Men's Health Edition

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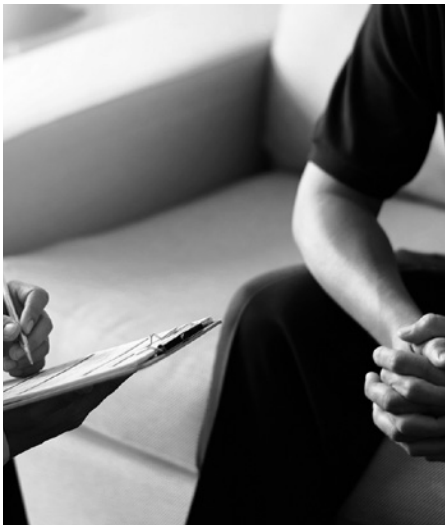
Central hemodynamics and arterial health research insights

168 papers and abstracts
published between 2001-2024*

Here are some of the highlights.



Erectile Dysfunction and its Link to Arterial Stiffness | May 2018

Sexual Function Is an Indicator of Central Arterial Stiffness and Arterial Stiffness Gradient in Japanese Adult Men

Atherosclerosis impacts all vascular beds, with the penile artery particularly susceptible due to its small diameter compared to larger central arteries. Kumagai et al. investigated whether erectile function could serve as a predictive marker for arterial stiffness (pulse wave velocity (PWV)) in men. They discovered a significant negative correlation between PWV and erectile dysfunction, suggesting that deteriorating erectile function is associated with increased central arterial stiffening and organ damage. This underscores the importance of assessing vascular health in males with erectile dysfunction to aid in earlier detection and treatment, thereby reducing cardiovascular disease risk.

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Association Between Testosterone Levels and Vascular Function in Men | May 2022

Low Testosterone in Men Predicts Impaired Arterial Elasticity and Microvascular Function

Men experience an age-related decline in sex hormones, termed "andropause," linked to decreased bone density, muscle mass, and increased cardiovascular risk. Corrigan et al. investigated the relationship between testosterone levels and vascular function in 242 men, with 25% having low testosterone. Low levels correlated with microvascular and endothelial dysfunction, increased arterial stiffness, and cardiovascular risk factors. Testosterone negatively correlated with augmentation index (AIX), indicating elevated vascular biomarkers with lower testosterone. Low testosterone is also associated with age, hypertension, diabetes, dyslipidemia, and body size, and reduced microvascular response. These findings underscore testosterone's role in vascular health and its association with cardiovascular risk factors in aging men.

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Androgens, Arterial Stiffness, and Sex Disparities: Review | November 2018

New Insights Into Arterial Stiffening: Does Sex Matter?

Androgens influence vascular remodeling. Pre-menopausal women show stable vascular biomarker measures (pulse pressure and augmentation index) across menstrual cycles, with lower stiffness than men from puberty to menopause. While both sexes experience increased arterial stiffness with age, men's rise is steeper. Post-menopausal women have stiffer arteries despite similar blood pressure. Testosterone deficiency worsens arterial stiffness in metabolic disorder-afflicted men, while hypogonadism correlates with increased stiffness in aging men, reversible with testosterone replacement. Prostate cancer treatment-induced testosterone suppression exacerbates arterial stiffening. These findings underscore testosterone's protective role in male vascular health.

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Testosterone Replacement | May 2009 **Therapy Improves Arterial Stiffness in Hypogonadal Men**

Effect of Testosterone Replacement Therapy on Arterial Stiffness in Older Hypogonadal Men

Male hypogonadism (low testosterone) is a recognized contributor to endothelial dysfunction and arterial stiffening, increasing cardiovascular mortality risk. Yaron et al. investigated the effects of testosterone replacement therapy on arterial stiffness (pulse wave velocity (PWV)), in hypogonadal men. They found that hypogonadal men exhibited significantly higher PWV, which decreased significantly within 48 hours of initiating testosterone replacement therapy and remained reduced over 3 months of treatment. These findings underscore the critical role of testosterone levels in modulating both functional and structural arterial responses.

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Effects of Testosterone | October 2012 **Therapy in Obese Men with Obstructive Sleep Apnea**

Body Compositional and Cardiometabolic Effects of Testosterone Therapy in Obese Men with Severe Obstructive Sleep Apnea: A Randomized Placebo-Controlled Trial

Untreated obstructive sleep apnea (OSA), especially when combined with obesity and male gender, increases all-cause and cardiovascular mortality. Androgen deficiency is common in both obese men and those with OSA. Led by Hoyos, a study investigated the impact of testosterone therapy on vascular biomarkers, specifically augmentation index (AIx), in 67 obese men with OSA. Although testosterone therapy did not affect weight, it significantly improved AIx and body composition. Monitoring vascular biomarkers in individuals with obesity or OSA could guide treatment decisions and assess the beneficial effects of testosterone therapy.

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Vascular Health and | November 2020 **Sexual Function Treatment in Familial Hypercholesterolemia**

Analysis of Arterial Stiffness and Sexual Function after Adding on PCSK9 Inhibitor Treatment in Male Patients with Familial Hypercholesterolemia: A Single Lipid Center Real-World Experience

While statins offer benefits for lipid profiles, sexual function, and arterial stiffness in the general population, patients with familial hypercholesterolemia (FH) still face early cardiovascular disease onset. Purrello and colleagues examined 30 males with FH to assess the effects of lipid-lowering treatment, specifically PCSK9 inhibitors, on sexual function and arterial stiffness (measured by pulse wave velocity, PWV). Their findings revealed that PCSK9 inhibitor therapy significantly improved both sexual function and the relationship between sexual function, lipid profiles, and PWV. These results suggest that adding PCSK9 inhibitor therapy can further enhance vascular and sexual function in males with FH.

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Effects of Androgen | September 2001 **Deprivation Therapy in Prostate Cancer**

The Effects of Induced Hypogonadism on Arterial Stiffness, Body Composition, and Metabolic Parameters in Males with Prostate Cancer

Androgen deprivation therapy (ADT) in prostate cancer induces hypogonadism with uncertain vascular effects. Smith et al. investigated ADT's impact on vascular biomarkers in 22 patients, including central blood pressure (cBP) and augmentation index (AIx). They found ADT-induced hypogonadism increased both cBP and AIx, suggesting elevated systemic arterial stiffness. Post-treatment cessation revealed reversible effects on arterial compliance. These findings underscore ADT's implications for vascular health, emphasizing the importance of monitoring vascular biomarkers during treatment to mitigate potential cardiovascular risks effectively.

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*As of April 2024, results from PubMed Central using "SphygmoCor" as the search term.