Dietary fibre modification with or without antibiotics in the prevention of diverticulitis in adults with diverticular disease: A systematic literature review and meta-analysis

Crichton, Megan; Dahl, Camilla; Jenkins-Chapman, Julie; Nucera, Romina; Marx, Wolfgang; Mackay, Hannah; Marshall, Skye

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A review of the role of dietary fibre in disease prevention

Megan Crichton1, Camilla Dahl1, Julie Jenkins2, Romina Nucera2, Wolfgang Marx3,4, Skye Marshall1,4

1 Faculty of Health Sciences & Medicine, Bond University, Australia
2 Department of Nutrition and Dietetics, Robina Hospital, Australia
3 School of Allied Health, La Trobe University, Australia
4 skye_marshall@bond.edu.au. Visit my personal researcher page for updates on publications: works.bepress.com/skye-marshall/

Introduction

Despite the belief that dietary fibre prevents diverticulosis and diverticulitis (diverticular disease), little evidence exists examining this relationship. Therefore, there are no evidence-based dietary management guidelines for the prevention of diverticulosis and progression to acute diverticulitis.

Methods & Included Studies

- Intervention and observational studies were searched for using five electronic databases from database inception up until 31st March 2017.
- Study quality was assessed using the Cochrane risk of bias tool. Data was pooled via meta-analysis. The quality of the body of evidence was assessed via GRADE.
- 20 studies were included, nine of which were included in six meta-analyses. There was moderate to high risk of bias across most studies.

Results

In patients with diverticular disease, meta-analysis found no significant effect of dietary fibre supplementation on gastrointestinal symptoms (SMD: -0.13; P=0.16) or transit time (MD: -3.70, P=0.32).

In patients with diverticular disease, meta-analysis found no significant effect of high dietary fibre intake on preventing diverticulosis and/or diverticulitis in healthy populations.

Conclusions

The possible benefits of high dietary fibre intake are likely to outweigh potential harms. Therefore, a high dietary fibre intake in accordance with national gender- and age-specific dietary fibre intake guidelines, is recommended for healthy populations and for those with diverticulosis to prevent primary occurrence of diverticulitis and/or diverticulitis.

Ispaghula husk supplementation should be considered on an individualised basis to improve bowel function in those with diverticulosis.

Randomised controlled trials with standardised dietary fibre interventions are warranted to form stronger recommendations and dietary management guidelines.