



# Prevention

Prostate Cancer Awareness Month September 2023

## REDUCING MORTALITY FROM PROSTATE CANCER

**Note to Readers: Innovation** is essential to cancer prevention. Genomic data support **precision prevention** as well as precision medicine. Strang is increasingly focused on innovation in cancer prevention. We will continue to highlight novel approaches as we have the consequences of Covid.

### PROSTATE CANCER SCREENING

**Innovation in Screening: Benefit from PSA screening is uncertain.** Randomized trials found **few lives saved**, benefits occur only **after 10 years** and **10-fold overdiagnosis** of clinically unimportant cancers is found in all trials. PSA screening prevents no more than 1 prostate cancer death for every 1000 men getting screened.<sup>1</sup> **Greater benefit** from screening **requires innovation**

**Identifying higher-risk populations to screen:** We now **identify high-risk populations** by **age (55-70)**, a **close family member** or **African American race**. A Swedish study concluded that a **prostate cancer family history** could justify **starting screening 9 years earlier**.<sup>2</sup>

**Quantifying genetic high risk:** A **British study** created and validated a model from **UK Genetic Prostate Cancer Study** data from 1993-2017. The model used **BRCA2, HOXB13, and BRCA1** mutations, and a polygenic score from **268 common low-risk variants**. Patients with above-median scores had **86% of prostate cancer cases within 10 years**, or about **7 of 8 cancers**. **Genetically high-risk populations** may be better for screening.<sup>3</sup>

**Reducing screening disparities: People experiencing homelessness (PEH) have less PSA screening**, despite **more African American men**. In an urban Cleveland hospital system, male PEH age 50-69 had lower PSA screening rates (13% vs 36%) despite 3-fold higher likelihood of being black (50% vs 17%). Likelihood of **PSA screening increased** if the patient had a **PCP (OR, 2.54)**, **Medicare (1.61)**, **private insurance (2.24)** or were **employed (2.22)**.<sup>4</sup>

**Screening today: PCPs who order more services order more low-value PSA screening tests.** PSA screening in men over 70 is considered low-value testing because it greatly increases overdiagnosis and overtreatment for indolent cancers. Analysis of the National Ambulatory Medical Care Survey (NAMCS) dataset found PCPs who order more tests and services are 49% more likely to order low-value PSA screening tests.<sup>5</sup>

**Strang Cancer Screening Trial and shared decision making:** Strang performed a **randomized trial of cancer screening educational supports for PCPs** has identified new benefits of shared decision making. Our final analysis, delayed by slow release of Mount Sinai-controlled data, has resumed. Preliminary analysis indicates that shared decision making improves communication and understanding about screening.

### PROSTATE CANCER PREVENTION

**Fertilizer-related nitrates in drinking water from intensive agriculture may increase risk of prostate cancer, but fiber, fruit/vegetables and vitamin C may be protective:** A Spanish case-control study found that high lifetime exposure to waterborne nitrate increased the risk of prostate cancer (OR 1.7), especially aggressive (Gleason score  $\geq 8$ ) prostate cancers (OR 2.8). Higher consumption of fiber, fruit/vegetables and vitamin C were protective.<sup>6</sup>

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# The Strang Cancer Prevention Cookbook

## Reduce your Risk for Cancer by Eating a Healthy Diet!

### Tomato-Basil Sauce 4 Servings

2 pounds plum tomatoes (10-12)  
1 tablespoon olive oil  
2 garlic cloves, crushed  
1 small onion (about 1/4 pound), chopped  
½ cup fresh basil leaves cut into long strips  
Salt and freshly ground black pepper



Core the tomatoes and drop them into boiling water for 20 to 30 seconds. Slip off the skins and slice the tomatoes in half horizontally. Gently squeeze the halves over a bowl to squeeze out the seeds. Use your fingers to remove any remaining seeds. Discard the seeds, chop the tomatoes and reserve.

Heat the olive oil in a medium nonstick skillet over high heat. Add the crushed garlic and cook until lightly browned, then remove and discard. Add the onion to the skillet and cook over medium heat until soft, about 5 minutes, stirring often. Add the reserved tomatoes and bring to a simmer. Cook uncovered over medium heat, stirring occasionally for 30 minutes, until the sauce thickens. Stir in basil, season with salt and pepper, and simmer for 2 to 3 minutes.

Calories 93, protein 3g, carbs 14 g, fat 4 g, cholesterol 0 mg, dietary fiber 3 g, saturated fat 1 g

### MAJOR SOURCES OF POTENTIAL CANCER FIGHTERS

**Phytochemicals:** allium compounds, plant polyphenols (flavonoids, phenolic acids) plant sterols, phytic acids, terpenes, (carotenoids, monoterpenes)

Recipe by Laura Pensiero, R.D., **Strang** Nutrition Consultant  
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