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Food and Health

# Healthy Eating for Children

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Science



- Introduction
- 1-4 yr olds
- 5-12 yr olds
- Key points
- Resources



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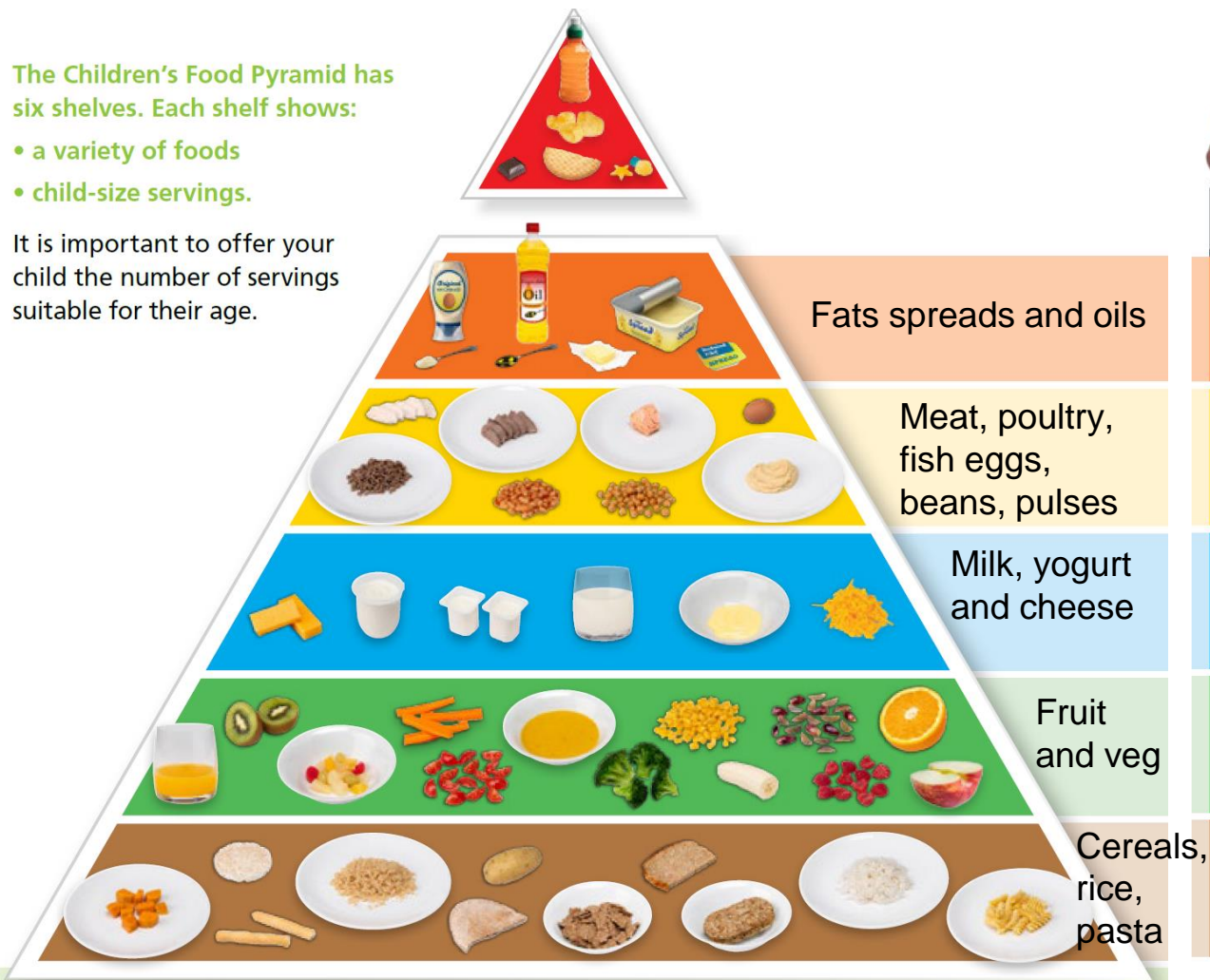
## Healthy Eating Guidelines

### Children – 1-4 year old

The Children's Food Pyramid has  
six shelves. Each shelf shows:

- a variety of foods
- child-size servings.

