

# cancer prevention works

Fall 2008

Cancer prevention and early detection information for your healthy life. Research. Education. Outreach.



## Cancer Prevention Milestones, 1985–2008

*As the Prevent Cancer Foundation enters its 24<sup>th</sup> year, we take a moment to reflect on the most significant developments in cancer over the past two decades.*

In 1985, “cancer prevention” was limited largely to stop-smoking efforts. Cancers were mostly killers; the brains and the dollars were devoted to treatment. While lip service was paid to the benefits of a healthy lifestyle, the idea that obesity, lack of exercise, and a diet high in saturated

*Continued on page 4*



### NEWS & STUDIES

PAGE 2

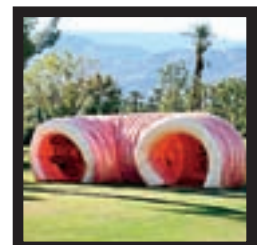
The benefits of omega-3, plus a pancreatic cancer screening breakthrough.



### GET SMART

PAGE 3

Michele Conley turned her breast cancer diagnosis into a mission.



### COVER STORY

CONT. PAGE 4

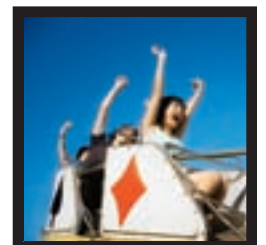
Two decades of advances in cancer prevention.



### ASK THE EXPERTS

PAGE 6

I've never had a weight problem so I don't exercise much. Is my health at risk?



### THE PREVENT CANCER FOUNDATION

PAGE 7

The Foundation takes its cancer screening program to the fair.



### THE LAST WORD

PAGE 8

Five top researchers offer their predictions for the future of cancer prevention.



## President's Corner

Carolyn Aldigé,  
President and Founder

AFTER 23 YEARS of raising awareness about cancer prevention and early detection, the Foundation and its mission have been accepted and embraced by the nation's most prestigious cancer-related professional organizations and millions of Americans.

It's been gratifying to see how respect for the Foundation has grown over time, and to realize that cancer prevention is now embedded in mainstream scientific beliefs.

Progress is being made. Men and women are beginning to take charge of their lives as they never have before. The message is resonating: A healthy lifestyle and the use of our arsenal of screening tools can help us all reduce our cancer risk.

But the Foundation's work is not done. We will continue to fund innovative research to improve early detection technology. We will maintain our efforts to raise cancer prevention awareness in underserved communities. And we will strive, with every ounce of strength, to make our world cancer-free.

# Fill Up on Fish

YOU'VE PROBABLY HEARD about the potential benefits of omega-3 fatty acids in protecting your heart and boosting your mood, but now there's another do-good effect to add to the list: a lower risk of colorectal cancer. Researchers from Harvard and Columbia universities tracked 500 men for 22 years as part of the Physicians' Health Study and found that men who ate the most fish—at least five times a week—had a 40 percent lower risk of colorectal cancer than those who dined on seafood less than once a week. Those who picked fish with the highest levels of omega-3s had a 26 percent lower risk than those who ate the least. Researchers think omega-3s may inhibit enzymes and the production of pro-inflammatory compounds that may play a role in the development of cancer. So choose fish rich in omega-3s, such as salmon or mackerel, and make it a regular main course—or try adding sardines to your salad.

## Research Grant in Action

As if helping a cancer prevention scientist establish his career wasn't enough, one Prevent Cancer Foundation fellowship grant awarded in 2004 has also laid the groundwork for breakthroughs in colorectal and pancreatic cancer screening.

Dr. Young L. Kim was a biomedical engineering researcher at Northwestern University when he won the award. "The fellowship provided initial support to



Fish such as salmon and mackerel can boost your omega-3s and lower your risk for colorectal cancer.

become an independent researcher during my first year of postdoctoral training," Dr. Kim says. "It was emotional and financial encouragement for me to pursue an academic career."

And his career has flourished. At Northwestern, Dr. Kim used the grant money to work closely with his mentor, Dr. Vadim Backman, a biomedical engineering professor, to develop light-scattering technology that may lead to the next generation of colorectal cancer screenings—optical, colonoscopy-free procedures. Drs. Backman, Kim, and others in the lab then repurposed the technology to detect pancreatic cancer. Currently, doctors have no way to screen populations to detect it early, Dr. Backman explains. Biopsies and other available methods are simply too invasive and have an unacceptably high rate of complications. As a result, pancreatic cancer's five-year survival rate is a dismal 3 percent.

The research team, however, was able to use its optical tools to predict pancreatic cancer pres-

ence without disturbing the organ. In fact, they didn't even touch it. The light-scattering technology allowed them to examine small-intestine tissue adjacent to the pancreas, and from that they could determine whether the pancreas was cancerous.

Findings such as these, reported in *Clinical Cancer Research* last year, could lead to earlier cancer detection and save many lives.

Meanwhile, Dr. Young L. Kim is continuing his exciting career at Purdue University as a tenure-track assistant professor. Still focused on early detection technology, he's currently experimenting with new imaging techniques to spot lung cancer in its earliest stage.

## Is Wine Really Fine?

Health-conscious consumers have had plenty of occasions to raise a glass as study after study touts

the virtues of red wine. A glass a day, the *International Journal of Cancer* reported in 2004, may cut the risk of prostate cancer in half. Protection from breast, colorectal, and lung cancers was also anticipated. But such reports proved premature. While red wine's antioxidants continue to benefit heart health and aging, recent reports regarding cancer are decidedly more sobering.



