

Lifestyle Interventions for Adults with Infertility

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With a significant increase in the age-standardized prevalence of infertile men and women, infertility has become a widespread global issue. Furthermore, infertility has led to increased stigma and disease burden. The causes of infertility include lifestyle factors such as obesity, an unbalanced diet, and physical activity. To increase the rate of successful pregnancy, infertile men and women must improve their health and fertility through lifestyle improvements.

Key Words: Lifestyle, Infertility, Health promotion

INTRODUCTION

Infertility is growing rapidly worldwide and has become a pervasive problem with significant consequences for individuals, families, and communities [1,2]. In many cultures, infertility is stigmatized [3]. Globally, from 1990 to 2017, the age-standardized prevalence of infertile women in 195 countries and regions increased by 14.9%, from 1,366.8 per 100,000 to 1,571.3 per 100,000. The age-standardized prevalence of infertile men increased by 8.2%, from 710.1 per 100,000 to 768.5 per 100,000. Thus, the burden of disease due to infertility has increased significantly [4].

Both male and female factors may cause infertility [3]. It may be the result of low sperm quality, ovarian problems, fallopian tube blockage, pelvic infection, advanced age, endometriosis, and difficulty in natural fertilization [3]. In ad-

dition, obesity [4], an unbalanced diet [5], a diet high in trans-fat and carbohydrates and sugar [6], lack of physical activity, smoking [7], depression, anxiety, and stress [8] contribute to infertility. Research has indicated that diet and lifestyle are key factors affecting fertility [6]. Furthermore, it has been shown that weight loss, if needed, is the most important means of increasing fertility [7]. It has also been reported that lifestyle changes, such as weight loss and increased physical activity, affected the number of births among infertile women [9]. In addition, research has shown that infertile couples have lower levels of the health-promoting behaviors that play an important role in improving quality of life, maintaining health, and improving fertility [10]; therefore, it is necessary to consider lifestyle interventions to improve the, fertility, and health of infertile men and women.

EFFECT OF LIFESTYLE INTERVENTIONS FOR ADULTS WITH INFERTILITY

Lifestyle factors can affect the likelihood of infertility [2]. Therefore, healthcare professionals should be more proactive in making lifestyle recommendations for infertility patients [11]. Lifestyle changes such as eating healthier, increasing physical activity, quitting smoking, and reducing

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alcohol consumption can help patients conceive [12]. In addition, proper levels of physical activity may help maintain regular menstrual cycles and ovulation [13], and appropriate physical activity can have a positive effect on childbirth among infertility patients [14]. According to a meta-analysis of studies conducted with infertile patients, an intervention that included basic information on infertility, as well as lifestyle and stress management, was useful for infertility correction. The lifestyle improvements which resulted from the intervention increased the participants' likelihood of pregnancy and had a positive effect reproductive health [15].

By reducing energy intake (kcal) and body mass index, long-term (five-year) lifestyle interventions improved the physical quality of life of obese and infertile women [16] and demonstrated the potentially sustainable effects of healthy eating and regular physical activity [12]. Interventions that included dietary and lifestyle recommendations at three months significantly increased ova count, mature ova count, embryo count, embryo quality, fertility, and pregnancy rate among infertile women [1]. In addition, a six-month lifestyle intervention improved reproductive endocrine and lipid metabolism and reduced the volume of the left and right ovaries, which increased menstrual recovery, ovulation, and pregnancy rates in obese and infertile women [17]. Lifestyle interventions also improved overall sexual function in infertile women [18].

Several studies regarding lifestyle interventions for infertile men have been recently conducted. A three-week physical activity intervention markedly improved sperm quality in infertile men, showing a direct association between a healthy lifestyle and men's reproductive health [19]. In addition, a three-month lifestyle intervention focused on diet and exercise also showed an improvement in sperm quality among infertile men [20]. Multidisciplinary strategies to improve the reproductive health of infertile men through reduced stress and increased social support should be considered [21].

Infertility affects 15% of couples of reproductive age worldwide [22]. One study found that without positive interactions in marriages with infertility, negative emotions regarding infertility-related stress and guilt were shared with couples and influence on marital relationships [23]. Lifestyle interventions for infertile couples have reduced

depression and improved quality of life for both parties [24]. In addition, improving the lifestyle of infertile couples also improved their quality of life and reduced medical costs [10]. In the future, it is necessary to develop and apply lifestyle interventions that improve reproductive health for infertile couples.

CONCLUSION

There is a significant association between infertility and lifestyle. Lifestyle changes such as a healthier diet and increased physical activity improve overall and reproductive health, as well as increase pregnancy rates. Therefore, healthcare providers should explain the importance of lifestyle improvements to infertile men, women, and couples alike.

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