It is important to offer your  
child the number of servings  
suitable for their age.



Note: The Children's Food Pyramid above shows examples of foods on each food shelf. It does not represent the amount of food a 1 to 4 year old child should eat every day.



Ages one and two	Ages three and four
In very small amounts	In very small amounts
2 Servings a day	3-4 Servings a day
3 Servings a day	3 Servings a day
2-3 Servings a day	4-5 Servings a day
3-4 Servings a day	4-6 Servings a day



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# Healthy Eating Guidelines

## Children – 1-4 year old

### Cereals, breads, potatoes, pasta and rice



Children need more of these foods for energy and growth – that is why they are the biggest shelf on the Children's Food Pyramid. These starchy foods provide fibre and some B vitamins which are needed to convert food into energy. Offer at least one of these foods at every meal.



### Healthy eating habits

Offer your child a breakfast cereal with added iron most days of the week. This is especially important for younger children.

Standard porridge is a healthy breakfast food but children aged 1 to 4 will benefit from a porridge with added iron.

Check the label and choose cereals and porridge that contain at least 12mg of iron per 100g.

Limit the amount of sugar coated and chocolate coated breakfast cereals you offer your child.

Young children can meet their fibre needs by having a mix of white and wholemeal cereals and breads.

Offering all wholemeal or wholegrain choices may be too filling and reduce your child's appetite for other nourishing foods.

If your child is prone to constipation, offer more wholemeal and wholegrain varieties. Make sure they eat vegetables and drink enough fluid.

### Servings

1 and 2 year olds

3 or 4 servings a day

3 and 4 year olds

4 to 6 servings a day

### Serving guide

Adjust these servings to suit your child.

Smaller, younger children will eat less.

Taller, older and more active children will eat more.

### Each of these examples shows one serving



½ cup (30g)  
flaked cereal  
fortified with iron



1-1½ wheat  
biscuits



1 plain rice cake



1-2 crackers



½-1 slice bread



½-1 small roll



½ pitta pocket



½ small wrap



½ chapatti



1 unsalted  
breadstick



½-1 small cooked  
potato



½ cup (30-40g)  
cooked sweet  
potato or yam



½ cup (30-40g)  
cooked pasta



½ cup (30-40g)  
cooked rice



½ cup (30-40g)  
cooked noodles



½ cup (30-40g)  
cooked couscous



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# Healthy Eating Guidelines

## Children – 1-4 year old

### Vegetables, salad and fruit



These foods provide vitamins, minerals and fibre.

At every meal, and as snacks, offer your child fresh vegetables, salad or fruit chopped into small servings.



### Healthy eating habits

Offer your child different coloured vegetables, salad and fruit. Try to include:

- green
- yellow
- orange
- red
- purple.

This will allow them to enjoy the variety of vitamins and minerals.

Orange juice is rich in vitamin C. When your child drinks unsweetened orange juice and eats an iron-containing breakfast cereal, it helps them absorb iron. Iron is an important nutrient for young children.

Other good sources of vitamin C are:

- berries
- oranges
- kiwis
- red peppers.

You can add chopped berries to breakfast cereal.

Limit dried food to once a week because it:

- contains sugar
- is sticky
- is not kind to teeth.

### Servings

1 and 2 year olds

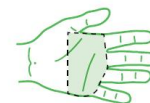
2 or 3 servings a day

3 and 4 year olds

4 or 5 servings a day

### Serving guide

An average serving size is about 40g. A serving size that fits into half the palm of your hand is about right for children aged 1 to 4.



Adjust these servings to suit your child – some children will take a little more and others a little less.

