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The swim drink study

Submission date	Recruitment status	[_] Prospectively registered
14/07/2016	No longer recruiting	[_] Protocol
Registration date	**Overall study status**	[_] Statistical analysis plan
20/07/2016	Completed	[X] Results
Last Edited	**Condition category**	[X] Individual participant data
30/08/2023	Nutritional, Metabolic, Endocrine	

Plain English summary of protocol

Background and study aims
Manufacturers of sports drinks claim their products are better at rehydrating athletes than water and that they allow the athlete to perform their sport better. They use reports from studies to back up their claims. However when these studies have been examined it has been found that the methods used are much less rigorous than a study that would be required to back up the use of a new drug. The aim of this study is to find out whether drinking fluid whilst swimming can improve performance compared to not drinking, and whether drinking a sports drink improves performance more than just drinking water.

Who can participate?
Healthy adolescent competitive swimmers aged between 11 and 18 who swim five times a week at West Suffolk Swimming Club (including Fridays).

What does the study involve?
Participants are randomly allocated to receive three study conditions in a different order over 12 swimming sessions. The first condition involves not drinking anything during six swimming sessions. The second condition involves being able to drink as much water as they like during three swimming sessions. The third condition involves being able to drink as much sports drink as they like during three swimming sessions. At the end of each of the sessions, participants complete a ten 100 metre swim sprints. During the middle 50 metres of each swim sprint, the time taken is recorded. The results are then compared to see if drinking water or a sports drink improved performance.

What are the possible benefits and risks of participating?
Participants may benefit from finding a drinking plan which could boost their individual performance that they may wish to carry on with after the study. There are no notable risks involved for those participating in this study.

Where is the study run from?
West Suffolk Swimming Club (UK)

When is the study starting and how long is it expected to run for?
March 2014 to June 2015

Who is funding the study?
Investigator initiated and funded (UK)

Who is the main contact?
Dr Graham Briars
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Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
Impact of in-session rehydration on swimming performance. Version 3

Study information

Scientific Title
The Swim Drink study: a randomised controlled trial of during-exercise rehydration to enhance performance

Study objectives
Null hypotheses:
1. There is no difference between 50 metre swim times for athletes whether they take fluid in the training session immediately preceding the test swim or not
2. There is no difference between swim times for athlete who drink in session, whether they drink water or a sports drink

Ethics approval required
Old ethics approval format

Ethics approval(s)

Faculty of Medicine and Health Sciences Research Ethics committee, University of East Anglia, 05 /09/2014, ref: 2013/2014 - 55

Study design
Double-blind randomised cross over trial

Primary study design
Interventional

Study type(s)
Other

Health condition(s) or problem(s) studied
Dehydration

Interventions
This trial will be conducted over 12 consecutive weeks in the course of 2 hour training session held at the same time each week. Swimmers will be randomised to one of three drinking regimes for the initial 90 minutes of the session each training session. Sessions 1-12 will be conducted in a random order and swimmers will be blinded to their designation at a particular session until they have arrived on poolside. This designation will be determined by the study blinder who will play no other part in the study. Each week's swimmer session number allocation will be released to the study team week by week to allow preparation of the week's drinks.

Regimen one: No drink for six sessions
Regimen two: Plain water ad-libitum for three sessions
Regimen three: Selected sports drink purchased from a high street supermarket by the study team for three sessions. All swimmers will use the same sports drink.

In the drinking sessions the study drink will be take ad libitum at any time throughout the 90 minute training session. After a training program estimated to last 90 minutes swimmers will undergo the test set. Swimmers allocated to a drinking regime will be free to continue ad libitum fluid intake in between individual swims. Any violation of the drinking regime will be recorded and analysis will be on an intention to treat basis. Once the test set has been completed and swimmers and drinks bottles have been weighed all swimmers will be free to drink any fluid they wish ad libitum.

Intervention Type
Supplement

Primary outcome(s)
Time to complete the middle 50 metres for each of ten 100 metre swim sprints in seconds using electronic timing pads at during the 30 minute test set at the end of each swimming session.

Key secondary outcome(s))
1. Thirst is measured using a Visual Analogue Scale (VAS) at the start and end of each swimming session
2. Body weight is measured using digital electronic scales at the start and end of each swimming session

Completion date

02/06/2015

Eligibility

Key inclusion criteria
1. Aged 11 to 18 years
2. Member of the West Suffolk Swimming Club
3. Trains 5 times/week
4. Trains on Friday evenings

Participant type(s)
Healthy volunteer

Healthy volunteers allowed
No

Age group
Mixed

Sex
All

Key exclusion criteria
Suffering illness

Date of first enrolment
28/11/2014

Date of final enrolment
08/01/2015

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
West Suffolk Swimming Club
Bury St Edmunds
United Kingdom
IP33 3TT

Sponsor information

Organisation
Norfolk and Norwich University Hospital

ROR
https://ror.org/021zm6p18

Funder(s)

Funder type
Other

Funder Name
Investigator initiated and funded

Results and Publications

Individual participant data (IPD) sharing plan
Subject level data are available as supplementary files to the BMJPaed open paper. They are anonymised and are not subject to any restriction on analyses. Any further inquiries can be directed to Dr Graham Briars (g.briars@doctors.org.uk).

IPD sharing plan summary
Other

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	25/10/2017		Yes	No
Dataset		25/10/2017	30/08/2023	No	No
Participant information sheet		19/07/2016	20/07/2016	No	Yes
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes