ISRCTN11524409 https://doi.org/10.1186/ISRCTN11524409

The effects of krill oil on resistance exercise

Submission date
27/10/2017

Recruitment status
No longer recruiting

Registration date
31/10/2017

Overall study status
Completed

Last Edited
16/10/2018

Condition category
Nutritional, Metabolic, Endocrine

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Resistance training describes a type of training where you move against a force that resists your movement. Krill Oil is a supplement that could be helpful to those who are doing resistance training.
The aim of this study is to investigate the effect of a nutritional intervention, Krill Oil, in combination with resistance training on muscular health in healthy participants.

Who can participate?
Males aged 18 to 30 years old who are currently doing resistance training at least two times per week for the past six months.

What does the study involve?
Participants undergo a resistance training program (programmed, non-linear training split) four days per week for a period of 8 weeks. Participants are randomly allocated to one of two groups. Those in the first group receive 3grams of a placebo (a dummy capsule) that contains safflower oil. Those in the second group receive the Krill oil (3 grams) capsule. Supplements are consumed prior to workouts on training days while eating breakfast on non-training days. Participants are assessed for their body composition and muscle strength after eight weeks.

What are the possible benefits and risks of participating?
Participants may benefit from an increase in lean body mass and strength. Participation in exercise includes the potential risk of injury.

Where is the study run from?
Applied Science and Performance Institute (USA)

When is the study starting and how long is it expected to run for?
January 2016 to December 2016

Who is funding the study?
Rimfrost USA (USA)

Who is the main contact?
Dr Jacob Wilson

Contact information

Type(s)
Scientific

Contact name
Dr Jacob Wilson

Contact details
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United States of America
33607

Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
KrillOil002

Study information

Scientific Title
The effects of krill oil supplementation combined with resistance training on body composition and athletic performance

Study objectives
The aim of this study is to investigate the ability of Krill Oil to augment resistance training-induced changes in body composition and performance.

Ethics approval required
Old ethics approval format

Ethics approval(s)
IntegReview IRB, Austin, TX, 14/03/2016, ref: Protocol Number: 7952

Study design
Single-center randomised double-blind placebo-controlled parallel interventional study

Primary study design
Interventional

Secondary study design
Randomised parallel trial

Study setting(s)
Other

Study type(s)
Quality of life

Participant information sheet
No participant information sheet available.

Health condition(s) or problem(s) studied
Healthy volunteers

Interventions
Participants undergo a resistance training program (programmed, non-linear training split) four days per week for a period of 8 weeks.

Participants are allocated to one of two groups. Those in the first group receive 3 grams of Placebo (safflower oil) in a softgel 6500 mg capsule. Those in the second group receive 3 grams of Krill (Euphausia superba) Oil (Rimfrost Sublime, Rimfrost USA LLC, Merry Hill, NC, USA, Lot 8723-15-01-03), administered as 6 500mg softgel capsules.

Supplements are consumed pre-workout on training days, and with breakfast on non-training days.

Participants are followed up for their body composition using the whole-body Dual-Energy X-ray Absorptiometry (DXA) at baseline and 8 weeks. Participants are assessed for their strength using one repetition maximum (1RM) on a bench press and leg press at baseline and 8 weeks.

Intervention Type
Supplement

Primary outcome measure
1. Body composition is measured using the whole-body Dual-Energy X-ray Absorptiometry (DXA) at baseline and 8 weeks
2. Strength is measured using one repetition maximum (1RM) on a bench press and leg press at baseline and 8 weeks

Secondary outcome measures
1. Perceptual Measures is measured using perceived recovery at beginning and end of every week
2. Cognition is measured using a Stroop Test at baseline and eight weeks
3. Safety is measured using comprehensive metabolic panel (CMP) at baseline and eight weeks
4. Complete blood count (CBC) and lipid panels is measured using blood tests at baseline and eight weeks

Overall study start date
01/01/2016

Completion date
31/12/2016

Eligibility

Key inclusion criteria
1. Males 18 to 30 years of age
2. Resistance training at least 2 times per week for the past six months
3. Minimum of 1 year of training experience active
4. Currently resistance training

Participant type(s)
Healthy volunteer

Age group
Adult

Lower age limit
18 Years

Sex
Male

Target number of participants
21

Key exclusion criteria
1. Free of musculoskeletal, metabolic, and respiratory disorders
2. Free of cardiovascular disease
3. No musculoskeletal injuries with the last six months
4. No history of smoking or drug use
5. No history of excessive alcohol consumption
6. Not taking prescription medication
7. Have not used a fish oil-, thermogenic-, protein-, amino acid-, or creatine supplement within the prior two months
8. Have not habitually used caffeine (e.g. more than 2 cups of coffee per day)

Date of first enrolment
15/03/2016

Date of final enrolment
01/11/2016

Locations

Countries of recruitment
United States of America

Study participating centre
Applied Science and Performance Institute
Tampa

United States of America
33607

Sponsor information

Organisation
Rimfrost USA

Sponsor details
841 Avoca Farm Road
Merry Hill
United States of America
27957

Sponsor type
Industry

ROR
https://ror.org/02q6tz689

Funder(s)

Funder type
Industry

Funder Name
Rimfrost USA

Results and Publications

Publication and dissemination plan
Planned publication in a high-impact peer reviewed journal.

Intention to publish date
01/04/2018

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are/will be available upon request from Dr Jacob M Wilson, jwilson@theaspi.com.

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	26/04/2018		Yes	No