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The Impacts of Consuming Peanuts During Pregnancy

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Abstract

Peanut allergy accounts for the majority of severe food-related allergic reactions. Childhood allergies have increased in prevalence by 50% between 1997 to 2011 with peanut allergies almost tripling between 1997 and 2017 (Turke, 2017). It tends to present early in life and affected individuals usually do not outgrow it. Reactions to peanuts can range from mild to severe, such as anaphylaxis. The diagnosis of a peanut allergy is confirmed with the detection of peanut-specific IgE (Czolk R., 2021). The question remains "how does one develop a peanut allergy?" Our research project has used evidence-based practice and nursing research to determine if consumption of peanuts by a pregnant woman can affect the child's likelihood of being born with a peanut allergy.

Introduction

- Peanut allergies are a common disorder that has been increasing among children, affecting up to 1 in 50 children (Gray, 2020).
- Our research focuses on the population of pregnant women and their newborn babies.
- The main intervention we are considering is "Does consuming peanuts while being pregnant have an influence on if a baby is born with a peanut allergy?"
- The comparison of interventions includes the baby contracting a peanut allergy if the mother did or did not consume peanuts during pregnancy.
- The research outcomes needed for practice include the rate of babies being born with peanut allergies related to mothers consuming peanuts during pregnancy. More specifically, we are looking to see if peanuts can cross the placental border and if this exposure can cause a baby to be born with a peanut allergy.

Research Question

Does consuming peanut / peanut products while being pregnant impact the chance of babies being born with peanut allergies in women who are pregnant and don't have peanut allergies?

Methods

In order to begin our research, we formulated our PICO question using topics that interested us. We utilized Longwood University's Greenwood Library as well as Google Scholar to find credible sources. When researching to find scholarly articles, a date range from 2016 - 2021 was set to avoid any articles greater than 5 years old. Keywords used during research included peanuts, pregnancy, allergy, and placenta. To narrow it down, we carefully selected the most reliable and factual sources to use for our project.

Results

- The placenta is an organ that is extremely important during pregnancy. It serves to allow waste and nutrients to pass from the mother to the fetus. The placenta is also capable of passing antibodies from mother to fetus (Maltepe & Penn, 2018).
- It has been established that peanut allergies, which are a major issue in healthcare, can be diagnosed and identified by the IgE antibody (Czolk et al., 2021).
- During the COVID-19 pandemic, a lot of research has been done on pregnant women and their babies being born with antibodies to the virus
- In a study conducted involving 36 pregnant women who had been vaccinated against COVID-19, all 36 babies tested positive for high titers of the anti-S IgG antibody associated with the vaccine (Trostle et al., 2021).
- Two out of three studies conducted by Mai T. et al. (2020), were consistent in finding that introduction of peanut intake during a woman's pregnancy was beneficial in reducing childhood risk of peanut allergy. The third study conducted by Mai T. et al. (2020) found that there was an increase in peanut allergy, but this study was conducted with a smaller number of participants and only infants who had a history of some other food allergy or atopic disease were included.
- An article written about the consumption of peanuts during pregnancy has highlighted numerous studies and identifies correlations between the two. For example, the article states that "recent studies suggest that peanut intake in pregnancy may have a preventative effect on development of peanut allergy in children" (Abrams & Sicherer, 2018).

Evaluation / Analysis

- The data overall has shown that the placenta serves as a passageway in which nutrients and chemicals such as antibodies can be passed from the mother to the fetus
- There has also been ample evidence provided that shows the severity and rise of incidence in peanut allergies in children across America
- The COVID-19 pandemic has shown that antibodies from the vaccine can be passed through the placenta and found in the fetus
- This can be applied and used to support the claims from previous studies that consuming peanuts while pregnant allows the fetus to present with antibodies and reducing their chance of contracting a peanut allergy

Conclusions / Implications for Future Research

In conclusion, introduction of peanut intake by a non-allergic pregnant woman is associated with a reduced risk of a peanut allergy in the child. Encouraging peanut products in a pregnant woman's diet should still be considered and further explored, as it could potentially reduce fatal childhood outcomes and reduce healthcare costs (Mai, T. et al., 2020). In order to definitively determine the safety of incorporating peanuts in a pregnant woman's diet, more research on current data is needed (Mai, T. et al., 2020). It is important to continue research on this topic in order to help the growing prevalence of deadly peanut allergies in children. Some implications for future research can consist of the passage of specific antibodies that are used to detect allergies as well as specific testing done on neonates and women during pregnancy. Future research can also consist of including women who are already allergic to peanuts and if that impacts the chance of the baby being born with an allergy as well.

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Peanut-allergy prevention in infants

For many years, national guidelines recommended avoiding eating peanuts during pregnancy, lactation and infancy. However, new research has shown that exposing infants to peanuts early on may reduce the development of peanut allergy.

Updated guidelines

Infants with severe eczema and/or egg allergy: Schedule an in-office medical evaluation with an IgE test, a skin-prick test, or both; with physician approval, introduce age-appropriate peanut-containing food as early as 4 to 6 months of age.

Infants with mild to moderate eczema: Introduce age-appropriate peanut-containing food around 6 months of age at home without an in-office evaluation.

Infants without eczema or any food allergy: Freely introduce peanut-containing foods alongside solid foods.

Signs & symptoms

Most peanut reactions in infants manifest within seconds to minutes of ingestion and many occur on first exposure. Initial signs and symptoms may include:

- Severe oral itching
- Lip and eyelid swelling
- Skin flushing
- Hives
- Coughing
- Difficulty breathing
- Restlessness
- A pale appearance
- Vomiting

1-2% of children and adolescents are allergic to peanuts

Consult your child's doctor

The updated guidelines provide specific recommendations depending on the child's risk of developing peanut allergy. Talk to a medical professional about the right approach for your child, and if safe, ways to incorporate peanut into his/her diet.

For more health tips, visit uclahealth.org/mattel

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