Heavy drinking has been known to contribute to liver and colon cancer, among others. But last spring, the National Cancer Institute announced that a drink or two a day—regardless of the type of alcohol—ups breast cancer risk by 32 percent. And Australia's Cancer Institute NSW reported that two drinks a day may raise larynx cancer risk by 40 percent, esophageal cancer by 50 percent, and oral cancer by 75 percent.

Not all the booze news has been bad, though. According to the International Agency for Research on Cancer,

some people have a gene variation that actually protects against alcohol-related cancers. The more they drink, the more protection they get. Doctors warn, however, that only a small percentage of the population carries the genes and even the lucky few have a higher cancer risk than if they didn't drink at all.

## An Even Dirtier Habit

Another reason to ditch the cigarettes and encourage friends and family to quit: A review of 14 studies published in the journal *Preventive Medicine* found that the connection between secondhand smoke and breast cancer is even stronger than evidence linking it to lung cancer. Seventy-one percent of studies showed an association between exposure to smoke and risk of breast cancer, and some revealed a 2.19-fold higher risk, especially for younger, premenopausal women. The review's authors say that these studies, conducted in 2005, provide a stronger link to cancer than did the six of 13 studies reviewed by the U.S. Surgeon General for the lung cancer connection made in 1986. The review came after the California Environmental Protection Agency's Air Resources Board added tobacco smoke, passive smoking, involuntary smoking, and environmental tobacco smoke to the state's list of "toxic air contaminants" and cited breast cancer as a new addition to the list of diseases caused by secondhand smoke.

# Mom Builds a Better Future, One Luncheon at a Time

*Michele Conley would go to the ends of the earth for her kids. Many believe she already has.*



**Michele Conley's mission is to save the next generation of women from a breast cancer diagnosis.**

MICHELE CONLEY, a mother of four, was first diagnosed with breast cancer at the age of 35. She embraced her chemotherapy, radiation, and surgery treatments with the same zest she brought to everything else in her life.

But five years later, Conley was diagnosed again. "It was a tiny spot of cancer in the opposite breast," she says. "I have four kids. I decided not to play this game."

So Conley sat down with her children (including her then 12-year-old twins, Brooke and Denver) and explained that this time she was approaching the cancer differently. "I'm going to have a lot of surgery done," she told them, explaining what they should expect after her double mastectomy and hyster-

ectomy. "I think it's the best decision for all of us. It'll keep Mom healthy."

When people hear Conley's story, they're astounded that she isn't angry or bitter. "But what would that do?" Conley counters. "I want to be able to raise my kids. If I'm angry, I'm not going to be an effective parent and a good role model for them."

Although Conley had come to terms with her situation, she wasn't content to watch as others fell victim to the disease. "I did all the walks, but it wasn't enough," Conley says. "I needed to make a difference."

It was this passion that drove her to create the Living in Pink Foundation (LIP). "The mission statement of LIP is that the next generation of women, our daughters, won't have to go through this not-so-pleasant process if they are diagnosed with breast cancer," Conley says with conviction.

Now in its fifth year, LIP is organized by a committee of 10 hard-working mothers that convenes at night, after the children are asleep, to raise money for breast cancer research. They host an annual luncheon in Washington, D.C., sell merchandise on the

Internet, and distribute pink awareness bracelets to local boutiques.

"When we were planning the first luncheon, someone told Bo [Carolyn Aldigé, Prevent Cancer's president and founder] about LIP and suggested we work together," Conley remembers fondly. "It blossomed into a great relationship."

Every year for the past four years, LIP and Prevent Cancer have co-sponsored a grant, funded in part by the luncheon proceeds, to support innovative and promising breast cancer research.

As a full-time State Farm insurance agent and mother of four, Conley would have been hard put to assess research proposals as vigorously and responsibly as organizations such as the National Institutes of Health, so she welcomed the support. "Prevent Cancer had a grant application process already," Conley says. "So, by donating the money to the Foundation, a lot of the difficult work gets taken off our hands."

Funding cancer research is vital to improving our understanding of the disease, says Conley as she rushes to get ready for her twins' high school graduation. "Because it's the future—the future of our children's health. We just want to do whatever we can possibly do to make their lives easier."

*Do you want a brighter future for the health of your children? Visit [livinginpink.com](http://livinginpink.com) or [preventcancer.org](http://preventcancer.org) to find out what you can do to help.*

*"I did all the walks, but it wasn't enough. I needed to make a difference."*

## Breast Cancer Quiz

It was perhaps last year's most surprising discovery in breast cancer. After nearly two decades of trailblazing advocacy, research, and education, the National Breast Cancer Coalition sponsored a survey of more than 1,000 women to determine their breast cancer awareness. And while 76 percent considered themselves well-informed, when it came to actual knowledge about prevention basics, their answers showed otherwise. Dr. Kenneth H. Cowan, director of the University of Nebraska Medical Center Eppley Cancer Center, helped us create this quiz so you can gauge how much you really know about breast cancer risk and prevention strategies.

**1) What percent of breast cancer cases occur in people with a family history of the disease? a) 10 or less; b) 20 to 30; c) 40 to 50; d) 50 or more**

**ANSWER: A.** Although having a genetic predisposition is the most potent known risk factor, mutations of the BRCA1 and BRCA2 "breast cancer genes" are relatively rare and account for only 5 to 10 percent of breast cancer diagnoses. In fact, known risk factors account for less than 30 percent of breast cancer diagnoses.

