

## Laboratory screening for men: what to consider

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### **Article:**

In a recent publication for the general public, "Men: Stay Healthy at Any Age: Your Checklist for Health," the Agency for Healthcare Research and Quality and the U.S. Department of Health and Human Services addresses the issue of patient responsibility for addressing preventive health measures and proactive choices for staying healthy and preventing diseases.<sup>1</sup> In general, the recommendations noted the need for screening tests, taking preventive measures, and practicing healthy behaviors.

These screening tests are recommended by the U.S. Preventive Services Task Force (USPSTF) and include cholesterol checks, blood pressure, colorectal cancer tests, diabetes tests, depression, sexually transmitted disease (STD), and abdominal aortic aneurysm.<sup>2</sup>

Consider a brief overview of the recommended screening laboratory tests, as well as the significance of the tested biomarker, the conditions associated with biomarker abnormalities, and indications for timing of testing with a focus on laboratory screening, and in particular, screening for those diseases for which men are at increasingly high risk.<sup>2</sup>

Screening laboratory work should be done for type 2 diabetes, lipid disorders, colorectal cancer, sexually transmitted diseases, and prostate cancer. Screening is not recommended for certain diseases because the positive predictive value of the test is low and should only be used when a specific disease is suspected. For example, checking levels of thyroid-stimulating hormone is useful when confirming suspected thyroid disease, but has low predictive value in screening men in general.

Screening should be offered within the context of preventive health services, which should include counseling and preventive healthcare. Finally, the most important lifestyle choices men can make to prevent disease and stay healthy is to "be tobacco free, be physically active, and eat a healthy diet."<sup>1</sup> Men are also urged to stay at a healthy weight and drink alcohol only in moderation.

### **Laboratory work**

The following is a list of pertinent labs for common conditions:

**Type 2 diabetes:** There are about 20.8 million people in the United States, 7% of the population, who have diabetes; of these approximately 6.2 million have not yet been diagnosed.<sup>4</sup> While there's little evidence to support community screening for diabetes, in general, there's substantial support for screening individuals who are at risk for developing the disease. The particular risk factors which are applicable to men include age older than 45, overweight (body mass index greater 25 to 29.9 kg/m<sup>2</sup>), family history of diabetes, habitual physical inactivity, race or ethnicity (African-Americans, Hispanic, American Indian, Asian-Americans, and Pacific Islanders), previous glucose intolerance, and hypertension.<sup>5</sup> Screening should be considered for these individuals at 3-year intervals, beginning at age 45. This is especially true for individuals who are overweight.

The best screening test for diabetes, also one element of diagnostic testing, is the fasting plasma glucose (FPG) test. While other tests are acceptable, the FPG is preferred because it's easier and faster to perform, convenient, less expensive than other tests, and more acceptable to patients. An FPG greater than or equal to 126 mg/dL is an indication to repeat testing, and the repeat should be done on a different day to confirm the diagnosis. Screening for diabetes should be done in the context of preventive health services, as mentioned previously.

**Lipid disorders:** The USPSTF recommends the routine screening of men age 35 and older for lipid disorders. In men 20 to 35 years of age, screening is recommended if other risks for coronary heart disease are present. Those risks include a diagnosis of diabetes and a family history of cardiovascular disease before the age of 50 in male relatives and before the age of 60 in female relatives. Total cholesterol (TC) and high-density lipoprotein (HDL) should be measured. While elevated cholesterol levels are associated with increased risk for coronary heart disease, an increase in the HDL appears protective. Low-density lipoproteins (LDL) are particularly associated with increased coronary risks. An elevated TC in which the HDL is high is a totally different reading than one in which the LDL is high. Because there can be variations in the results from different laboratories, as well as variations in individual patients, lipid levels should be estimated as the means of two determinations.

**Colorectal cancer:** The average age risk for colon cancer in men is 50. Based on this risk, the American Cancer Society recommends that screening for colon cancer begin at age 50.<sup>6</sup> The methods for screening include fecal occult blood testing (FOBT) (which may be done at home) or fecal immunochemical test (FIT) every year, flexible sigmoidoscopy every 5 years, FOBT or FIT every year in addition to flexible sigmoidoscopy every 5 years (preferred over either option alone), double-contrast barium enema every 5 years, and colonoscopy every 10 years. Also recommended is a follow-up colonoscopy with any positive results from the other tests. The screening methods should be a matter of choice between the provider and the patient, as each has advantages and disadvantages that vary from patient to patient and setting to setting. It's reasonable to initiate screening at earlier ages in those men who have higher risks, including close relatives with a colorectal cancer diagnosis before age 60 and those with personal high risks, such as family history of polyposis, hereditary nonpolyposis colorectal cancer, and those with a history of ulcerative colitis.

