

AMERICAN CANCER SOCIETY GUIDELINES ON NUTRITION AND PHYSICAL ACTIVITY FOR CANCER PREVENTION

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For most peoples who do not use tobacco, the most important cancer risk factors that can be changed are **body weight, diet, and physical activity.**

One-third of all **cancer deaths** in the United States each year **are linked to diet and physical activity,** including being overweight or obese, while **another third is caused by tobacco products.**

Although our genes influence our risk of cancer, most of the difference in cancer risk between people is due to factors that are **not inherited.**

Avoiding tobacco products, staying at a healthy weight, staying active throughout life, and eating a healthy diet may greatly **reduce a person's lifetime risk of developing or dying from cancer.** These same behaviors are also linked with a **lower risk of developing heart disease and diabetes.**

Although these healthy choices can be made by each of us, they may be helped or slowed by the social, physical, economic, and regulatory environment in which we live.

Community efforts are needed to create an environment that makes it easier for us to make healthy choices when it comes to diet and physical activity.

Summary of the ACS Guidelines on Nutrition and Physical Activity

ACS RECOMMENDATIONS FOR INDIVIDUAL CHOICES

Achieve and maintain a healthy weight throughout life.

- Be **as lean as possible** throughout life without being underweight.
- **Avoid excess weight gain** at all ages. For those who are overweight or obese, losing even a small amount of weight has health benefits and is a good place to start.
- Get **regular physical activity** and **limit intake of high-calorie foods** and drinks as keys to help maintain a healthy weight.

Be physically active.

- ▣ **Adults:** Get at least **150 minutes of moderate intensity or 75 minutes of vigorous intensity activity each week** (or a combination of these), preferably spread throughout the week.
- ▣ **Children and teens:** Get at least **1 hour of moderate or vigorous intensity activity each day**, with **vigorous activity on at least 3 days each week**.
- ▣ **Limit sedentary behavior** such as sitting, lying down, watching TV, and other forms of screen-based entertainment.
- ▣ Doing some **physical activity above usual activities**, no matter what one's level of activity, can have many health benefits.

Eat a healthy diet, with an emphasis on plant foods.

- ❑ Choose foods and drinks in amounts that help you **get to and maintain** a healthy weight.
- ❑ **Limit** how much **processed meat and red meat** you eat.
- ❑ Eat at least **2½ cups of vegetables and fruits** each day.
- ❑ Choose **whole grains** instead of refined grain products.

If you drink alcohol, limit your intake.

- Drink no more than 1 drink per day for women or 2 per day for men.
- A drink of alcohol is defined as **350 ml of beer, 150 ml of wine, or 37.5 ml of 80-proof distilled spirits (hard liquor)**

ACS RECOMMENDATIONS FOR COMMUNITY ACTION

Public, private, and community organizations should work together at national, state, and local levels to apply policy and environmental changes that:

- ▣ Increase **access to affordable, healthy foods** in communities, places of work, and schools, and decrease access to and marketing of foods and drinks of low nutritional value, particularly to youth.
- ▣ Provide **safe, enjoyable, and accessible environments for physical activity** in schools and workplaces, and for transportation and recreation in communities.

Obesity **increases** the risk of many types of cancer.

It also **increases** the risk of heart disease, stroke, diabetes, and other health outcomes, such as dying at an early age.

While it is not clear exactly how excess body fat, consuming too many calories, and lack of physical activity **raise cancer risk**, there is no question that they are linked to an increased risk of many types of cancer and that they are a serious and growing health problem.

Body weight and cancer risk

- Breast (among women who have gone through menopause)
- Colon and rectum
- Endometrium (lining of the uterus)
- Esophagus
- Kidney
- Pancreas

- ▣ Gallbladder
- ▣ Liver
- ▣ Non-Hodgkin lymphoma
- ▣ Multiple myeloma
- ▣ Cervix
- ▣ Ovary
- ▣ Aggressive forms of prostate cancer

In addition, having too much **belly fat** is linked with an increased risk of **colorectal cancer**, and is probably linked to a higher risk of cancers of the **pancreas**, **endometrium** (lining of the uterus), and **breast** cancer (in women past menopause).

Some studies have shown a link between **weight loss and a lower risk of breast cancer** after menopause. The risk of some other cancers may also be lowered by weight loss.

While there is still much to be learned about this area, **people who are overweight or obese are encouraged to lose weight.**

Getting to and maintaining a healthy weight

A healthy weight depends on a person's height, so recommendations for a healthy weight are often expressed in terms of **body mass index (BMI)**. BMI is a number that is calculated using your weight and height. In general, the higher the number, the more body fat a person has (although there are exceptions).

