

⅔ cup brown rice

½ cup green beans with butter

1 cup green beans drizzled with 1 tsp. olive oil

For more good ideas, you can order single free copies of these brochures. (See page 20 for ordering information.)



Physical Activity and Eating Smart: The Other Parts of the Equation

Eating mostly low calorie-dense foods, being physically active and maintaining a healthy weight are the three essential components of cancer prevention. Although each of the first two alone directly reduces cancer risk, together they also help us manage our weight, which is the third component of cancer prevention. It takes all three to provide the most health protection.



AICR Guidelines for Cancer Prevention

The choices you make about food, physical activity and weight management can reduce your chances of developing cancer.

Choose mostly plant foods, limit red meat and avoid processed meat.

Be physically active every day in any way for 30 minutes or more.

Aim to be a healthy weight throughout life.

And always remember – do not smoke or chew tobacco.

Eating low calorie-dense plant foods and avoiding sugary drinks shaves calories to help you control your weight. Add physical activity to the mix, and you'll see even better results. The expert panel found convincing evidence that daily physical activity

protects against colon and post-menopausal breast cancer and possibly cancers of the lung, uterus and prostate.

For cancer prevention, AICR recommends getting at least 30 minutes of moderate physical activity per day. To help avoid weight gain, try one of the activities below for 30 minutes then add another 30 minutes of movement throughout the day to get a minimum of 60 minutes, whether it's by walking, taking the stairs, housecleaning or gardening. Anything that makes you move counts as physical activity.

Walking

Running

Hiking

Biking

Tennis

Rowing

Swimming

Using gym equipment

Dancing

Doing housework at a vigorous pace

Don't have time to get a whole 30-minute or hour-long block of physical activity at once? Try breaking it up into 10-, 15- or 20-minute segments throughout the day. If you haven't been getting much exercise for a while, check with your healthcare provider before starting or increasing physical activity.



Need More Help?

To help you follow the AICR Guidelines for Cancer Prevention, you can order a free copy of up to six of the individual brochures listed below by writing to American Institute for Cancer Research, 1759 R Street, NW, P.O. Box 97167, Washington, DC 20090-7167 or visit www.aicr.org to read online or download:

Moving More for Cancer Prevention

Eating Well for Cancer Prevention (with recipes)

Staying Lean for Cancer Prevention

Guidelines for Cancer Prevention

Recommendations for Cancer Prevention

The New American Plate brochure series (all featuring healthy recipes):

The New American Plate

Veggies

One-Pot Meals

Comfort Foods

Breakfast

Beans and Whole Grains

Call the Toll-Free Nutrition Hotline

Dial 1-800-843-8114 to leave a message for a registered dietitian (who will return your call), Monday-Friday, 9 a.m.-5 p.m. Eastern Time. Or visit the AICR Hotline online at www.aicr.org.

Editorial Review Committee

Ritva Butrum, Ph.D.; Karen Collins, M.S., R.D.; John Erdman, Ph.D.; Elaine Feldman, M.D.; Jan Kasofsky, Ph.D., R.D.; Kimberly Kline, Ph.D.; Barbara Pence, Ph.D.; Richard Rivlin, M.D.; AICR Executive Staff

AICR is part of the WCRF global network.

How You Can Support Cancer Research and Education through Your Will

You can help provide for future cancer research and education through a simple bequest in your will. Consult with your attorney when first writing your will or to add a simple paragraph to your existing will. Your bequest to help in the war against cancer can be a cash amount, a gift of the remainder of your estate or a portion of the remainder after obligations to your family and loved ones are met.

Your attorney can easily help you make a bequest to the American Institute for Cancer Research (AICR). To do so, your attorney will need to know:

AICR's official name:

American Institute for Cancer Research

AICR's mailing address:

1759 R Street, NW, Washington, DC 20009

AICR's telephone number:

202-328-7744

AICR's identification:

A not-for-profit organization under Section 501(c) (3) of the Internal Revenue Code

AICR's tax-exempt IRS number:

52-1238026

For further information, contact AICR's Gift Planning Department at 1-800-843-8114 or send an email to gifts@aicr.org.

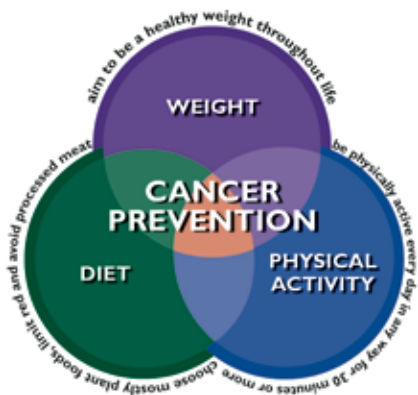
AICR Recommendations for Cancer Prevention

1. Be as lean as possible without becoming underweight.
2. Be physically active for at least 30 minutes every day.
3. Avoid sugary drinks. Limit consumption of calorie-dense foods (particularly processed foods high in added sugar, or low in fiber, or high in fat).
4. Eat more of a variety of vegetables, fruits, whole grains and legumes such as beans.
5. Limit consumption of red meats (such as beef, pork and lamb) and avoid processed meats.
6. If consumed at all, limit alcoholic drinks to 2 for men and 1 for women a day.
7. Limit consumption of salty foods and foods processed with salt (sodium).
8. Don't use supplements to protect against cancer.

Special Population Recommendations

9. It is best for mothers to breastfeed exclusively for up to 6 months and then add other liquids and foods.
10. After treatment, cancer survivors should follow the recommendations for cancer prevention.

And always remember – do not smoke or chew tobacco.



AICR Guidelines for Cancer Prevention

The choices you make about food, physical activity and weight management can reduce your chances of developing cancer.

Choose mostly plant foods, limit red meat and avoid processed meat.

Be physically active every day in any way for 30 minutes or more.

Aim to be a healthy weight throughout life.

*And always remember –
do not use tobacco in any form.*

These steps are based on recommendations set forth in the expert panel report, *Food, Nutrition, Physical Activity, and the Prevention of Cancer: a Global Perspective*, published by the American Institute for Cancer Research and its affiliate, the World Cancer Research Fund in the U.K.

The report was written by an expert panel of scientists who reviewed all the available evidence on diet, physical activity and weight management in relation to cancer prevention. Scientists conclude that approximately one-third of all cancer cases could be prevented if everyone ate a healthy diet, was physically active every day and maintained a healthy weight.



American Institute
for Cancer Research

Prepared by the American Institute for Cancer Research, October 2008. Copyright © 2008