Each of these examples shows one serving



1 plum



1 kiwi



1 mandarin



100ml unsweetened orange juice



1/2 orange



1/2 apple



1/2 pear



1/2 banana



3-4 cooked carrot sticks



3-4 cucumber sticks



5-6 berries cut in halves or quarters



5-6 grapes cut in quarters



3-4 cherry tomatoes cut in quarters



1/2 cup (30-40g) tinned fruit in natural juice



1/2 cup (30-40g) cooked, fresh or frozen vegetables



100ml homemade or readymade vegetable soup



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# Healthy Eating Guidelines

## Children – 1-4 year old

### Milk, yogurt and cheese



These foods provide calcium for healthy bones and teeth. Offering milk as a drink with meals is an easy way to give your child one of the three daily servings they need.



### Healthy eating habits

Milk is a key food for 1 to 4 year old children.

Continue to provide breastmilk up to 2 years of age or beyond.

Offer full-fat milk to children aged 1 to 2 years.

You can offer low-fat milk to children aged 3 to 4 years.

Skimmed milk is not suitable for children under 5 years of age.

You can offer non-dairy soya 'milks' if your child is allergic to cow's milk. These should be unsweetened and fortified with calcium.

Almond milk, coconut milk, rice milks and other plant-based milks are not suitable for young children.

Your child can be given infant formula up to one year old and after that age they can have full-fat cow's milk.

You can offer your child small pots (47g) of plain or natural fromage frais with meals or between meals.

### Servings

**1 and 2 year olds**

**3 servings a day**

**3 and 4 year olds**

**3 servings a day**

Breastmilk counts towards these servings. Breastfeeding mothers can add cow's milk to their child's cereal or offer cow's milk as a drink. It is important to include yogurt and cheese also to help meet your child's nutritional needs.



Each of these examples shows one serving



**200ml or 2x100ml**  
plain milk or milk with added vitamins



**200ml or 2x100ml**  
unsweetened soya 'milk' fortified with calcium



**2 adult thumbs**  
of cheese



**1 pot (125g)**  
plain yogurt



**2 small pots (47g)**  
plain or natural  
fromage frais



Homemade custard or  
rice pudding made with  
**200ml** of milk

Servings can be split during the day between a meal and a snack. 1 serving can combine two foods or drinks. For example, 1 serving could be 100ml of milk with 1 small pot fromage frais or 1 thumb of cheese.

Your child can start drinking from a cup or a beaker when they are between 1 and 2 years old.





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# Healthy Eating Guidelines

## Children – 1-4 year old

### Meat, poultry, fish, eggs, beans or nuts



These foods provide protein and iron for growth and development. Red meat such as beef, lamb and pork contain iron. Offer them 3 times a week.



### Healthy eating habits

Offer meat, poultry, fish, eggs, beans or nuts to your child at each of their 2 main meals every day.

Oily fish have omega 3 and vitamin D including:

- mackerel
- trout
- herring
- sardines.
- salmon

These are good for brain and eye development so offer them once a week.

You should limit processed meat like ham or bacon to once a week and only give **small amounts**.

Offer your child smooth nut butter without added sugar and salt. Whole nuts should not be given to children under 5 because of the risk of choking.

Good vegetarian protein sources include:

- eggs
- beans
- soya products
- nuts
- peas
- seeds.
- chickpeas

Protein is not a problem for vegetarian diets but iron can be. Consult a registered dietitian for advice.

Foods from the milk, yogurt and cheese shelf also provide protein.

Chicken nuggets, sausages and burgers have less protein and are high in fat and salt. **They should not be a regular part of your child's diet.**

### Servings

**1 and 2 year olds**

**2 servings a day**

**3 and 4 year olds**

**3 or 4 servings a day**

### Serving Guide

An average serving size of cooked beef, lamb, pork, chicken, turkey or fish is about 30g. A serving size that fits into one third the palm of your hand is about right for children aged 1 to 4.