For most adults, experts consider a BMI within the range of **18.5 to 24.9 to be healthy**, a BMI between **25 and 29.9 to be overweight**, and a BMI of **30 and over to be obese**.

The way to achieve a healthy body weight is to **balance energy intake** (what you eat and drink) **with energy use** (physical activity).

Excess body fat can be reduced by lowering the number of calories you consume and increasing your physical activity.

You can lower the number of calories that you take in by eating smaller amounts of food (**lowering portion sizes**), limiting between-meal **snacks**, and limiting foods and drinks that are **high** in calories, fat, and/or added sugars, and that provide few nutrients.

Fried foods, cookies, cakes, candy, ice cream, and regular soft drinks should be replaced with **vegetables and fruits, whole grains, beans, and lower calorie beverages.**

Benefits of physical activity:

Physical activity may reduce the risk of several types of cancer:

- Breast
- Colon
- Endometrium (lining of the uterus)
- Prostate (advanced cancers)

A physically active lifestyle may **also lower a person's risk of other health problems** such as heart disease, high blood pressure, diabetes, and osteoporosis (bone thinning).

Being active may also help to **prevent weight gain** and obesity, which may in turn reduce the risk of developing cancers that have been linked to excess body weight.

Types of activity

Usual activities are those that are done on a regular basis as part of one's daily routine.

These activities include those done **at work** (such as walking from the parking garage to the office), **at home** (such as climbing a flight of stairs), and those that are part of **daily living** (such as dressing and bathing).

Usual activities are typically **brief** and of **low intensity**.

Intentional activities are those that are done in addition to these usual activities. These activities are often planned and done at leisure, as regularly scheduled physical activity or fitness sessions (exercise), such as a bike ride or a run.

Other intentional activities may involve adding more purposeful physical activity into the day and making lifestyle choices to add to or replace other routine activities, such as walking to use public transportation or commuting by bicycle instead of driving.

Usual and intentional activities can also be grouped by intensity:

- ❖ *Light* intensity activities include activities such as housework, shopping, or gardening.
- ❖ *Moderate* intensity activities are those that require effort equal to a brisk walk.
- ❖ *Vigorous* intensity activities generally use large muscle groups and result in a faster heart rate, deeper and faster breathing, and sweating.

	Moderate intensity	Vigorous intensity
Exercise and leisure	Walking, dancing, leisurely bicycling, ice and roller skating, horseback riding, canoeing, yoga	Jogging or running, fast bicycling, circuit weight training, aerobic dance, martial arts, jumping rope, swimming
Sports	Volleyball, golfing, softball, baseball, badminton, doubles tennis, downhill skiing	Soccer, field or ice hockey, lacrosse, singles tennis, racquetball, basketball, crosscountry skiing
Home activities	Mowing the lawn, general yard and garden maintenance	Digging, carrying and hauling, masonry, carpentry
Workplace activity	Walking and lifting as part of the job (custodial work, farming, auto or machine repair)	Heavy manual labor (forestry, construction, fire fighting)

Recommended amount of activity

Adults should get at least **150 minutes per week of moderate intensity activity** **or** **75 minutes per week of vigorous intensity activity**, or an equal combination, in addition to normal activities of daily living.

When combining different types of activity, 1 minute of vigorous activity can take the place of 2 minutes of moderate activity.

It is not clear if daily activity provides the most benefit if done all at once or in smaller blocks of time throughout the day, but it is reasonable to get your activity in **separate sessions of at least 20 to 30 minutes each**.

Men older than 40 years, women older than 50 years, and people with chronic illnesses or risk factors for heart disease should check with their doctors before starting a vigorous activity program.

Children and teens should be encouraged to be active at moderate to vigorous intensities for **at least an hour a day, every day.**

To help reach activity goals, daily physical education programs and activity breaks should be **provided for children at school**, and "**screen time**" (TV viewing, playing video games, or social networking on the computer and similar activities) should be **limited at home.**

Tips to reduce sitting time

- Limit time spent watching TV and using other forms of screen-based entertainment.
- Use a stationary bicycle or treadmill when you do watch TV.
- Use stairs rather than an elevator.
- If you can, walk or bike to your destination.
- Exercise at lunch with your coworkers, family, or friends.

- Take an exercise break at work to stretch or take a quick walk.
- Walk to visit coworkers instead of phoning or sending an e-mail.
- Plan active vacations rather than only driving trips.
- Join a sports team.

Eat a healthy diet, with an
emphasis on plant foods

Choose foods and drinks in amounts that help you get to and maintain a healthy weight.

