



PROSTATE CANCER SIGNS, SYMPTOMS AND SUPPORT

Prostate Cancer

Prostate cancer affects the prostate gland, a small gland located below the bladder in biological males. It is made of glandular and muscular tissue and produces and secretes fluids that add to semen helping to push semen through the urethra.

Prostate cancer occurs when cells in the prostate gland start to grow and multiply uncontrollably, leading to tumors. If left untreated, the cancer can metastasize, or spread to other parts of the body.

Prostate cancer is one of the most common cancers among men. According to the American Cancer Society:

- About 1 in 8 men will be diagnosed with prostate cancer during their lifetime.
- After skin cancer, prostate cancer is the second most common cancer in American men.
- It is estimated that about 288,300 new cases of prostate cancer will be diagnosed and 34,700 men will die from prostate cancer in 2023.

Prostate Cancer Risk

Risk factors for prostate cancer include age (the risk increases with age), family history of prostate cancer, race (African-American men have a higher risk), and certain genetic factors. Prostate cancer has a higher likelihood of occurrence in elderly males and non-Hispanic Black males.

Approximately 6 out of 10 cases are detected in men aged 65 or above and is uncommon among males younger than 40 years old. On average, men are diagnosed with prostate cancer at around 66 years of age.

Prostate Cancer Signs & Symptoms

The majority of prostate cancers are detected early through screening, and by the time of diagnosis, typically do not produce noticeable symptoms. However, more advanced prostate cancers can sometimes lead to the following symptoms:

- Difficulty with urination, such as a slow or weak urinary stream or increased frequency, particularly at night.
- Presence of blood in urine or semen.
- Trouble achieving an erection (erectile dysfunction or ED)
- Pain in the hips, back (spine), chest (ribs), or other areas.
- Weakness or numbness in the legs or feet, or potential loss of bladder or bowel control.

These symptoms can be caused by conditions other than prostate cancer. For example, difficulties with urination are more commonly associated with benign prostatic hyperplasia (BPH), a non-cancerous enlargement of the prostate. Nevertheless, if you experience any of the above symptoms, inform your healthcare provider, so that the underlying cause can be identified and addressed.



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Prostate Cancer Screening

It remains uncertain whether the advantages of prostate cancer screening outweigh the potential risks for the majority of men. Some men might make an informed decision to undergo screening after weighing the pros and cons with their doctors.

Screening tests cannot definitively confirm the presence of cancer. If any of the following tests indicate abnormal results, a prostate biopsy is usually necessary to establish whether cancer is present.

Here are four additional ways to test for prostate cancer:

- **Prostate-specific antigen (PSA) test:** PSA is a protein produced by cells in the prostate gland. As PSA levels increase, the likelihood of having prostate cancer rises. However, there is no definitive cutoff point that can conclusively determine the presence or absence of prostate cancer. Typically, most men without prostate cancer will have a PSA below 4 ng/mL. However, a PSA level below 4 does not guarantee the absence of cancer. About 15% of men with a PSA below 4 will still have prostate cancer if a biopsy is performed. When PSA levels are elevated, further tests may be necessary.
- **Digital Rectal Exam:** During a digital rectal exam (DRE), the doctor inserts a lubricated, gloved finger into the rectum to palpate the prostate for any abnormal lumps or firm regions that could indicate cancer. Prostate cancers frequently originate in the posterior part of the gland and may be detectable through a rectal examination. Though the exam can be uncomfortable, especially for men with hemorrhoids, it is generally not painful and is a brief procedure. While the DRE is not as effective as the PSA blood test, it can sometimes identify cancers in men with normal PSA levels. For this reason, it may be part of a prostate cancer screening.
- **Additional testing:** In addition to the PSA test, other specialized PSA tests like the Prostate Health Index (PHI), 4K score test, or percent-free PSA, may be conducted by your doctor. Newer laboratory tests, like the ExoDx Prostate (IntelliScore), might also be completed as part of the diagnostic process.
- **Prostate Biopsy:** For certain men, undergoing a prostate biopsy may be the most suitable course of action, particularly if the initial PSA level is elevated. A biopsy involves the extraction of small tissue samples from the prostate, which are then examined under a microscope. This procedure determines whether prostate cancer is present or not. Moreover, if prostate cancer is detected, the biopsy can also provide valuable insights into the likelihood of the cancer's aggressiveness and potential for rapid growth.



