Urologic Disease Significantly Impacted By Dietary, Social Habits

CHICAGO, May 4, 2019 -- Dietary and social habits can have significant impacts on urinary health, as evidenced by new studies being presented at the 2019 AUA Annual Meeting in Chicago. Four studies highlight the positive effects of heart-healthy diets on erectile function, the impact of marijuana smoking on urinary health and the impact of restrictive diets on testosterone production. These studies will be presented during a special session for media on May 4, 2019 at 9:00 a.m. Mayo Clinic urologist Dr. Tobias Kohler, chair of the AUA Public Media Committee, will moderate this session.

Abstracts presented include:

**Publication # MP46-03**
The Association Between Popular Diets and Serum Testosterone Among Men in the United States

Low-fat diets have been shown to have a number of health benefits, but may have a negative impact on serum testosterone levels in men. This study, using data from the National Health and Nutrition Examination Survey (NHANES), examined the relationship between diets and serum testosterone levels. Among the 7,316 men identified for the study, 15.9 percent (1,160) were on a low-fat diet, 26.3 percent (1,924) were on a Mediterranean diet and 67.2 percent (4,920) were on a non-restrictive diet.

Key findings include:

- Compared to men with non-restrictive diets, average testosterone was lower among men with low-fat and Mediterranean diets.
- Men adhering to a low-fat diet were more likely to have a testosterone level under 300 ng/dl compared to those on non-restrictive diets.

**Publication # MP75-09**
Marijuana Consumption Has A Direct Deleterious Effect On Spermatozoa By Increasing Intracellular Reactive Oxygen Species Levels 20 Times More Than Tobacco Smoking: Reasons For Concern On Widespread Use

Marijuana and tobacco smoke have been shown to increase oxidative stress in cells, including reactive oxygen species (ROS), unstable molecules that build up at the cellular level. A build-up of ROS within cells can lead to DNA or RNA damage, or even cellular death. In this study of 622 men, researchers explored the potential association between marijuana and tobacco use in testicular and sperm function, as well as male infertility and hypogonadism. Subjects were divided into four groups: marijuana users (74), tobacco users (144), infertile (125) and fertile (279).

Key findings include:

- Seminal ROS levels were higher in the marijuana group compared to tobacco and fertile groups.
- Marijuana users had worse overall semen parameters (including sperm concentration, sperm count, motility and morphology) than tobacco users.

**Publication # PD19-08**
Marijuana, Alcohol, ED and Depression: Epidemiologic Correlations with BPH/LUTS

Prostatic enlargement (benign prostatic hyperplasia, or BPH) may cause men to experience bothersome lower urinary tract symptoms (LUTS), such as nocturia, weak urine streams and urgency. In this review of 20,548...
patients on medical treatment for BPH/LUTS, researchers identified several risk factors for LUTS: depression, hypertension, metabolic syndrome, erectile dysfunction, and also marijuana use. This is the first time marijuana use has been implicated as a risk factor for urination problems.

Key findings include:

- Marijuana use and erectile dysfunction were associated with an increased risk of being on a LUTS medication.
- On multivariate analysis, marijuana remained associated with this increased risk.
- Alcohol use was not associated with an increased risk of BPH/LUTS.

Publication # PD28-07
Heart Healthy Diet and Erectile Dysfunction in the Health Professionals Follow-Up Study

Heart-healthy lifestyle changes – such as smoking cessation and weight loss – are attractive, non-pharmacologic options in the treatment of erectile dysfunction (ED), but is unknown whether heart-healthy diets have an association with ED. Researchers conducted a prospective analysis of 26,246 men ages 40 to 75 in the Health Professionals Follow-Up Study, which included assessments on erectile function and dietary questionnaires (used to calculate Mediterranean Diet and Alternative Health Eating Index scores) to review whether dietary choices were related to risk of incident ED. Key findings include:

Mediterranean Diet and Alternative Health Eating Index (AHEI) scores were associated with decreased risk of incident ED.

- The inverse association between Mediterranean Diet and AHEI scores was strongest in men under age 60.
- Higher intakes of legumes, fruit, vegetables, fish and long-chain fats were associated with a decreased risk of ED, and red and processed meats and trans fats were positively associated with ED risk.

"This is the first time we've seen a definitive connection between marijuana use and certain urologic conditions such as infertility and BPH/LUTS, and in the context of legalization of cannabis, more research is warranted," Dr. Kohler said. "Most importantly, these studies further underscore the need for healthy lifestyles and an understanding of how what we put in our bodies affects how they function."

**About the American Urological Association:** Founded in 1902 and headquartered near Baltimore, Maryland, the American Urological Association is a leading advocate for the specialty of urology, and has more than 22,000 members throughout the world. The AUA is a premier urologic association, providing invaluable support to the urologic community as it pursues its mission of fostering the highest standards of urologic care through education, research and the formulation of health policy.

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