- ❑ Read food labels to become more aware of portion sizes and calories. Be aware that "**low-fat**" or "**non-fat**" does **not** necessarily mean "**low-calorie**."
- ❑ Eat **smaller portions** when eating high-calorie foods.
- ❑ Choose **vegetables, whole fruit**, and other low-calorie foods instead of calorie-dense foods such as French fries, potato and other chips, ice cream, donuts, and other sweets.
- ❑ Limit your intake of **sugar-sweetened beverages** such as soft drinks, sports drinks, and fruit-flavored drinks.
- ❑ When you eat **away from home**, be especially mindful to choose food low in calories, fat, and added sugar, and avoid eating large portion sizes.

Limit how much processed meat and red meat you eat.

- Limit your intake of processed meats such as bacon, sausage, lunch meats, and hot dogs.
- Choose fish, poultry, or beans instead of red meat (beef, pork, and lamb).
- If you eat red meat, choose lean cuts and eat smaller portions.
- Prepare meat, poultry, and fish by baking, broiling, or poaching rather than by frying or charbroiling.

Eat at least 2½ cups of vegetables and fruits each day.

- Include vegetables and fruits at every meal and for snacks.
- Eat a variety of vegetables and fruits each day.
- Emphasize whole fruits and vegetables; choose 100% juice if you drink vegetable or fruit juices.
- Limit your use of creamy sauces, dressings, and dips with fruits and vegetables.

Choose whole grains instead of refined grain products.

- Choose whole-grain breads, pasta, and cereals (such as barley and oats) instead of breads, cereals, and pasta made from refined grains, and brown rice instead of white rice.
- Limit your intake of refined carbohydrate foods, including pastries, candy, sugarsweetened breakfast cereals, and other high-sugar foods.

If you drink alcohol, limit your intake

- ❑ People who drink alcohol should limit their intake to no more than **2 drinks per day for men** and **1 drink per day for women**.
- ❑ A drink of alcohol is defined as **12 ounces of beer, 5 ounces of wine, or 1½ ounces of 80-proof distilled spirits (hard liquor)**. In terms of cancer risk, it is the amount of alcohol consumed that is important, not the type of alcoholic drink.
- ❑ These daily limits do not mean you can drink larger amounts on fewer days of the week, since this can lead to health, social, and other problems.

Alcohol is a known cause of cancers of the:

- Mouth
- Throat (pharynx)
- Voice box (larynx)
- Esophagus
- Liver
- Colon and rectum
- Breast
- Alcohol may also increase the risk of cancer of the pancreas.

Food additives, safety, and organic foods

Food additives and contaminants

- Many substances are added to foods to **prolong shelf and storage life** and to enhance color, flavor, and texture.
- Additives are usually present in very small quantities in food, and some are **nutrients** that may have beneficial effects (for example, vitamins C and E are sometimes added to food products as a preservative).

Other compounds find their way into the food supply through **agricultural use**, **animal farming**, or **food processing**, even if their use is not directly intended for human consumption.

Examples include **growth hormones** or **antibiotics** used in animal farming, small amounts of **pesticides** and **herbicides** in plant-based foods, and compounds such as bisphenol A (BPA) or phthalates that enter food from **packaging**.

Some of these compounds are not known to directly cause cancer, but they may influence cancer risk in other ways – for example, by acting as hormone-like substances in the body.

Unintended contamination of food may also result in exposure to chemicals that are a cause of concern and may be related to cancer risk.

Examples include **heavy metals** such as cadmium or mercury.

These metals may enter the food supply if they build up the food chain, such as from **fish**, or they may enter through contamination or their natural presence in **soil** or **water**.

Food processing

Food processing may also alter foods in ways that might affect cancer risk. An example is the **refining of grains**, which greatly lowers the amount of fiber and other compounds that may reduce cancer risk.

The processing of meat, by adding preservatives such as **salt or sodium nitrite** to prevent the growth of germs, or **smoking the meat** to preserve or enhance color and flavor, may add compounds that might increase the potential of these foods to cause cancer.

Studies have linked eating large amounts of **processed meats** with an increased risk of **colorectal cancer**.

This may be due to **nitrites**, which are added to many lunch meats, hams, hot dogs, and other processed meats.

Some food processing, such as **freezing** and **canning** vegetables and fruits, can **preserve** vitamins and other components that may decrease cancer risk.

Cooking or **heat-treating** (such as when canning) vegetables breaks down the plant cell walls and may allow the helpful compounds in these foods to be more easily digested.

But some of these methods may also lower the content of some **heat-sensitive** vitamins, such as vitamin C and some B vitamins.

