



REVIEW ARTICLE

Water and fluid intake in the prevention and treatment of functional constipation in children and adolescents: is there evidence? ☆,☆☆



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KEYWORDS

Constipation;
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Fluid intake;
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Abstract

Objective: To study the evidence on the role of water and fluid intake in the prevention and treatment of functional intestinal constipation in children and adolescents.

Source of data: A search was carried out in the Medline database (between 1966 and 2016) for all published articles containing the following words: constipation, water, and fluids, published in Portuguese, English, and Spanish. All original articles that assessed children and adolescents were selected by title and abstract. The references of these articles were also evaluated.

Synthesis of data: A total of 1040 articles were retrieved. Of these, 24 were selected for reading. The study included 11 articles that assessed children and adolescents. The articles were divided into two categories, those that evaluated water and fluid intake as a risk factor for intestinal constipation and those that evaluated their role in the treatment of intestinal constipation. Five articles were included in the first category. The criteria for assessing fluid intake and bowel rhythm were different in each study. Three studies demonstrated an association between low fluid intake and intestinal constipation. Regarding treatment, five articles with heterogeneous methodologies were found. None of them clearly identified the favorable role of fluid intake in the treatment of intestinal constipation.

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☆☆ This study was carried out at Universidade Federal de São Paulo (UNIFESP), Escola Paulista de Medicina (EPM), Disciplina de Gastroenterologia Pediátrica, São Paulo, SP, Brazil.

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PALAVRAS-CHAVE

Constipação
intestinal;
Criança;
Ingestão de líquidos;
Adolescente

Conclusion: There are few articles on the association between fluid intake and intestinal constipation. Epidemiological evidence indicates an association between lower fluid intake and intestinal constipation. Further clinical trials and epidemiological studies that consider the international recommendations for fluid intake by children and adolescents are required.

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Ingestão de água e líquidos na prevenção e no tratamento da constipação intestinal funcional em crianças e adolescentes: existem evidências?

Resumo

Objetivo: Estudar as evidências sobre o papel do consumo de água e líquidos na prevenção e no tratamento da constipação intestinal funcional em crianças e adolescentes.

Fontes de dados: Foi pesquisado na base de dados do Medline (entre 1966 e 2016) todos os artigos publicados com as seguintes palavras: constipação, água e líquidos, nos idiomas português, inglês e espanhol. Foram selecionados, pelo título e resumo, todos os artigos originais com crianças e adolescentes. As referências desses artigos também foram avaliadas.

Síntese de dados: Foram encontrados 1040 artigos. Desses, 24 foram selecionados para leitura. Foram incluídos 11 artigos que estudaram crianças e adolescentes. Os artigos foram distribuídos em duas categorias, os que avaliaram o consumo de água e líquidos como fator de risco para constipação intestinal e os que avaliaram o seu papel na terapêutica da constipação intestinal. Cinco artigos se enquadraram na primeira categoria. Os critérios para avaliar consumo de líquidos e ritmo intestinal foram diferentes em cada estudo. Três estudos demonstraram relação entre baixo consumo de líquidos e constipação intestinal. Quanto ao tratamento, foram encontrados cinco artigos com metodologias heterogêneas. Em nenhum deles foi possível identificar com clareza o papel favorável do consumo de líquidos no tratamento da constipação intestinal. **Conclusão:** Existem poucos artigos sobre a relação entre consumo de líquidos e constipação intestinal. Evidências epidemiológicas indicam associação entre menor consumo de líquidos com constipação intestinal. São necessários outros ensaios clínicos e estudos epidemiológicos que levem em consideração as recomendações internacionais para consumo de líquidos por crianças e adolescentes.

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Introduction

Intestinal constipation is a common clinical manifestation in the pediatric population, and over 90% of cases are classified as functional gastrointestinal disorders.¹⁻³ As observed in other functional gastrointestinal disorders, childhood intestinal constipation results from the interaction of biological, dietary, and psychosocial factors that interfere with intestinal motility.⁴ The main factors related to diet are water and dietary fiber consumption.³⁻⁶

According to the guidelines, functional intestinal constipation treatment includes fecaloma clearing and maintenance therapy using laxatives to avoid fecal re-impaction, toilet training, and guidelines for increasing fiber and water intake.^{4,7-9} However, the guidelines of the European Society for Pediatric Gastroenterology, Hepatology, and Nutrition (ESPGHAN)/North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN), published in 2014, questions the efficacy of increased water intake in intestinal constipation therapy and suggests that, according to the evidence, an increase in fluid intake for the treatment of functional intestinal constipation should not be

recommended.¹⁰ When analyzing the evidence supporting this position, it can be verified that this was based on only one clinical trial, published in 1998.¹¹

Considering that increased water intake is part of the treatment of functional intestinal constipation in other guidelines⁷⁻⁹ and in clinical practice, this recent positioning motivated the development of the present study, which aimed to assess the evidence on the role of water and fluid intake in the prevention and treatment of functional intestinal constipation in children and adolescents.

Methodology

The Medline database was used for the search. The period evaluated was January 1966 to November 2016. Research was carried out on articles that analyzed the role of water and/or fluid intake in the treatment and prevention of intestinal constipation in children and adolescents. As for the strategy, a broad search was made using the following pairs of words: "constipation" and "water"; "constipação" and "água"; "estreñimiento" and "agua"; "constipation" and "fluid"; "constipação"

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