**2) Which of the following is a known risk factor? a) caffeine; b) a high-fat diet; c) combined hormone replacement therapy (HRT); d) all of the above**

**ANSWER: C.** Numerous studies have shown that HRT ups breast cancer risk by about 5 percent, increasing with each year of use and decreasing if HRT is stopped. Neither caffeine nor fat intake has been proven to add to risk, although obesity and being overweight have—plus, dietary fat increases the risk for other cancers and heart disease.

**3) Of the following, whose lifetime breast cancer risk is the lowest (assuming other factors are equal)?**

**a) a woman who has her first child before 20; b) a woman who has her first child between 20 and 35; c) a woman who has her first child after 40; d) a woman who never has a full-term pregnancy**

**ANSWER: A.** The younger she is when she has her first child, the lower her lifetime risk. Women who have their first child after 35 are approximately twice as likely to develop breast cancer as those who deliver before 20 (though the increase in risk is small). Women who first give birth at around age 30 have about the same lifetime risk as those who never give birth.

fat might have a direct link to certain cancers seemed far-fetched. Likewise, routine screenings were limited to mammograms and Pap smears, and a cancer diagnosis was something to be whispered about—even if one in three Americans would have to face it.

“Prevention was not in the mainstream,” recalls Carolyn Aldigé, president and founder of the Prevent Cancer Foundation. “I think the attitude of most people was that cancer was a disease you were either going to get or you weren’t. There wasn’t anything you could do to keep yourself from getting it.” But all that would soon change.

First came a mass movement of cancer advocates, among them Aldigé, who established the Foundation in 1985. Initially raising their voices against stigma and for survivorship, these advocates went on to raise public awareness

and boost federal funding for research. They then extended their mission to recast cancer prevention as a national program worthy of the respect, and the resources, afforded basic science and drug development. Although funding still lags, millions of Americans now take a proactive approach to preventing cancer. The stats speak for themselves: Cancer incidence rates decreased 1.1 percent per year from 1992 through 1998 among all persons in the U.S. In 2003 and 2004, the cancer death rate declined by about 2 percent each year.

Today, most experts agree that a third of cancer deaths can be prevented through lifestyle changes. We have a long way to go to reach that goal, but we *can* find inspiration in how far we’ve come. Here are some highlights from the past quarter century:

## 1980s–2008 Cancer Prevention Study II: The Lifestyle Link

Following the success of the first study, which offered some of the first evidence linking cigarette smoking to lung cancer, the American Cancer Society (ACS) launched CPS II in 1982, the largest study of lifestyle and cancer rates. Researchers gathered medical history, fitness, and nutrition data from 1.2 million men and women and tracked them over the years. By the mid-1990s, a strong link between lifestyle and cancer was apparent. To date, the data have yielded an unprecedented range of correlations, linking lung cancer to secondhand smoke; breast, colon, and kidney cancer to obesity; colon and prostate cancer to diets high in saturated fat; breast, colon, and prostate cancer to physical inactivity; and oral and esophageal cancer to alcohol. Other findings indicate that diets rich in

fruits and vegetables—and, independently, a daily aspirin—can reduce colon cancer deaths.

CPS II also inspired countless lab studies, including one in 1992 in which Foundation-funded researchers at Johns Hopkins isolated sulforaphane, a cancer-preventive compound found in broccoli and other cruciferous vegetables (see recipe on page 6).

## 1990s ASSIST: Smoking Law Reform

Big Tobacco was hit hard in the 1990s. States were filing lawsuits to recover Medicaid costs for tobacco-related illnesses. Activists were protesting the kid-friendly Joe Camel ads. And countless antismoking campaigns were launched. The National Cancer Institute and ACS joined forces in the largest-ever federally funded antismoking campaign—a \$165 million, eight-year tobacco-control program in 17 states.

ASSIST (American Stop Smoking Intervention Study) operated locally to counteract social factors that encouraged smoking. It bankrolled programs in schools, businesses, and health centers; funded public service announcements; and supported lobbying efforts to enact antismoking laws.

While ASSIST’s impact can’t be distinguished from that of concurrent efforts, it is credited as a catalyst for the decrease in smoking and increase in tobacco control legislation that followed: An estimated 104,000 Americans kicked the habit in ASSIST states, and hundreds of smoking bans were enacted.





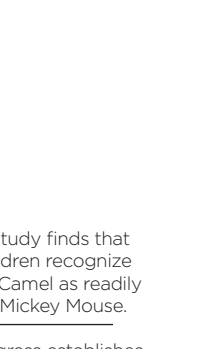

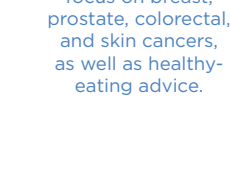

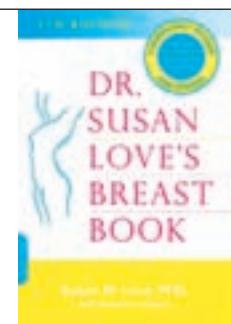

## 1992 Pink Ribbon: Advancing Awareness

A worldwide symbol of breast cancer, the ribbon helped organize a movement to increase awareness and funding for the most prevalent cancer among women.

