Welcome

Welcome to the Human Nutrition Facility (HNF) volunteer newsletter.

At the Rowett we run a variety of human nutrition studies for which volunteers are needed. A brief description of our latest studies and how to take part are listed here.

If you have received this newsletter in error or have any comments or questions please feel free to get in touch with David Bremner, Research Assistant
Tel: 01224 438785
Email: d.bremner@abdn.ac.uk

Rowett now on Facebook

The Rowett Institute has recently launched its own facebook page. The aim is to provide volunteers for our Human Nutrition studies with information about studies as well as provide feedback on completed studies. We will also try to answer any questions that you may have about what volunteering for a particular study involves.

https://www.facebook.com/RowettAberdeen
Our Latest Studies

**Reduced Gluten Study**

The aim of this study is to produce a type of wheat bread comparable to standard gluten containing bread in terms of taste but in which the proteins that may cause gluten sensitivity have been removed or digested. This new type of bread would then be suitable for non-coeliac gluten sensitive people who feel they benefit from being on a low-gluten or gluten free diet.

We are looking to recruit volunteers who are;
- Men and women aged between 18 and 70, who believe they experience non-coeliac gluten sensitivity and are willing to consume breads made of wheat flour
- Healthy male and female volunteers aged 18-70 who do not experience gluten sensitivity to act as a control group

As part of the trial you will be asked to consume normal gluten-containing bread, therefore we are unable to accept volunteers who have been diagnosed with coeliac disease or wheat allergy.

For more information please contact:
- Dr. Dinka Rees
  - Tel: 01224 438602
  - Email: dinka.rees@abdn.ac.uk

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**The Fabulous Fibre Study**

We are developing a new fibre supplement to promote gut health and general health in people over 60 years old. We will provide volunteers the fibre supplement in the form of a powdered sachet which can be easily sprinkled on top of your meal or mixed into drinks.

We are looking to recruit volunteers who are:
- Healthy men and woman aged 60 or over
- Normal/overweight body weight range (BMI 20 – 32 kg/m²)
- Not on any kinds of antibiotics within the last 3 months
- Have no wheat or gluten allergies
- Not on any cholesterol lowering medication
- Non-vegetarian or vegan
- Non-smokers

There will be a travel reimbursement with a £50 gratuity on completion of the study.

For more information please contact:
- Miss Faith Chung
  - Tel: 01224 438726
  - Email: faith.chung@abdn.ac.uk
- Dr. Sylvia Duncan
  - Tel: 01224 438732
  - Email: sylvia.duncan@abdn.ac.uk
Our Latest Studies

The Local Foods Study

Volunteers required for a study investigating whether eating local foods rather than foods produced globally can affect our body’s mineral and vitamin levels.

We are looking to recruit:
• Healthy men and women
• Non-smokers
• Normal to overweight (BMI 19-35 kg/m²)
• Not taking any long term medication or nutritional supplements

For more information please contact:
Dr Joanna Kaniewska  Mr David Bremner
Tel: 01224 438644  01224 438785
Email: j.kaniewska@abdn.ac.uk  d.bremner@abdn.ac.uk

CAROTFoods Study

Bugs bunny knew what was good for him when he ate all those carrots! Fruits and vegetables such as tomatoes, carrots, melons and peppers are rich in a family of pigments known as carotenoids. They also give these foods their colour. Carotenoids are important for our health as they serve as a source of vitamin A and help protect us against disease. We are particularly keen to develop ways of increasing the absorption of these important compounds from our food. In this study we are looking at how carotenoids are absorbed into our bodies when they are incorporated into two processed foods – bread and mayonnaise.

