

Carbohydrates and health

Key message: Investigate the role of cereals and cereal products in a varied diet. Comment on the importance of carbohydrates in the diet and how cereal and grain dishes can contribute.

Objectives

- Explain the sources and function of carbohydrates.
- Investigate the current recommendations for dietary fibre and explain how bread, and other cereal products contribute.

Resources

- Carbohydrates and health PowerPoint presentation
- Fibre investigation sheet

Introduction

- Ask the class if they can remember the different types of carbohydrates and examples of foods which provide these.
 - *Starch – bread, rice, pasta, potatoes, cereal, couscous*
 - *Sugars – fruit, yogurt, biscuits, chocolate, cakes, sugar sweetened drinks*
 - *Fibre – fruit and vegetables, beans and pulses, cereal and cereal products, nuts and seeds*
- Why do we need carbohydrate in our diet?
 - *Carbohydrate provides an important source of energy.*
 - *Fibre is important for keeping our digestive system healthy and may reduce the risk of diseases such as cardiovascular disease, type 2 diabetes and coronary events.*

Activity ideas

- Use the PowerPoint presentation **Carbohydrates and health** to recap on the sources and functions of carbohydrates, along with the latest findings and recommendations from the SACN report on Carbohydrates and health.
- Over a week, task pupils with collecting nutrition and health articles from newspapers, magazines or online news websites. Ask pupils to work in small groups to critically appraise the articles collected and look for the 'facts behind the headlines'. Challenge pupils to create a factual newspaper article reporting on an aspect of carbohydrates and health (e.g. sugars, fibre). This could be used to create an informative display in the classroom.
- Task pupils with using the **Fibre investigation sheet** either as part of a supermarket visit or using an online supermarket website. As well as finding the fibre content of each food stated, there is space for pupils to find and document five other fibre containing foods.



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- When back as a group in the classroom, get pupils to compare and discuss their findings (e.g. how wholegrain/white varieties varied, how different brands varied, price of different fibre containing foods). As a class come up with a top ten of affordable fibre containing foods. Challenge pupils to work in pairs to design and make a healthy recipe which utilizes one of these fibre containing foods.
- Successful recipes could be featured on the school website or in the school newsletter for pupils and their families to recreate at home. They can also be sent to the Grainchain team for possible inclusion on the website.

Round up

Recap the learning by questioning the pupils:

- What are the different types of carbohydrate and what are some examples of foods that provide these?
- What are the functions of carbohydrate?
- What does the term free sugars mean?
- What are the health benefits of consuming fibre?
- What are the latest recommendations on total carbohydrate, fibre and sugars?
- What are some sources of fibre?

Extension ideas

- Challenge pupils to come up with a FAQ about carbohydrates and health. Each pupil should write down a question on carbohydrates and swap with another pupil in the class, who will be responsible for researching and writing the answer to the question. Finished questions and answers can be placed into a master document and used for revision.
- Challenge pupils to come up with a meal plan that provides 30g of AOAC fibre. Ensure that the pupils follow other healthy eating principles in their meal plans (e.g. adequate drinks, at least 5 portions of fruit and vegetables each day).

Fact file

In the diets of 11-18 year olds, 42% of fibre intake comes from cereals and cereal products.