In the early 1990s, Charlotte Haley, whose daughter, sister, and mother had battled the disease, began making peach-colored ribbons after witnessing the fast uptake of the red AIDS awareness ribbon. She sold her ribbons with an explicit message: “The National Cancer Institute’s annual budget is \$1.8 billion, and only 5 percent goes for cancer prevention. Help us wake up our legislators and America by wearing this ribbon.”

In 1992, the head of cosmetics company Estée Lauder collaborated with the editor of the women’s health magazine *Self* on the October issue to mark Breast Cancer Awareness Month. As marketing mavens, they saw mass appeal in Haley’s ribbon, but the grassroots loyalist begged off their commercial venture. The duo went ahead with the ribbon concept, agreeing to change it to pink.

## A Cancer Prevention Timeline

<p>Carolyn Aldigé founds the Prevent Cancer Foundation in memory of her father, Edward Perry Richardson, who died of cancer.</p> 	<p>Discovery of a “hole” in the ozone over Antarctica incites panic that skin cancer rates will multiply in coming decades.</p> 	 <p>Raising awareness about the cancer-causing potential of pesticides in food, Meryl Streep calls for a boycott of Alar-sprayed apples; the nation’s mothers rethink what’s for lunch.</p>	<p>Foundation-funded Dr. V. Craig Jordan is the first to discover the breast cancer properties of tamoxifen, the first chemopreventive breast cancer drug.</p>	 <p>The Foundation establishes the bi-partisan Congressional Families Action for Cancer Awareness program.</p>	<p>A study finds that children recognize Joe Camel as readily as Mickey Mouse.</p>  <p>Congress establishes October as Breast Cancer Awareness Month.</p>	 <p>The Marlboro Man, David McLean, dies of lung cancer.</p>		
<p>1985</p> <p>“Your Cancer Risk,” the Foundation’s first public awareness campaign, is launched. The ads focus on breast, prostate, colorectal, and skin cancers, as well as healthy-eating advice.</p> 	<p>1987</p> <p>Northwest Airlines is the first major American airline to go smoke-free on domestic flights.</p> 	<p>1988</p>	<p>1989</p> <p>San Luis Obispo, CA, is the first city to ban smoking in all public buildings; in 2003, New York City becomes the largest metropolis to extend its ban to all bars and restaurants.</p> <p>Dr. Susan Love’s <i>Breast Book</i> hits shelves; it soon becomes “the bible” for women with breast cancer.</p> 	<p>1990</p>	<p>1991</p> 	<p>1994</p> <p>The BRCA1 gene, implicated in breast and ovarian cancer for women and prostate cancer for men, is discovered. BRCA2 follows in 1995. To date, approximately 350 cancer-related genes have been identified.</p>	<p>1995</p>	<p>1996</p> <p>A downturn in cancer mortality rates—attributed to prevention, early detection, and research efforts—is documented for the first time since nationwide record-keeping was instituted in the 1930s.</p>

## The Birth of a National Awareness Month

In 1998, colorectal cancer was the second leading cause of cancer mortality. Carolyn Aldigé, the Foundation's president, found that frustrating. "It's one of the most preventable and treatable cancers. But too many people didn't know about screening or lacked access to services," she says. And too many people were unaware that healthy lifestyle choices could lower their risk. The public discourse needed a major boost.

How better to rally a country than by dedicating a month of observance? "Breast and prostate cancer had their own months. So did skin and ovarian cancer, but there wasn't a month for colon cancer. We decided to change that," Aldigé says. The Foundation joined forces with the American Society for Gastrointestinal Endoscopy, the National Colorectal Cancer Roundtable, and the Foundation for Digestive Health and Nutrition. Their stated goal: "Increasing awareness that colorectal cancer is largely preventable, treatable, and beatable." Aldigé worked with others at Prevent Cancer, including Lisa Hughes, senior director of policy and advocacy, to approach Congress with a draft resolution on the effectiveness of screening in reducing mortality. The Foundation then called on citizens to ask their elected officials to sponsor the bill.

National Colorectal Cancer Awareness Month was established in 1999, and the first one kicked off in March 2000. Now, nearly a decade later, colorectal cancer is still second in fatalities, but its rates have declined by about 16 percent, due to increased screening. Hughes takes pride in the Foundation's contribution and is optimistic about its ongoing efforts: "We are working to make colonoscopies available to people of all income levels. If colorectal cancer is caught early, the five-year survival rate is roughly 90 percent. That's a cause for hope." *Find out more about the Foundation's colorectal cancer initiatives at [preventcancer.org/colorectal](http://preventcancer.org/colorectal).*

That fall, Estée Lauder makeup counters gave out 1.5 million ribbons, each with a card about how to perform a breast self-exam. Cosmetics competitor Avon next embraced the cause, raising \$10 million in two years with its pink-ribbon jewelry. And soon the emblem was emblazoned on thousands of products.

By 1996, the rise of the Pink Ribbon had seen a fourfold increase in federal funding for breast cancer research and a similar jump in the percentage of women who were getting annual mammograms.

Its success also inspired the more recent trend for awareness bracelets, beginning with the Foundation's own blue Buddy Bracelet, which encourages screening for colorectal cancer, and also including Lance Armstrong's yellow LiveStrong wristband (which has generated more than \$70 million).

### 2000 Katie Couric's On-Air Colonoscopy: Screening Promo

The practice of screening to detect cancer or precancerous lesions revolutionized prevention. Mammograms for breast cancer, Pap smears for cervical cancer, and PSA tests for prostate cancer have become routine aspects of medical care, at least for those with insurance.

