

An investigation into the influence of intestinal transit rate on the metabolism of dietary sulphate

Submission date

12/09/2003

Recruitment status

No longer recruiting

Registration date

12/09/2003

Overall study status

Completed

Last Edited

15/11/2011

Condition category

Nutritional, Metabolic, Endocrine

☐ Prospectively registered

☐ Protocol

☐ Statistical analysis plan

☒ Results

☐ Individual participant data

Plain English summary of protocol

Not provided at time of registration

Contact information

Type(s)

Scientific

Contact name

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Contact details

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Additional identifiers

Protocol serial number

N0544093560 - PROJ 30/10/2000

Study information

Scientific Title

Study objectives

Influence of intestinal transit on sulphate metabolism.

Hydrogen sulphide (H₂S) can be toxic to the colon. The principle source of H₂S in the colon is from the conversion of sulphate to sulfide by bacteria. Other sources of H₂S production include the fermentation of proteins of animal and plant origin. The majority of dietary sulphate is absorbed in the small intestine with relatively small amounts entering the colon. Intestinal transit speed is known to influence the absorption and breakdown of many dietary substances. In particular intestinal transit speed alters the colonic bacterial flora and fermentation of food. The purpose of this study is to look at the influence of intestinal transit time on the metabolism of sulphate as no data exist. If transit is an influence in sulphate metabolism, then many of the findings linking high concentrations of faecal H₂S to diseases such as ulcerative colitis could be explained. A brief clinical and drug history would be taken.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Not provided at time of registration

Primary study design

Interventional

Study design

Randomised controlled trial

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Dietary sulphate metabolism

Interventions

During the protocol volunteers will take (once a day) either:

1. Senna (a laxative)
2. Loperamide (slows down the colon)
3. Placebo tablet

Volunteers will be asked to take a special diet designed to be low in sulphate. Dr Lewis will be in close contact during the study period to answer any queries and ensure that the senna or loperamide are having the desired effect. In addition they will take tablets containing sulphate. Intestinal transit speed will be measured by two methods. Two stool samples will be collected and a urine sample. After completing the protocol volunteers will have a 2-week washout period repeating the protocol but taking a different transit altering tablet. The volunteers will complete all three protocols.

Intervention Type

Drug

Phase

Not Applicable

Drug/device/biological/vaccine name(s)

Senna, loperamide

Primary outcome(s)

Not provided at time of registration

Key secondary outcome(s)

Not provided at time of registration

Completion date

10/01/2004

Eligibility

Key inclusion criteria

Not provided at time of registration

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Not Specified

Sex

Not Specified

Key exclusion criteria

Not provided at time of registration

Date of first enrolment

10/01/2001

Date of final enrolment

10/01/2004

Locations

Countries of recruitment

United Kingdom

England

Study participating centre

Box No 201A
Cambridge
United Kingdom
CB2 2QQ

Sponsor information

Organisation
Department of Health (UK)

Funder(s)

Funder type
Government

Funder Name
Cambridge Consortium - Addenbrooke's (UK)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	01/03/2007		Yes	No