Irradiated foods

Irradiation of food products is one way to limit the risk of **germ contamination** and food poisoning.

In the United States, some foods, such as spices, are routinely irradiated.

Irradiated meats and other foods are also widely available. Because radiation is known to cause cancer, there has been concern that food irradiation may present a cancer risk.

However, radiation does not remain in foods that have been irradiated.

Organic foods

Concern about the possible effects of food additives on health, including cancer, is one reason that many people are now interested in organic foods.

Organic foods are often promoted as an alternative to foods grown with conventional methods that use **chemical pesticides and herbicides, hormones, or antibiotics.**

These compounds cannot be used for foods labeled as "organic." Organic foods, as defined by the US Department of Agriculture (USDA), also exclude **genetically modified foods or foods that have been irradiated.**

Whether organic foods carry a lower risk of cancer because they are less likely to be contaminated by compounds that might cause cancer is largely **unknown**.

Several studies have looked at the nutrient content of organic versus conventionally grown fruits or vegetables, and while some studies suggest a higher nutrient content, others suggest no difference.

It is not known if the nutritional differences that have been reported would result in health benefits such as a reduced cancer risk.

Vegetables, fruits, and whole grains should form the central part of a person's diet, regardless of whether they are grown conventionally or organically.

غذاهای «آبر» ضد سرطان:

□ سبزیجات خانواده کلم: بروکلی، کلم، گل کلم، جوانه های کلم بروکلی

□ میوه ها و سبزیجات نارنجی: هویج، کدو تنبل، انبه

□ گوجه فرنگی: سرشار از لیکوپن که یک آنتی اکسیدان قوی است می باشد. میزان لیکوپن در گوجه فرنگی **پخته** بیشتر است. این ماده احتمالا در برابر سرطان **پروستات** اثر محافظتی دارد

□ حبوبات

□ انواع توت ها (Berries): توت فرنگی، تمشک فرنگی (کاهش آسیب سلولی در اثر دود سیگار و آلودگی هوا)

□ غلات کامل: گندم، برنج، جو دوسر

□ مغزها و دانه ها: به خصوص بادام هندی (پیشگیری از سرطان پروستات)

□ دانه کتان

□ چای سبز و چای سیاه: پیشگیری از سرطان معده، محافظت در برابر عفونت های ویروسی

غذاهای ضد پیری

□ بعضی از غذاها غنی از آنتی اکسیدان ها هستند. این مواد، رادیکال های آزاد را (که مواد شیمیایی مخرب سلول ها در بدن و در نتیجه تشدید کننده پیری و بیماری هستند) خنثی میکنند.

□ **آنتی اکسیدان های اصلی عبارتند از:** ویتامین A، ویتامین C، ویتامین E، بتاکاروتن (پیش ساز ویتامین A)، سلنیوم، روی، و لیکوپن.

□ مصرف مقدار زیاد میوه و سبزیجات تازه، مصرف روغن زیتون و روغن کلزا، ترک سیگار، نداشتن مواجهه طولانی با آفتاب، دوری از استرس های بیش از حد و اجتناب از نواحی آلوده همگی در کاهش رادیکال های آزاد موثرند.

غذاهای غنی از آنتی اکسیدان

- قطعات خربزه یا طالبی دارای گوشت نارنجی رنگ
- توت فرنگی
- آووکادوی له شده کشیده شده روی نان تست شده
- ماهی آزاد گریل شده به همراه سالاد، فلفل قرمز، گوجه فرنگی و انبه همراه پودر دانه کتان.
- مخلوطی از بروکلی، نخود سبز و گل کلم به صورت داغ یا سرد.
- یک مشت هویج کوچک یا بادام.
- اسفناج تفت داده شده در روغن زیتون همراه با سیر و آب لیموی تازه

- سالاد مخلوط با گوجه فرنگی، کرفس، ذرت شیرین و بروکلی.
- سیب زمینی تنوری با پوست، آغشته به ماست کم چرب.
- خلال بادام ریخته شده روی لوبیا سبز یا نخودسبز.
- برش های پرتقال به عنوان دسر.
- توت های تازه روی غذاهای تهیه شده از غلات.
- قطعات نان همراه با گوجه فرنگی.

A tranquil garden scene featuring a calm pond that reflects the surrounding landscape. The pond is bordered by a low wooden fence and is surrounded by a variety of plants, including large green trees, smaller shrubs, and vibrant pink and red flowering bushes. In the foreground, a small grassy island with a curved edge is visible, and a branch with pink flowers hangs into the frame from the bottom left. The overall atmosphere is peaceful and picturesque.

***THANKS FOR
YOUR
ATTENTION***