But colonoscopies to spot and remove polyps and lesions before they grow into colorectal cancer—the most common cancer among men—were underutilized. Men especially balked at the invasive procedure.

So it was with Jay Mo-nahan, who died of colon cancer in 1998 at age 42. He might have remained merely another cancer statistic if not for the fact that he was married to Katie Couric.

In the wake of her husband's death, Couric became a crusader for

screening. She devoted an entire week of the *Today* show to colon cancer prevention and treatment, including a broadcast of her own colonoscopy that coincided with the first National Colorectal Cancer Awareness Month (see "The Birth of a National Awareness Month" at right). This use of celebrity was unprecedented and caused colonoscopy figures to leap by 20 percent. In 2001, Medicare agreed to begin covering the procedure for people with no symptoms.

### 2006 HPV Vaccine: The First FDA-Approved Cancer Vaccine

Cancer prevention vaccines have proved elusive, primarily because cancer cells do not trigger an immune response. But because cervical cancer is caused by the infectious human papillomavirus (HPV), it could be targeted. (The hepatitis B vaccine similarly blocks

a viral infection, reducing liver cancer risk.) Using HPV particles, first isolated by the National Cancer Institute, the vaccine provides antibody protection against the two most common high-risk HPVs. Together these are responsible for 70 percent of all cervical cancers, the second leading cause of cancer deaths in women worldwide. To date, 16 million doses have been distributed.

Many treatment vaccines (as opposed to preventive) are in the works as well, including ones for breast, colon, renal, and lung cancer. Foundation-funded Dr. Craig Slinggluff, Jr., of the Human Immune Therapy Center at the University of Virginia, has developed a melanoma vaccine, which brought about significant tumor regressions in phase II clinical trials. *Go to page 8 for five experts' predictions about the future of cancer prevention.*



The Foundation is one of some 600 groups that galvanize 250,000 people in Washington, D.C., and a million more in local events, to march for cancer research funding.

Reports confirm that new cancer cases have declined since 1990, reversing a nearly 20-year trend.

In the largest civil settlement in U.S. history, tobacco companies agree to pay \$246 billion to U.S. states over 25 years.



The Foundation helps establish March as National Colorectal Cancer Awareness Month and holds the first annual Dialogue for Action conference to increase colorectal cancer screening.

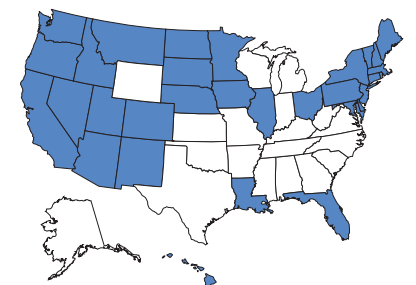


The Foundation's Super Colon tour, featuring an inflatable interactive intestine, takes to the road to educate Americans about colorectal cancer.





A bald, triumphant Melissa Etheridge makes her first post-chemo public appearance at the Grammy Awards.



Diagnosed with pancreatic cancer, Carnegie Mellon professor Randy Pausch delivers his life-affirming "Last Lecture." More than 6 million people view it on YouTube



Statewide smoke-free laws reach critical mass, with more than 30 states participating.

<p><b>1998</b></p>  <p>Lance Armstrong wins his first of seven Tour de France titles, three years after an advanced testicular cancer diagnosis.</p> <p><i>The Insider</i>, tobacco industry whistle-blower Jeffrey Wigand's story, hits the big screen.</p>	<p><b>1999</b></p>	<p><b>2000</b></p>  <p>Researchers announce that excess weight contributes to most cancers and may account for one of every six cases.</p>	<p><b>2003</b></p>	<p><b>2005</b></p>	<p><b>2006</b></p>  <p>The FDA approves an HPV vaccine to help prevent cervical cancer.</p>	<p><b>2007</b></p> <p>A reported 113 million Americans use the Internet to search for health information.</p>	<p><b>2008</b></p>  <p>The Foundation joins Stand Up to Cancer, a broad philanthropic initiative to accelerate cancer research. ABC, CBS, and NBC donate a commercial-free prime-time hour to air a fundraiser for the cause.</p>
---	--------------------	---	--------------------	--------------------	--	---	--



Maintaining a healthy body weight and staying fit should be central to any cancer prevention plan.

**Q I NEVER HAD A WEIGHT PROBLEM, SO I DON'T EXERCISE MUCH. AM I PUTTING MY HEALTH AT RISK?**

**A** Where cancer prevention is concerned, the most important fitness issue (in addition to avoiding tobacco products) is maintaining a normal, healthy body weight, says Dr. Richard C. Wender, M.D., former president of the American Cancer Society and chairman of the Department of Family and Community Medicine at Thomas Jefferson University. If you're

already there, you're off to a great start. But an added benefit will come from regular exercise. A recent study found that women who had been physically active since adolescence were 23 percent less likely to develop premenopausal breast cancer than those who didn't exercise. Other studies have linked exercise to the prevention of prostate, colon, lung, and post-menopausal breast

cancers. Exercise has also been proven to help protect against heart disease and diabetes. So even if weight loss isn't your primary motivation, there are plenty of other health benefits.

**Q AS A FORMER SMOKER, SHOULD I BE SCREENED FOR ORAL CANCER?**

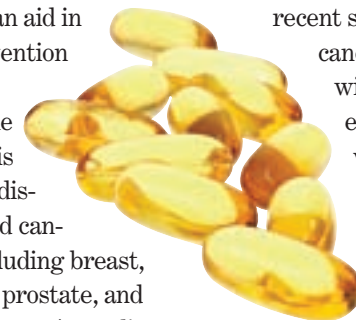
**A** Early detection is especially significant with oral cancer. The five-year survival rate is 75 to 85 percent when it's found early and localized to the primary lesion, says Dr. Petra Wilder-Smith, D.D.S., Ph.D., director of dentistry at Beck-

man Laser Institute and associate professor at the University of California, Irvine. With later detection, the survival rate drops below 20 percent. One preventive measure—even if you've never touched a cigarette—is visiting the dentist regularly. Dentists examine high-risk areas, and if you have a history of tobacco or alcohol use (or head and neck cancer, or human papillomavirus), be sure to mention it, because it can help make the exam more thorough. Between visits, if you experience unexplained swelling or numbness; difficulty chewing or swallowing; a white or red patch; or a lump, sore, or lesion that persists more than two weeks, have your dentist check it. But keep in mind that an innocuous stress ulcer, a bitten lip, or a burn from hot food can look very similar to a precancerous or cancerous lesion. At the same time, oral cancer frequently begins with a lesion you can't see, so in addition to screening you should avoid known risk factors.

**Q DOES VITAMIN D HELP PREVENT CANCER?**

**A** A number of recent studies have found a link between cancer and vitamin D deficiency, says Dr. Larry Norton, M.D., deputy physician-in-chief for breast cancer programs at Memorial Sloan-Kettering Cancer Center. The converse also appears to be true: Vitamin D can aid in the prevention and improve the prognosis of some diseases and cancers, including breast, ovarian, prostate, and colon cancer. According to Dr. Norton, the best way to maintain adequate levels of vitamin D is by taking a supplement. Sun exposure causes the skin to produce vitamin D, but

it also increases the risk of skin cancer. "I recommend that everybody, young or old, take 2000 units a day of vitamin D3 [its most readily absorbed form]," he says. Also, have your vitamin blood levels checked periodically to make sure they're in the normal range. And keep in mind that too much vitamin D can be harmful. In a recent study, breast cancer patients with the highest levels of vitamin D had an increased risk of death, as did those with the lowest levels, which suggests that there's an optimal middle ground for vitamin D.



Get more expert answers at [preventcancer.org](http://preventcancer.org).

**OUR EXPERTS**

In this article, we've tapped three of our 53 Prevent Cancer Foundation Medical Advisory Board members: **Richard C. Wender, M.D.**; **Petra Wilder-Smith, D.D.S., Ph.D.**; and **Larry Norton, M.D.** All these distinguished physician-scientists are leaders in the field of cancer prevention in the United States.

**Power Food**

**TURKEY POT PIE WITH BUTTERMILK BISCUIT CRUST**

*Who says comfort food can't be made healthy? This low-fat take on an old family favorite will keep your belly happy in more ways than one. It packs in fiber, a key player in a healthy digestive system, as well as cruciferous veggies like cauliflower, which contain compounds that may help prevent colorectal cancer.*

- 1 cup all-purpose flour
- 1 teaspoon baking powder
- 1/4 teaspoon baking soda
- Pinch of salt

- 1 tablespoon plus 2 teaspoons chilled butter, cut into small pieces
- 1/4 cup low-fat buttermilk
- 3 tablespoons low-fat sour cream
- 1 3/4 cups chicken broth, with any fat skimmed off the top
- 1/3 cup chopped onions
- 2 teaspoons minced garlic
- 2 1/2 tablespoons cornstarch
- 1/4 teaspoon poultry seasoning
- 1/2 teaspoon dried thyme
- 1/4 teaspoon dried sage
- 2 cups mixed frozen peas, carrots and cauliflower

- 2 cups diced skinless cooked turkey
- In a medium bowl, combine the flour, baking powder, baking soda and salt; cut in the chilled butter with a pastry blender until the mixture resembles fine crumbs. Add the buttermilk and sour cream; mix until smooth. Turn the dough onto a sheet of plastic wrap and flatten it into a large pancake; wrap tightly. Refrigerate while you make the filling.
- Preheat the oven to 425. In a 10" nonstick

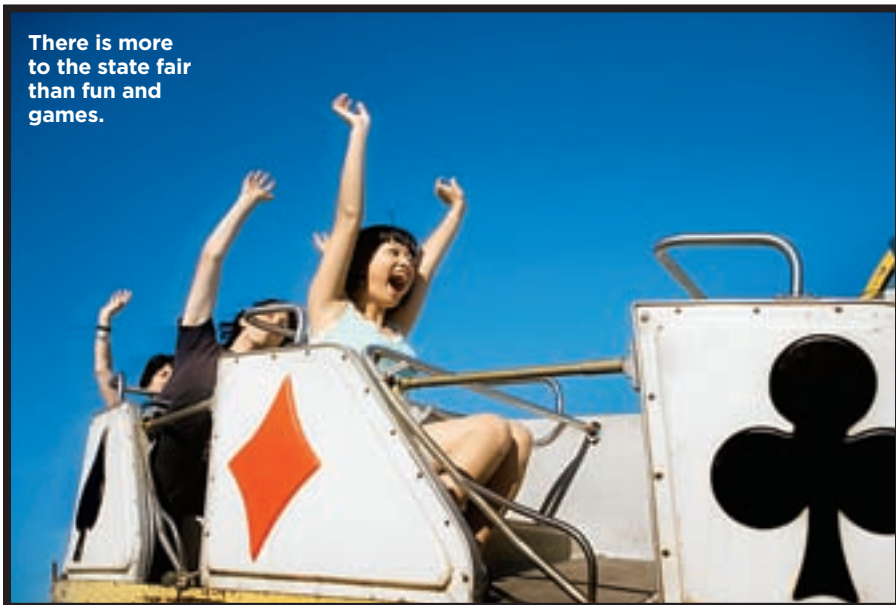
- skillet over medium-high heat, bring 1/4 cup of the broth to a boil. Add the onions and garlic; cook and stir for 2 minutes.
- In a bowl, combine the cornstarch, poultry seasoning, thyme, sage and remaining broth; stir into the sauce. Bring to a boil; cook and stir for 1 minute. Remove from the heat; add the mixed vegetables and turkey. Pour into an 8"-x-8" casserole or baking pan. Cut the biscuit dough into four sections; arrange the pieces on