**Prostate cancer:** Methods for screening for prostate cancer include the prostate specific antigen (PSA) and the digital rectal examination (DRE). Together, the two methods have been found to detect prostate cancer in earlier stages and increase the treatment options and survival rates. Both the PSA and the DRE must be performed together and not independently of each other to increase the ability to detect disease. The PSA, which measures an antigen, is found in both normal prostatic epithelial cells and prostatic carcinoma cells. A normal level (0 to 4 ng/mL) is the level associated with normal prostate; higher levels are associated with possible carcinoma. However, elevated levels aren't definitive for prostatic cancer, as the PSA may be elevated with benign prostatic hyperplasia. For this reason, the PSA should always be done in conjunction with a regular genital and rectal examination. Screening is recommended for men age 50 to 70. Men with increased risk, including African-American men and men with a first degree family member with prostate cancer, should begin screening at age 45. The USPSTF has concluded that the evidence is insufficient to recommend for or against routine screening for prostate cancer using PSA testing or DRE.

**Sexually transmitted disease:** Routine screening of men for STDs is not recommended unless they're a member of a high risk population. Unfortunately, whether or not someone is a member of a high risk population isn't always immediately clear. It requires a careful history to make that determination. The two STDs of most concern are syphilis and HIV. For syphilis, the high risk populations include men who have sex with men and engage in high-risk sexual behavior, commercial sex workers, persons who exchange sex for drugs, and men in correctional facilities. High risk populations for HIV included men who have had sex with men after 1975, men with multiple sex partners who have unprotected sex, men currently injecting or with a history of injecting drugs, men who exchange sex for drugs or money or have sexual partners who do, men with sexual partners in the past or present who are HIV-infected, bisexual, or were or are intravenous drug users; or history of blood transfusion between 1978 and 1985. High-risk individuals also include those who request an HIV test, because these may be reluctant to indicate their membership in one of the high-risk populations.

The repeatedly reactive enzyme immunoassay followed by the Western blot (immunofluorescent assay) is the standard for HIV testing. This method has been found to be both sensitive and specific (99%). The rapid HIV antibody test, which can be performed in 10 to 30 minutes, is also highly accurate. This rapid HIV antibody test is specifically recommended for screening in those individuals who don't receive regular healthcare. Early identification of HIV has implications for preventing the spread to sex partners, through blood transfusions, injecting drug use, and in the case of pregnant women, to their newborns. With the effectiveness of antiviral drug treatment, early diagnosis and treatment is also related to longer life and better quality of life in the HIV infected and those with AIDS.

### Preventive care

It's important to reemphasize that any screening test or other diagnostic test should only be conducted in the context of a healthcare service. The implications, follow-up, and further testing indicated by an abnormal test value can only be done within the context of a good history and physical examination.

### References

1. U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality. Men: Stay healthy at any age: Your checklist for health. Available at: <http://www.ahrq.gov/ppip/healthymen.htm>. Accessed September 14, 2007
2. The clinical guide to preventive services. U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality. AHRQ Pub. No. APPIP 06-0588; June 2006.
3. Prochazka AV, Lundahl K, Pearson W, Oboler S, Anderson RJ. Support of evidence-based guidelines for the annual physical examination. *Arch Int Med*. 2005;165(12):1352-1352.
4. National diabetes information clearinghouse. National Institutes of Diabetes and Digestive and Kidney Diseases, National Institutes of Health. NIH Publication No. 06-3873; September 2006.
5. American Diabetes Association. Screening for type 2 diabetes. *Diabetes Care*. 2004;27:S11-S14.
6. American Cancer Society. Guidelines for early detection of cancer, revised 3/28/2007 Available at: [http://www.cancer.org/docroot/ped/content/ped\\_2\\_3x\\_acs\\_cancer\\_detection\\_guidelines\\_36.asp](http://www.cancer.org/docroot/ped/content/ped_2_3x_acs_cancer_detection_guidelines_36.asp). Accessed September 14, 2007