Abstract Title: Congenital heart defects: Personalized nutritional care plans to promote healthy growth and development

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Objective: The objective of this research was to explore and raise awareness of the relationship between congenital heart defects (CHD) in infants and their nutritional requirements that, in turn, affect their growth and development.
Methods: For Senior Seminar, the capstone course in the Bachelor of Science in Nutrition, a literature review was conducted on the relationship between CHD in infants and nutritional care guidelines. Resources from the Canadian Heart and Stroke Foundation and the American Heart Association contained general information on CHDs in infants and nutritional needs. Review of resources located using the terms 'congenital heart defect', 'infant nutrition', and 'failure to thrive' (FTT) revealed that personalized nutrition care plans are important when feeding infants with a CHD.
Results: Depending on the severity of CHD, various factors can alter how an infant will consume and absorb food and nutrients, affecting growth and development. These include greater caloric needs and poor appetite, breathing difficulties, and gastroesophageal reflux disease. Increased caloric needs and difficulties feeding can lead to malnutrition and FTT. High density formula (about 0.40 kcal per ml higher than standard formulae) can help increase nutrient intakes and promote weight gain. If oral feeding is not adequate, nasogastric feedings may be used to help reduce the risk of FTT.
Conclusion: In addition to energy needs, continued research is needed to establish standard macronutrient ranges for infants living with a CHD to prevent malnutrition and FTT. When infants living with a CHD consume the nutrients they require, they grow and live normal lives.
Significance to the Field of Dietetics: These findings are significant because dietitians' need to know how to properly screen and detect these issues so that a nutritional care plan can be put in place. Early detection and intervention is important when screening for feeding difficulties to prevent malnutrition.