- top of the pot pie filling.
- Bake the pot pie for 30 minutes, or until the biscuits are golden brown and the filling is bubbling.
- Makes 4 servings.

**Health Benefits Rating**  
(on a scale of 1 to 3)

- ★★ Fiber
- ★★ Folate
- ★★★ Vitamin A





## Summer Fun Saves Lives

*Nestled between the pie contests, Ferris wheels, and prize-winning petunias, the Prevent Cancer Foundation creates a place for cancer screenings at state fairs.*

HEALTH-CARE COSTS HAVE become a tremendous burden to all Americans, but rural populations have been hit particularly hard. Nineteen percent of rural residents lack health insurance, which can make medical costs prohibitive, according to the U.S. Department of Agriculture Economic Research Service. To address this concern, the Foundation seizes upon signature events that happen every year in the American heartland: state fairs. The State Fairs Initiative, which

brings cancer screenings to the summer fairs, began in 1993 at the Kansas State Fair in cooperation with former Senator Bob Dole, a prostate cancer survivor. Since then, the Foundation has worked with local health-care facilities and volunteers to provide free health-care screening booths for state fair attendees.

These health booths are particularly helpful to men, because the majority of participating state fairs offer prostate cancer screening. “Over and over we hear from men

that the booth is the main reason they attend the fair,” says Kathy Nucifora, who helped organize the State Fair Initiative in many states. “Over the years, I have received many letters of thanks, typically from the wives of men whose prostate cancer was detected early because they stopped at the booth to get their annual PSA test.”

This past summer, the Foundation co-hosted awareness and screening booths in eight states: Kansas, Idaho, Iowa, Nebraska, Montana, North

and South Dakota, and Ohio. Thousands of people visited these health education and screening booths. Some fair-goers traveled long distances to take advantage of the confidential screening opportunities.

*If you are interested in partnering to bring health booths to your state fair, contact the Foundation at [info@preventcancer.org](mailto:info@preventcancer.org).*

Special thanks to this past summer's state fair honorary co-chairs and local medical partners. Kansas: Senator Pat and Franki Roberts, Hutchinson Clinic; Idaho: Senator Mike Crapo, St. Luke's Medical System; Montana: Senator Max Baucus, Central Montana Laboratory; Nebraska: Senator Chuck and Lilibet Hagel, Senator Ben and Diane Nelson, Eppley Cancer Institute; North Dakota: Senator Kent Conrad, Trinity Health System; Ohio: Senator George and Janet Voinovich, Representative Deborah Pryce, The Ohio State University—Arthur G. James Cancer Hospital; South Dakota: Senator Tim and Barbara Johnson, Huron Regional Medical Center.



## Extra Meaningful Weddings

Guests at Danielle Salera and Chris Pasquale's wedding sat down to a simple message printed on a card: In honor of this special occasion, a donation has been made to the Prevent Cancer Foundation.

Salera has seen her sister and mother battle cancer. “I knew I wanted to do something meaningful at my wedding in their honor,” she says.

Salera and Pasquale are among a growing number of couples who want their wedding to be meaningful on many levels.

Some couples ask guests for donations in lieu of gifts, while others choose a registry that makes charitable contributions. And a lucky few will work with celebrity wedding planner David Tutera, who donates a portion of his fees to the Foundation.

*Make your gifts extra meaningful. Visit [preventcancer.org](http://preventcancer.org) to learn how.*

## Of Note

■ The Prevent Cancer Foundation supports the **Stand Up to Cancer** initiative, a campaign to raise dollars for accelerating cancer research. Carolyn Aldigé, the Foundation's president and founder, joined the Advocacy Advisory Council, which includes leaders from approximately 25 patient advocacy organizations. The council is working with scientists to integrate patient and survivor perspectives into the direction of the research.

■ When Congress adjourns in December, the cancer community will have lost many cancer prevention champions to retirement. Among them is Congresswoman **Deborah Pryce** (OH-15th). During her 15-year tenure, Congresswoman Pryce has fought for cancer prevention, clinical trials, and countless other issues impacting access and quality of care. Congresswoman Pryce and Randy Walker also co-founded Hope Street Kids, a children's initiative of the Prevent Cancer Foundation, in memory of their daughter, Caroline Pryce Walker, who lost a battle against neuroblastoma. We thank the Congresswoman for her tireless advocacy.

