



Strang Cancer Prevention Institute

Dedicated to Promoting Cure by Early Detection and Research to Prevent Cancer since 1933

Prevention

National Cancer Prevention Month February 2024

CANCER PREVENTION AWARENESS MONTH

Note to readers: Innovation is essential to cancer prevention. Using genomic data and new analytic techniques to create precision medicine may also enable **precision prevention**. Strang will continue to highlight innovation in cancer prevention. **Preventing Cancers:** Other newsletters focus on specific cancers, but in National Cancer Prevention Month, we discuss efforts to reduce multiple cancers.

INNOVATION IN CANCER PREVENTION Gene-specific personalized cancer prevention strategies: **Risk-reducing surgery**, medical prevention, and more intensive surveillance may **prevent cancers and deaths** for patients with **high-risk cancer susceptibility genes (CSGs)**, but their benefits and cost-effectiveness **differ by** the specific cancer risks of each CSG. A **cost-effectiveness model of pathogenic variants (PVs)** that increase risk of **ovarian cancer (OC) and breast cancer (BC)** found that **risk-reducing mastectomy (RRM) and risk reducing salpingo-oophorectomy (RRSO)** at the optimal age were the **most effective** actions to prolong life. **For every 1000 women with a BRCA1 PV, RRM at age 30 and RRSO at age 35 would prevent 923 BC and OC cases and 302 deaths.** The surgeries would provide large benefits for women with other PVs: 686 and 464 cancers and 170 and 130 deaths for BRCA2 and PALB2, respectively. For women with PVs that increase only OC risk, RRSO in 1000 women would prevent 102 OC cases and 64 deaths for *RAD51C*, 118 OC cases and 76 deaths for *RAD51D*, and 55 OC cases and 37 deaths for *BRIP1*. The surgery would be **highly cost-effective**, ranging from saving \$2680 per quality-adjusted life-years (QALYs) to costing \$3286/QALY.¹ These results indicate that **risk-reducing surgery recommendations should be personalized based on genetic risk factors.**

Should the Cancer Moonshot focus on prevention? The Cancer Moonshot's goal is **reducing cancer deaths by 50%** in the next 25 years. It focuses on **precision medicine** in screening and treatment. **Following cancer prevention guidelines** in healthy patients and cancer survivors **could accomplish that.**² **Avoiding tobacco, limiting alcohol, a healthy weight and regular exercise** could reduce cancer deaths 59% in women and 2/3 in men.³ In trials, **regular physical exercise reduced cancer deaths** by a third in patients with breast, colorectal and prostate cancer.⁴ Cancer prevention by improving lifestyle is a cheap, effective strategy.²

Lack of paid sick leave reduces cancer screening: Mammography and colorectal **cancer screening** were from **1.2% to 2.1% higher** in metropolitan areas with paid-sick-leave mandates.⁵

Smoking cessation programs widespread but incomplete: The American College of Surgeons Committee on Cancer national accreditation program for breast cancer found **most programs ask about smoking, document smoking history and advise quitting.** However, **fewer than half actively assist quitting by documenting smoking cessation plans, providing individual counseling or referring** to tobacco treatment programs. Only 18% of programs prescribe medications to assist quitting. Other priorities displace smoking cessation needs.⁶

Screening after COVID Only colorectal cancer screening, with a home testing option, fully rebounded in 2023: **Colorectal cancer screening** reached pre-pandemic levels in 2023 but screening for breast, cervical and prostate cancer did not. **Blood stool testing offset** the decline in **colonoscopy screening**, demonstrating the importance of **home-based screening in disrupted health systems.**⁷ Home testing for colorectal or cervical cancer could mitigate system disruptions from weather or conflict.

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The Strang Cancer Prevention Cookbook

Reduce your Risk for Cancer by Eating a Healthy Diet!

Sautéed Spinach with Garlic

This cooking method can be applied to other leafy greens such as Swiss chard, escarole, broccoli rabe, and beet or turnip greens

- 1 1/4 pounds fresh spinach
- 1 tablespoon extra -virgin olive oil
- 4 garlic cloves, peeled, lightly crushed, and quartered lengthwise
- Pinch of hot red pepper flakes (optional)
- Salt and freshly ground black pepper



Remove the stems from the spinach and tear any large leaves into bite –size pieces.

Rinse thoroughly and drain.

Heat the olive oil in a large skillet. Add the garlic and red pepper flakes if using, and cook over medium heat until the garlic is light gold; don't let the garlic get too brown or it will be bitter.

Remove the garlic and set aside.

Reserve the oil in the skillet and increase the heat to medium high.

Add the spinach and season with salt and pepper to taste. Sauté, turning the spinach with tongs to cook evenly. When the spinach is just wilted and tender, 2 to 3 minutes, remove the skillet from the heat. Using a slotted spoon or tongs, lift the spinach from the skillet leaving behind excess liquid. Transfer to individual plates or a platter. Top with garlic and serve

Spinach is exceptionally high in beta –carotene (110 percent of the DV for Vitamin A per serving of this recipe) as well as other carotenoids, folate (more than 80% of the DV), vitamin C (more than 80% of the DV) and minerals such as calcium, iron, magnesium, and potassium. It is also high in protein when compared to other vegetables. A good source of fiber.

Calories 82, protein 5 g, carbs 7 g, fat 4g, cholesterol 0 mg, dietary fiber 4 g, saturated fat 1 g

MAJOR SOURCES OF POTENTIAL CANCER FIGHTERS.

Phytochemicals: allium compounds, terpenes (carotenoids).

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February is National Cancer Prevention Month

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