We are looking to recruit volunteers who are:
• Healthy men and women
• Aged between 18 - 75
• Not taking any regular prescription medication

For more information please contact:
Dr. Viren Ranawana  Mrs Claire Kidd
Tel: 01224 438764  01224 438690
Email: vranawana@abdn.ac.uk  c.kidd@abdn.ac.uk
Our Latest Studies

Consumer Attitudes Study

Our study seeks to understand the appeal of meat and meat alternatives. Current levels of meat consumption appear unsustainable from both environmental and public health perspectives. This study uses focus groups to help understand barriers and opportunities for the partial replacement of meat with plant alternatives.

We are looking to recruit volunteers who are:
- New Parents and pregnant women
- Couples who both work and have no children
- Recently retired or approaching retirement
- Regular gym users
- 1st year undergraduate students
- Working men

For more information contact
Mr David McBey  Dr. David Watts
Tel: 01224 274128  01224 272352
Email: d.mcbey@abdn.ac.uk  d.watts@abdn.ac.uk

Full4Health

This a study funded by the European Commission and is looking at the effect of breakfast on appetite.

Eligible volunteers will be asked to visit the Rowett Institute (Bucksburn) for two morning visits lasting approximately 3 hours each.

We are looking for volunteers who are:
- Slim to Normal-weight
- Aged between 65 and 75 years

For more information contact
Mr William Buosi  Miss Claire Fyfe
Tel: 01224 438691  01224 438606
Email: f4h@abdn.ac.uk  c.fyfe@abdn.ac.uk
Our Latest Studies

**Full4Health fMRI Study**

We are now looking to recruit volunteers for this study. The study involves 2 morning visits (each visit lasting approximately 2 and a half hours) at the Aberdeen Biomedical Imaging Centre, located within the Foresterhill Hospital Campus. During each visit we will monitor your appetite, and ask you to complete 3 simple tasks whilst we measure your brains response to images of food. You will receive feedback about your body weight, body fat and BMI

We are looking to recruit volunteers who are;

- Male or Female
- Ages 8 – 10 and 13 - 17
- Lean or Overweight

For more information please contact
**Mr William Buosi**
Tel: 01224 438691
Email: william.buosi@abdn.ac.uk

**Dairy Breakfast Study**

We are interested in assessing the impact of dairy protein on appetite and food intake using liquid & solid test meals of varying protein and carbohydrate compositions.

We are looking to recruit volunteers who are;

- Healthy men
- Aged 20 - 75
- Lean (BMI 18.5 – 25 kg/m²) or Overweight (BMI 26 – 40 kg/m²)

You are invited to come to the Rowett HNF for a medical screening & baseline body composition tests, after which we would like you to record a 7 day food diary. You will then be asked to attend the HNF on five occasions (1 week apart) for the study test visits which last approximately 4.5 hours. The study lasts 29 days in total.

For more information please contact
**Miss Claire Fyfe**
Tel: 01224 438606
Email: C.Fyfe@abdn.ac.uk
Our Latest Studies

**Reality Study**

This study involves testing a web tool to record diet and physical activity.

We are looking to recruit volunteers who are:
- Aged 18 - 65

For more information please contact

**Prof Paul Haggarty**
Tel: 01224 438630
Email: p.haggarty@abdn.ac.uk

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**Understanding Food Choices Study**

Understanding how we make food choices could help the Scottish Government develop and implement effective policies for promoting healthy eating. To do this we need your help.

We are looking to recruit volunteers who are:
- Men and Women
- All adult age groups
- Resident in Scotland
- Single People
- Couples with and without children

For more information please contact

**Dr. John McKenzie**
Tel: 01224 274568
Email: j.s.mckenzie@abdn.ac.uk

**Dr. David Watts**
Tel: 01224 272352
Email: d.watts@abdn.ac.uk
Our Latest Studies

Benefit of plant-based food in our diet

Alternative protein long-term study

The partial replacement of traditional sources of protein (meat/processed meat) with plant protein could represent a healthy, sustainable way of eating.

Our study will evaluate the nutritional and health benefits after eating buckwheat, broad bean, hemp and green pea by replacing part of the meat from your habitual diet over a 12-week period. We will provide the plant-based food.

