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Editorial

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Raising Awareness About the Risk Factors of Female Infertility: Proactive Steps Towards Optimizing Fertility

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Infertility is a common chronic disease affecting many reproductive-age women and men and represents a major life burden, causing anxiety, depression, relationship dysfunction, and social marginalization.[1] While advancements in reproductive medicine have provided hope and solutions for many infertile couples, decreasing the number of people affected by infertility has become a critical aspect of fertility care.

Female infertility is a complex and emotionally challenging issue that affects millions of couples worldwide. One important aspect of preventing female infertility and optimizing reproductive health is raising awareness about the risk factors associated with infertility. Several risk factors for female infertility have been identified. These include such as residence in rural areas, previous miscarriage or abortions, family history of infertility, marital status, use of modern contraceptives, smoking, caffeine consumption, physical activity level, and dietary factors. Additionally, body mass index (BMI), body fat percentage, alcohol consumption, and education level have also been associated with female infertility.[2,3] Other factors such as age, age at marriage, number of abortions, presence of underlying diseases, and stress have been found to be significantly associated with female infertility.

In the current issue of the *Journal of Korean Medical Science*, Lee et al.[4] investigated the risk factors for infertility in Korean women. This study, encompassing 986 infertile women and fertile controls from nationally representative cohorts, reported that underweight, obesity, smoking, alcohol consumption, and thyroid disease were associated with female infertility in Korean women.

It has been well known that fertility rates are decreased in women who are either very thin or obese. Lee et al.[4] illuminated the impact of BMI on female fertility, revealing that both underweight and obesity contribute significantly to increased odds of infertility. This underscores the importance of maintaining a healthy weight, not only for overall well-being but also for preserving reproductive health. Smoking has substantial adverse effects on fertility. Smoking women were more likely to be infertile and menopause 1 to 4 years earlier compared to non-smoking women.[3] Lee et al.[4] reported ever-smokers exhibited significantly higher odds of infertility, emphasizing the well-established link between smoking and reproductive health. Lee et al.[4] also found that alcohol consumption displayed a U-shaped relationship with infertility, revealing increased risks for both non-drinkers and higher intake groups. The effect of alcohol on female fertility has not been clearly established. Higher levels

of alcohol consumption by women (more than two drinks per day, with one drink containing 10 g of ethanol) probably are best avoided when attempting pregnancy, but there is limited evidence to indicate that more moderate alcohol consumption adversely affects fertility.[3] Another noteworthy finding was the increased odds of infertility among women with thyroid disease. This association underscores the importance of addressing and managing thyroid diseases in the context of fertility.

While infertility is not always preventable due to certain medical conditions and age-related factors, there are proactive steps individuals and couples can take to minimize the risk and optimize reproductive health. Considering infertility as a preventable condition involves adopting a preventive healthcare approach. This study revealed associations between female infertility and modifiable risk factors and provided insights for regulating and preventing potential causes of infertility. It may also provide an enhanced understanding of infertility among policymakers and raise national attention.

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