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EDITORIAL

Lifestyle tools for men's health and disease prevention: well-being through nutrition, physical activity, stress management, and connection

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Lifestyle; Disease prevention; Nutrition; Physical activity; Stress management; Connection; Men's health

Mental health is an often-overlooked aspect of overall health and wellness (well-being). Mental illness is increasingly common with 1 in 5 American adults experiencing it annually, and 1 in 20 suffering from a serious mental illness each year [1]. Treatment rates for mental illness are lower in men (37.4%) compared to women (51.2%) [1]. Globally, treatment rates are similar with an estimated cost to the global economy of \$1 trillion annually, yet less than 2% of government health expenditure is for mental health worldwide [2]. Despite this, only nine studies have been published specifically targeting men's mental health through lifestyle interventions, be that primary prevention or treatment, and all were underpowered for mental health outcomes [3]. The long-term consequences of such interventions in men are promising and the benefits of a healthy lifestyle in general are clear, especially in programs geared specifically towards men [4]. Mental health also effects physical health; for instance, cardiovascular and metabolic disease risk is 40% higher in those with depression [5]. Therefore, a holistic, systems approach is necessary to truly prevent disease and cultivate well-being using the lifestyle intervention tools of nutrition, physical activity, stress management, and connection.

Men's reproductive health including prevention of erectile dysfunction has been linked to adherence to the Mediterranean diet and maintaining a healthy weight [6]. The benefits of the Mediterranean diet are wide and extensively studied including cardiovascular health, blood glucose control, and brain/mental health [7]. While other diets can be done in a health promoting manner, the greatest evidence of benefit and strongest evidence for lack of harm falls on the Mediterranean diet, even if only used as a structure for different approaches, *e.g.*, Paleo, vegetarian, or pescatarian Mediterranean [8]. The greatest strength of the Mediterranean diet is that it is not simply a dietary pattern but a lifestyle—a holistic approach that includes the major elements of this article. It emphasizes whole, minimally processed foods, mostly plants, water as the beverage of choice, low amounts of alcohol, and enjoying this with loved ones as much as possible plus physical activity. While

stress management is not always specifically mentioned, this is very much a part of the Mediterranean lifestyle. Thus, the Mediterranean lifestyle is an ideal framework for a holistic lifestyle program.

Physical activity has many benefits to well-being including quality of life, self-rated health, and mental health [9]. The most fundamental is that of mobility and its contribution to healthy aging—along with nutrition. Osteoporosis, osteoarthritis, and sarcopenia can be prevented through diet and physical activity—a healthy lifestyle. In terms of nutrition the key elements are bone and cartilage maintenance (vitamins B₃, B₉, B₁₂, C, D, E, K₂; calcium; magnesium; boron; zinc; *etc.*) and muscle protein synthesis (amino acids and cofactors) [10]. The latter is often too heavily emphasized in men's health where trends have gone well beyond Paleo to include ketogenic and carnivore diets. Protein does not come solely from animals; therefore, an extreme diet such as the carnivore diet is not necessary for maximal muscle protein synthesis. Further, plant protein has been linked strongly with markers of health in many studies and plants offer many beneficial elements, not the least of which is fiber. Prebiotic fibers fuel the gut microbiome and support mental and physical health. I have covered nutrient requirements for optimum physical performance in depth in a recent textbook chapter [11].

Back to physical activity, resistance training is a crucial element of muscle and bone health and must be part of any regime for men's well-being along with aerobic exercise to support cardiovascular health [10]. However, the literature places a heavy emphasis on formal exercise, which has not been part of our history. In fact most centenarians get their physical activity from natural movement throughout the day—think of the Sardinian shepherders as an example of the Mediterranean lifestyle in action, supporting longevity. This natural movement throughout the day supports a sense of purpose and typically comes with some sense of connection to others. This can be recreated without formal exercise depending on the occupation of the individual. For many with desk jobs, some formal exercise is necessary, but this does not

require a 1-hour gym session. It can be broken up into bouts, presenting an opportunity to incorporate others as well as stress management, even if just a mental break from a challenging day. Programs specifically for men may be better received [10].

Stress management, including self-care and prioritizing recharging your batteries, is an important part of well-being promotion. This is increasingly recognized by healthcare and the public—hence, the rise of adaptogens like ashwagandha. Stress has been linked to many negative health outcomes including infertility, erectile dysfunction, and cardiovascular disease, which can be improved with cognitive behavioral therapy, progressive muscle relaxation, deep breathing, and meditation and exacerbated by social isolation [12–14]. Humans are social creatures. A sense of connection supports physical and mental health. This should include a support system and loved ones. The quality of connections is more important than the quantity; however, there is room for many connections to have value including clubs, teams, and hobbies. Of note, participation in sport may support health outcomes in middle-aged men, a high-risk group, likely through the benefits of physical activity, connectedness, and stress reduction [9].

Another important part of recharging is sufficient, high-quality sleep, which has been further highlighted by the discovery of the glymphatic system [15]. Promoting sleep hygiene in combination with other elements of stress management as well as physical activity has shown promise in improving sleep and men's health [16]. There is limited evidence for programs directed specifically towards men despite this being a more effective approach than gender-neutral interventions in other lifestyle interventions [16].

A whole-person care approach combining good nutrition, natural movement throughout the day, a robust stress management plan including restorative sleep, and a sense of connection can optimize men's well-being. Impacting any single factor will have a positive impact; however, the greatest effect will come from holistic lifestyle programs targeting these main factors.

Ethics approval and consent to participate

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