We are offering a gratuity of £50 which includes travel expenses for participation

We are looking to recruit volunteers who are:
• Healthy men and woman
• Aged 18 – 65
• Non-smokers
• Vegetarian and non-vegetarian
• Normal to overweight (BMI 18 – 40 kg/m²)

For further details, please contact
Dr. Madalina Neacsu or Mr Nicholas Vaughan
Tel: 01224 438760 or 01224 438769
Email: m.neacsu@abdn.ac.uk, 
Email: n.j.vaughan@abdn.ac.uk
You ask the Questions.  
Micronutrients

In basic terms, nutrients can be described as things that we get from our food which are essential to allow our body to live and function properly.

Apart from breastmilk as food for babies, no single food, or indeed single food group, contains all the essential nutrients our bodies need to be healthy which is why so much emphasis is placed on consuming a healthy, balanced diet to allow us to get all the nutrients we need.

Nutrients can be split into two groups

- **Macronutrients** – Carbohydrate, Protein, Fats which we need to eat in larger amounts in the diet as they provide our bodies with energy and also provide the building blocks for growth and maintenance of a healthy body.

- **Micronutrients** – Vitamins, Minerals and Trace Elements which are needed in very small amounts but which are still essential to keep us healthy. These are used predominantly for body repair and for regulating a multitude of physiological processes within the body.

For the next few pages we are going to look specifically at a few of the minerals and trace elements and look at what they are, what we need them for and the types of food we can get them from.
You ask the Questions.
Micronutrients

- Minerals are inorganic substances required by the body in small amounts for a variety of different functions.
- Minerals are involved in the formation of bones and teeth; they are essential constituents of body fluids and tissues; they are components of enzyme systems and they are involved in normal nerve function.
- The body requires different amounts of each mineral; people have different requirements, according to their age, sex, physiological state (e.g. pregnancy) and sometimes their state of health.

Some minerals are needed in larger amounts than others, e.g. calcium, phosphorus, magnesium, sodium, potassium and chloride. Others are required in smaller quantities and are sometimes called trace minerals, e.g. iron, zinc, iodine, fluoride, selenium and copper. Despite being required in smaller amounts, trace minerals are no less important than other minerals.

Minerals are often absorbed more efficiently by the body if supplied in foods rather than as supplements. Also, a diet that is short in one mineral may well be low in others, and so the first step in dealing with this is to review and improve the diet as a whole. Eating a varied diet will help ensure an adequate supply of most minerals for healthy people.
You ask the Questions.  
Micronutrients

Calcium

Calcium (Ca) is the most abundant mineral in the body and is essential for a number of vital functions. While most widely recognized for its role in bone health, it also plays other very important roles such as being used by cells to communicate with each other as well as being involved in processes which control muscle contraction and blood clotting.

Food sources

- Milk, cheese and other dairy products provide about half of the calcium in the UK diet.
- Bread is also an important source in the UK because most bread flour (though not wholemeal) is fortified with calcium by law.
- Calcium is also provided by some green leafy vegetables such as broccoli and cabbage (but not spinach),
- Good vegetarian sources include fortified soya products, plain live yoghurt and cottage cheese
- There are also reasonable levels in pulses, soya beans, almonds and sesame seeds

Sodium

Sodium is responsible for regulating body water content and electrolyte balance. Sodium is a component of common salt, known as sodium chloride (NaCl).

Most raw foods contain very small amounts of sodium chloride (salt). But salt is often added during the processing, preparation, preservation and serving of foods.

High sodium intakes, is considered to be among the risk factors for high blood pressure (hypertension), which is a risk factor for cardiovascular disease and stroke. A low salt diet may be used in the treatment of hypertension.

For more information on salt: http://www.salt.gov.uk/
You ask the Questions.
Micronutrients

Potassium

Potassium is essential for water and electrolyte balance and the normal functioning of cells, including nerves.

