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## THE ROLE OF DIET IN ENDOMETRIOSIS

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### **Abstract**

The dependence of the disease on estrogens is considered relevant. In other conditions in which hormones play a specific role, such as breast and endometrial cancer, scientific studies have shown that diet and excess fat can strongly influence the incidence.

Keywords: diet, endometriosis, coffee, vitamins, fats.

#### Introduction

The aim of this study was to elucidate the relationship between dietary habits and endometriosis. For this purpose, a survey was conducted in the form of printed questionnaires in 450 women of reproductive age, of which 180 cases were diagnosed with endometriosis. The questionnaires included foods that are considered a risk factor for the development of this disease. These are fats, vegetables, coffee, caffeine, vitamins, meat, fish, dairy products and fruits. Information on food intake was collected using food frequency questionnaires. Simple "no" or "yes" questions were used to assess coffee consumption. Retrospective food collection is difficult, especially in long-term illnesses. Women with endometriosis typically experience a 6 to 10 year delay between the onset of symptoms and a definitive diagnosis, and the disease can progress. They may have changed their dietary habits at the onset of the disease, or their diet may have affected the underlying pain that warrants a diagnosis.

Vitamin A is only present in animal products such as liver, kidney, oily fish, and dairy products, but can also be converted endogenously from its dietary precursor,  $\beta$ -carotene, found mainly in green leafy and yellow vegetables and orange fruits. Thus, provitamin A (carotenoids) from plants is an additional main dietary source of vitamin A for the majority of the world's population [2]. In general, intake of  $\beta$ -carotene or vitamin A is not statistically associated with the risk of endometriosis.

Vitamin A intake was 25% of the recommended daily intake in patients with endometriosis compared to 45% in the control group. Data on vitamins C and E are also contradictory. Vitamin C and vitamin E supplementation has not been associated with a risk of endometriosis. Saturated fats and animal fats were not significantly associated with the risk of endometriosis. However, this aspect needs further study, given that a diet characterized by a high consumption of red meat is moderately associated with the concentration of estradiol and estrone sulfate, and, as a result, its consumption can directly affect the concentration of circulating steroid. hormones in the human body and, ultimately, to maintain disease.

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The study found an increased risk in women with endometriosis who reported any or infrequent coffee consumption. Consumption of caffeine and caffeinated beverages is positively associated with the concentration of sex hormone-binding globulins and inversely with testosterone bioavailability. However, early follicular phase estrogen concentrations and estrone concentrations have been found to be higher in women with high caffeine intake. These hormonal changes can influence hormone-dependent diseases. However, limited data do not support the conclusion of an association between coffee consumption and the risk of endometriosis.

Diets rich in fiber increase estrogen excretion and decrease estrogen bioavailability, while refined and whole grain cereals affect the glycemic index and glycemic load, variables that measure the rate of absorption of carbohydrates and therefore the need for insulin. Insulin has been shown to be able to stimulate the proliferation of endometrial stromal cells by binding to its receptors in the endometrium. In addition, hyperinsulinemia can increase estrogen by decreasing sex hormone-binding globulin and can increase insulin-like growth factor 1 by decreasing IGF-binding protein I. Both estrogen and insulin-like growth factor 1 stimulate endometrial proliferation. cells.

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