



Preconception health for women

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Introduction

All women can benefit from preconception health, whether or not they plan to have a baby one day. One of the best things a woman can do for herself is to take good care of her health. It is natural to think about eating well and exercising as important parts of being healthy before falling pregnant, but there are other factors to consider too, such as alcohol use, smoking and medication use. Some women may have certain medical conditions that need close monitoring or medication changes before pregnancy is contemplated.

Nutrition before conception

It is well known that a pregnant woman should follow good dietary practices in order to ensure the proper growth and development of the foetus. However, evidence shows that the nutritional status of a woman before she becomes pregnant is also important. In order to acquire the nutrients necessary for a successful pregnancy, it is advised that women maintain a healthy weight and follow a varied diet.

Parenting begins before conception. This is because the nutritional status of both men and women can determine a pregnancy outcome and affect the long-term health of the child. This is particularly true for parents with unhealthy body weights and micronutrient deficiencies. For example, underweight women have a 32% higher risk of delivering prematurely, while obese women have more than double the risk for developing gestational diabetes and pre-eclampsia (pregnancy complication characterised by high blood pressure). Children born to obese mothers are more likely to develop neural tube defects and heart problems.

The micronutrient (vitamin and mineral) status of a woman can also have an effect on pregnancy outcomes. Studies have shown that insufficient levels of folic acid, choline, copper, zinc, iodine,

as well as vitamins B₁₂, D, A, and K in early pregnancy are linked to birth defects. In circumstances where women are not able to reach the high nutritional demands of preconception and pregnancy, supplements may be beneficial.

Nutritional requirements

There is a critical window before conception when gametes mature, fertilisation occurs, and the embryo begins to develop. During this period, nutritional status and environmental exposures are significant. The availability of macronutrients (carbohydrates, protein, fat) and micronutrients, as well as exposure to smoking, alcohol or drugs will influence foetal health. There is debate on how long before pregnancy a woman should adjust her diet to meet the nutritional demands of a growing foetus. Data suggests anywhere between three months to one year before conception is optimal. However, it is not possible to gauge the exact time conception will occur. It is therefore advised that a couple begin nutritional intervention from the moment they decide to start a family.

A healthy diet should be balanced, containing carbohydrates (45–65% total energy), protein (10–35% total energy) and fat (20–35% total energy). Consuming insufficient calories can lead to weight loss and underweight, while consuming too many calories can cause overweight and obesity. Both men and women should reach a healthy weight before planning conception as underweight and obesity in either parent can affect fertility and pregnancy outcomes.

- In order to meet the nutrient needs of pregnancy, it is advised that complex carbohydrates take priority over simple sugars. Consuming sufficient whole grains, fruits and vegetables and avoiding sugar, syrups and juices is recommended. Choosing complex carbohydrates will also ensure that the daily requirement for fibre is met.
- Protein is one of the most essential macronutrients required for pregnancy. This is due to its role in promoting cell growth and development. In early pregnancy, protein is essential for the development of the placenta. If a woman's protein status is poor during this time, the placenta may not develop optimally. This could prevent effective transport of nutrients from mother to baby throughout the pregnancy. The daily protein requirement

- Exposure to maternal smoking has been associated with intra-uterine growth restriction, prematurity, low birth weight, congenital malformations and sudden infant death syndrome.

Avoiding exposure to these potentially harmful substances well before and during pregnancy can play an important role in improving the health of women and their families.

Medicines and medical conditions

It is important that careful attention is paid to the potentially harmful effects of any medicine use during pregnancy. The risk of harm exists throughout pregnancy and is not confined to the first trimester only. A valid indication should exist before considering the use of any medicines, including over-the-counter and traditional, alternative or complementary medicines. Self-medication should be discouraged.

Women with pre-existing medical conditions such as epilepsy, diabetes, hypertension or depression, should speak to their doctor before contemplating pregnancy. If drug therapy is considered essential, the doctor may want to choose medicines with which there has been adequate experience during pregnancy. It is important to remember that those conditions requiring drug therapy, should be treated adequately during pregnancy, since failure to do so may be more dangerous to the foetus than cautious administration of needed medicines.

Planning for pregnancy

When pregnancy is being contemplated, the most important thing that men and women can do is to plan for pregnancy. For some women, getting ready for pregnancy may take a few months. For other women, it may take longer. Women should consider factors such as their preconception health, diet, lifestyle and medication use before contemplating pregnancy and talk to a healthcare professional about preconception health care.

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