## Help Spread the Word

Did you know that research shows you can lower your risk for developing cancer? If you didn't, you're not alone. Only one out of two Americans over age 35 is aware of the ways they can reduce their cancer risk, according to a 2008 survey by C-Change, a consortium of the nation's cancer leaders

from government, business, and nonprofit sectors. To address this, the Foundation has released a series of free “Reduce Your Risk for Cancer” public service announcements focusing on cancer prevention and early detection practices. *Visit [preventcancer.org](http://preventcancer.org) to get these and other lifesaving messages.*



## Cancer's Bright Future

*Five specialists see paradigm-shifting changes on the horizon.*

DARE WE IMAGINE A day when cancer will be an inconvenient problem and not a life-threatening disease? "I really don't think cancer is something my children will have to worry about," says Dr. Gerard Evan, professor of cancer research at the University of California, San Francisco. Dr. Evan predicts a "bonanza" in treatment as the focus shifts from targeting enzymes to other proteins. He is not alone: Across the country, scientists are predicting advances that stand to transform the role of cancer in our lives.

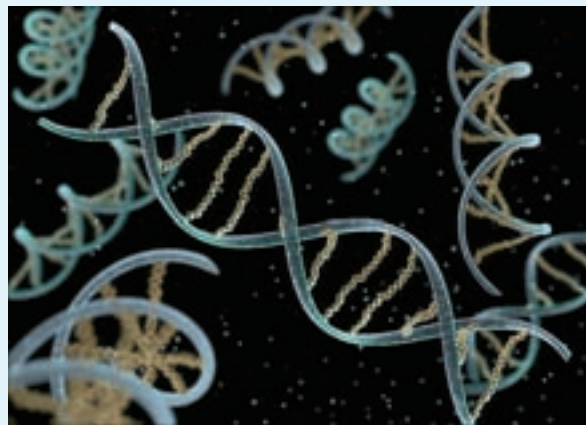
■ Preventive drugs and supplements will become commonplace as researchers pin down genetic markers for specific cancers and learn

how lifestyle factors impact them. "We're making great strides," says Dr. Ernie Hawk, vice president of Cancer Prevention and Population Sciences at the University of Texas M.D. Anderson Cancer Center, regarding the center's comprehensive tobacco program. Researchers are studying genetic variations related to nicotine addiction, cancer risk in smokers, and the effectiveness of treatment. The goal is to better identify individuals at high risk and develop drugs and supplements that will mitigate that risk—and predict which patients will benefit the most from taking them.

■ Proactive health practices will lead to significant changes in the next decade, says Dr. James L. Mulshine, M.D., associate

provost for research at Rush University Medical Center in Chicago. "The Prevent Cancer Foundation has been on the forefront of a movement to increase public awareness of cancer risk and

and exercise. "Arming the public with practical, accessible ways to be proactive about prevention," Dr. Mulshine says, "is the single most profound thing we can do for national health."



outline specific, simple measures to reduce risk." The touring Super Colon, for instance, demystifies colorectal cancer by allowing visitors a close-up view of colorectal tissue and educating them about the importance of early detection and reducing risk with diet

■ Noninvasive, targeted treatments that don't harm healthy cells are showing great potential, says Dr. David Geller, co-director of the University of Pittsburgh Medical Center. "We're doing research with nanoparticles; the goal is to turn them into smart homing

pigeons that bind to specific cancer cells, minimizing collateral damage to normal tissue." Geller is working with a device that uses radio frequencies to heat nanoparticles, which are then injected into abnormal cells. The high temperature destroys malignant cells while leaving healthy ones intact.

■ Genetically based therapies will personalize patient care, says Dr. Daniel Arie Haber, professor of medicine at Harvard Medical School. As we learn more about the genetic markers of some cancers, doctors can analyze a tumor's makeup and tailor treatment to its characteristics. By matching therapies to the conditions, the patient will experience fewer side effects.

■ Timely diagnosis and treatment standards will lead to a more comprehensive use of the term

"cancer prevention," expanding it to prevention of death, according to Harold P. Freeman, M.D., president and founder of the Ralph Lauren Center for Cancer Care and Prevention in New York. Accomplishing this starts with national and local education efforts that piggyback with greater financial accessibility. Underserved communities and those with high death rates should be offered resources, including, he adds, patient navigation programs to eliminate financial, communication and medical system barriers to timely screening, diagnosis and treatment. In addition, Freeman says that a health-care system that provides screening and care must be promoted, regardless of the recipient's ability to pay.

### To subscribe, contact:

Prevent Cancer Foundation  
1600 Duke St., Suite 500  
Alexandria, VA 22314  
(800) 227-2732, (703) 836-4412, fax (703) 836-4413  
www.PreventCancer.org  
Info@PreventCancer.org

### Editor:

Juhi Kunde

### Produced by Rodale

All rights reserved. No portion of *cancer PreventionWorks* may be replicated without prior permission.

Reference herein to any specific commercial products, methodologies, health information materials, Web sites, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the Prevent Cancer Foundation.

*cancer PreventionWorks* is published by the Prevent Cancer Foundation (formerly the Cancer Research and Prevention Foundation), a 501(c)3 nonprofit organization dedicated to the prevention and early detection of cancer.

All contributions are tax deductible to the fullest extent allowed by law.

The Prevent Cancer Foundation is a member of the Combined Federal Campaign (#11074) and the United Way (#0481).