Food sources

- Bananas
- Vegetables, especially dark green,
- Apricots
- Sweet Potatoes

Copper

Copper is the third most abundant dietary trace metal after iron and zinc. It is a component of many enzymes and is needed to produce red and white blood cells. The body also needs copper to utilise iron efficiently and it is thought to be important for infant growth, brain development, the immune system and for strong bones.

Food sources

- Shellfish
- Offal
- Seeds, nuts and wholegrain cereals (about a third of intake in the UK is from cereals)
You ask the Questions.
Micronutrients

Iron

Iron is essential for the formation of haemoglobin in red blood cells; haemoglobin binds oxygen and transports it around the body. Iron is also an essential component in many enzyme reactions and has an important role in the immune system.

A lack of iron stores in the body can eventually lead to iron deficiency or anaemia. In particular, women of child bearing age and teenage girls need to ensure they consume adequate dietary iron because their requirements are higher than those of men of the same age.

Food sources

- Liver
- Red Meat such as beef, lamb and venison

Good vegetarian sources include

- Pulses
- Nuts
- Eggs
- Dried Fruits
- Whole Grains
- Dark green leafy vegetables

Since the 1950s in the UK, all wheat flours (other than wholemeal) have been fortified with iron and many breakfast cereals are also fortified with iron and so contribute to iron intake.
Micronutrients

Zinc

The major function of zinc in human metabolism is as a cofactor for numerous enzymes. Zinc has a key role as a catalyst in a wide range of reactions. It is directly or indirectly involved in the major metabolic pathways concerned with protein, lipid, carbohydrate and energy metabolism and is also essential for cell division and, therefore, for growth and tissue repair and for normal reproductive development. In addition, zinc is required for the functioning of the immune system and in the structure and function of the skin, and hence plays a vital role in wound healing.

Food sources

Zinc is present in many foods and is most readily absorbed from

- Meat, which provides about a third of zinc in the UK diet.

It is also present in

- Milk, cheese, yoghurts
- Eggs
- Shellfish
- Wholegrain cereals
- Nuts and pulses.
You ask the Questions.
Micronutrients

Iodine

Iodine is an essential component of the thyroid hormones, thyroxine and triidothyronine, which are vital regulators of metabolic rate.

The amount of iodine in plant foods such as vegetables and cereal grains is determined by the amount of iodine in the growing plant's environment, and the amount in the soil or water can vary dramatically. The only rich sources of iodine are seafoods (sea fish, shellfish and seaweed), but milk is also a source. In some countries certain foods, e.g. salt and bread, are fortified with iodine.

Chromium

Chromium (III) is the active form of this nutrient and its main functions appear to be linked with carbohydrate and lipid metabolism. This form of chromium is thought to promote the action of insulin, the hormone which controls glucose levels in the blood. Subjects with adequate dietary chromium have improved control over blood glucose and a better blood lipid profile.

Sources of chromium include

- Meat
- Nuts
- Cereal grains

While the list above appears extensive, there are other minerals which are needed in tiny amounts and which appear to be essential in the diet, e.g. phosphorous, boron, Selenium, Manganese to name but a few, for more information see the link below.

http://www.nutrition.org.uk/
If you have a topic you would like more detail on or ideas for topics to include in our newsletters then please send suggestions to David Bremner at the e-mail address listed on page 1. All suggestions or requests for topic matters will be treated confidentially.

Alternatively, if you would like to see a more in depth explanation about any of the current studies or maybe a study you previously participated in, then contact us in the same way.

Links to sites and resources provided by third parties are provided for your general information only. We have no control over the contents of those sites or resources and subsequently can give no guarantee regarding their accuracy or suitability.

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Some Useful Web links

Human Nutrition Facility Homepage
Rowett Homepage
Food Standards Agency
NHS Livewell
British Heart Foundation
World Cancer Research Fund
British Dietetic Association

Contact Us

Human Nutrition Facility
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