PROSTATE CANCER RESOURCE

Prostate Cancer Prevention

There is no guaranteed way to completely prevent prostate cancer, as several risk factors such as age, race, and family history are beyond our control. However, ongoing investigations explore how modifiable lifestyle factors (such as diet) can positively impact overall prostate health.

Nutrition

Observational studies show that individuals with higher rates of insulin resistance are more likely to have prostate cancer. Additionally, elevated glucose levels and poor glucose control are also linked to an increased risk of prostate cancer and a higher mortality rate. Tumor cells depend on glucose as a vital energy source for growth, therefore, researchers believe that high blood sugar levels may promote cancer. To reduce the risk of prostate cancer and improve overall health, it is recommended to maintain a healthy weight, engage in regular physical activity, and follow an anti-inflammatory diet. This diet should include high-quality lean protein, colorful fruits and vegetables, and healthy fats such as extra-virgin olive oil, flaxseeds, and cold-water fish like wild-caught salmon while reducing the consumption of highly processed foods (fast food, packaged food, and sweetened beverages like soda).

Fasting

Currently, there is limited research exploring the link between therapeutic fasting interventions and prostate cancer outcomes. However, initial studies have indicated potential benefits for prostate health. For instance, a case-control study conducted in 2021, which involved 607 prostate cancer cases and 848 individuals from the general population, revealed noteworthy yet statistically insignificant trends. Those who fasted for more than 11 hours overnight had reduced odds of developing prostate cancer, and a longer overnight fast combined with an early breakfast was also associated with lower odds of prostate cancer, compared to a shorter overnight fast and later breakfast.

Stress Management & Sleep

Chronic stress can have adverse effects on various bodily systems, including the endocrine and immune systems, potentially influencing prostate health. While further research is required to fully understand the direct impact of mind-body therapies for stress management on prostate cancer risk, current studies indicate the potential benefits of practices like yoga, mindfulness, and meditation in promoting cortisol balance and overall wellbeing in prostate cancer patients. Observational studies have also shown a correlation between elevated cortisol levels from stressful life events and higher prostate-specific antigen (PSA) levels, providing additional insights into the potential relationship between psychological stress and prostate health. Adequate sleep is another essential factor to consider for a healthy prostate. Research suggests that poor sleep, including sleep disorders or disturbances, may increase the risk of prostate cancer.



PROSTATE CANCER RESOURCE

Resources

1. Abrams DI. An integrative approach to prostate cancer. *J Altern Complement Med*. 2018;24(9-10):872-880. doi:[10.1089/acm.2018.0169](https://doi.org/10.1089/acm.2018.0169)
2. Arthur R, Møller H, Garmo H, et al. Association between baseline serum glucose, triglycerides and total cholesterol, and prostate cancer risk categories. *Cancer Med*. 2016;5(6):1307-1318. doi:[10.1002/cam4.665](https://doi.org/10.1002/cam4.665)
3. Lv X, Li Y, Li R, et al. Relationships of sleep traits with prostate cancer risk: a prospective study of 213,999 UK Biobank participants. *Prostate*. 2022;82(9):984-992. doi:[10.1002/pros.24345](https://doi.org/10.1002/pros.24345)
4. Murtola TJ, Vihervuori VJ, Lahtela J, et al. Fasting blood glucose, glycaemic control and prostate cancer risk in the Finnish Randomized Study of Screening for Prostate Cancer. *Br J Cancer*. 2018;118(9):1248-1254. doi:[10.1038/s41416-018-0055-4](https://doi.org/10.1038/s41416-018-0055-4)
5. Palomar-Cros A, Espinosa A, Straif K, et al. The association of nighttime fasting duration and prostate cancer risk: results from the Multicase-Control (MCC) Study in Spain. *Nutrients*. 2021;13(8):2662. doi:[10.3390/nu13082662](https://doi.org/10.3390/nu13082662)
6. Prostate Cancer | Prostate Cancer Information and Overview. [www.cancer.org](https://www.cancer.org/cancer/types/prostate-cancer.html).
<https://www.cancer.org/cancer/types/prostate-cancer.html>.
7. Saboori S, Rad EY, Birjandi M, Mohiti S, Falahi E. Serum insulin level, HOMA-IR and prostate cancer risk: a systematic review and meta-analysis. *Diabetes Metab Syndr*. 2019;13(1):110-115. doi:[10.1016/j.dsx.2018.08.031](https://doi.org/10.1016/j.dsx.2018.08.031)