Bicycle Riding and Erectile Dysfunction: A Review

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ABSTRACT

Introduction. For many years, reports in the literature have implicated bicycle riding as causing increased risk of erectile dysfunction (ED). Perineal compression during cycling has been associated with the development of sexual complications.

Aim. To review current literature on the rationale for ED from bicycle riding and outcome of bicycle riding on erectile function and to present available research on preventative measures specifically regarding bicycle riding.

Methods. A systematic comprehensive literature review.

Results. There is a significant relationship between cycling-induced perineal compression leading to vascular, endothelial, and neurogenic dysfunction in men and the development of ED. Research on female bicyclists is very limited but indicates the same impairment as in male bicyclists. Preventative measures including use of a properly fitted bicycle, a riding style with a suitable seat position and an appropriate bicycle seat can help prevent impairment of erectile function.

Conclusions. There is a need for further research on safe bicycle and bicycle seat design and investigations that address the underlying mechanisms leading to cycling-related sexual dysfunction in both male and female bicyclists.


Key Words. Bicycling; Erectile Dysfunction; Perineal Compression; Penile Blood Supply; Saddle

Introduction

Millions of people of all ages use bicycling as a popular means of transportation, recreation, sport and exercise. Bicycle types used vary widely, ranging from mountain to road to stationary exercise bicycles. As a readily available and efficient form of aerobic nonimpact exercise, considerable health benefits can be gained from bicycling, including cardiovascular health, weight loss, relaxation, and improved quality of life [1–10]. A recently published large study on 53,542 individuals, assessing the association of metabolic clustering and physical activity with cardiovascular mortality, revealed that physical activity reduced the risk of a premature cardiovascular death in people with cardiovascular risk factors to the level of an inactive individual without a cardiovascular risk factor [1]. Thirty minutes of biking three times a week for 6 months resulted in improved exercise endurance in patients with stable chronic heart failure (NYHA class II–III) [2].

In a review in which data from about 200,000 participants from 33 eligible studies were obtained, better cardiorespiratory fitness was associated with lower risk of all-cause mortality and coronary heart disease/cardiovascular disease events [3]. Sundquist et al. compared the different levels of physical activity (including bike riding) and all-cause mortality among elderly people. A total of 3,206 women and men aged >65 years were included in this study. Results revealed a reduction in all-cause mortality risk for those who were physically active once a week or more compared with the inactive ones. The mortality risk was 43% lower for men and 41% for women who, e.g., rode a bicycle once a week. No further decrease in risk appeared in those who were physically active more than once a week [4]. In a prospective population-based epidemiologic study in 2,364 individuals