Each of these examples shows one serving



**30g** cooked beef



**30g** cooked lamb



**30g** cooked chicken or turkey



**30g** cooked salmon



**1/4 cup (40g)** baked beans



**1/4 cup (40g)** lentils



**1/4 cup (40g)** peas



**1/4 cup (40g)** chickpeas



**35g** hummus



**35g** cooked portion tofu



**2** falafels



**1** medium egg



**1 heaped teaspoon** smooth peanut or nut butter



# Healthy Eating Guidelines

## Children – 5-12 years old

### Young girls (5–12 years)

#### Healthy eating is important for girls aged 5–12 years because:

- They are growing.
- From five years of age, growth is gradual until they reach puberty, when growth is more rapid.
- Puberty can start as young as 8 years old or as late as 11 or 12 years old.
- Growth spurt at puberty lasts about four years.

#### A healthy diet helps young girls reach their full physical and mental potential and:

- Promotes healthy weight gain
- Protects against iron deficiency
- Helps girls develop a taste for the foods they need to keep healthy for the rest of their lives.

See page 54 for information on the number of calories girls need each day.



### Young boys (5–12 years)

#### Healthy eating is important for boys aged 5–12 years because:

- They are growing.
- From five years of age, growth is gradual until they reach puberty, when growth is more rapid.
- Puberty can start as young as 10 years or as late as 13 or 14 years.
- Growth spurt at puberty lasts about four years.

#### A healthy diet helps young boys reach their full physical and mental potential and:

- Promotes healthy weight gain
- Provides enough vitamins and minerals
- Supports rapidly developing muscles
- Helps boys develop a taste for the foods they need to keep healthy for the rest of their lives.

See page 54 for information on the number of calories boys need each day.





# Children – 5-12 years old



**Foods and drinks  
high in fat, sugar  
and salt**

**NOT every day**



**Fats, spreads  
and oils**

**In very small amounts**



**Meat, poultry,  
fish, eggs, beans  
and nuts**

**2 servings per day**



**Milk, yogurt  
and cheese**

**3 to 5 servings per day**



**Wholemeal cereals  
and breads, potatoes,  
pasta and rice**

**3 to 4 servings per day**  
(very active girls will need more)



**Vegetables,  
salad and fruit**

**5 to 7 servings per day**

These foods are high in calories, fat, sugar and salt,  
and need to be limited.

*See page 30 for a calorie guide*



A teaspoon can guide a portion size of jam, honey or marmalade.

Use small amounts of reduced-fat spreads.  
Cook with as little oil as possible – boil, bake,  
steam and grill instead.

*See page 27 for a guide to serving sizes*



Portions of butter or spread found in cafés can guide the amount to use.  
Reduced-fat monounsaturated and polyunsaturated spreads are best. One portion  
pack is more than enough for one slice of bread – try to make it do for two.

Choose lean meat and poultry. Eat fish twice a  
week – choose oily fish once. Limit processed  
meats such as sausages, bacon and ham.

*See page 19 for a guide to serving sizes*



The width and depth of a child's  
palm is a guide to how much meat,  
poultry or fish they need in a day.



Use a 200 mL disposable cup to  
guide portion size. For example:  
¾ cup peas, beans or lentils.

Choose low-fat varieties. Enjoy low-fat milk  
and yogurt more often than cheese.

*See page 15 for a guide to serving sizes*



Use the width and depth of a  
child's thumbs to guide their  
portion size of cheese.



Use a 200 mL disposable cup to  
guide a portion of milk or yogurt.

Wholemeal and wholegrain are best. Younger and  
smaller girls need less than older and bigger girls.

*See page 11 for a guide to serving sizes*



Use a 200 mL disposable cup to guide portion size. For example:  
⅓ cup raw porridge oats | One cup cooked brown rice | 1½ cups cooked brown pasta.

Base your meals on these and enjoy a variety  
of colours. More is better.

*See page 7 for a guide to serving sizes*



Use a 200 mL disposable cup to guide portion size. For example:  
½ cup cooked carrots | One cup raw peppers | ½ cup blueberries.

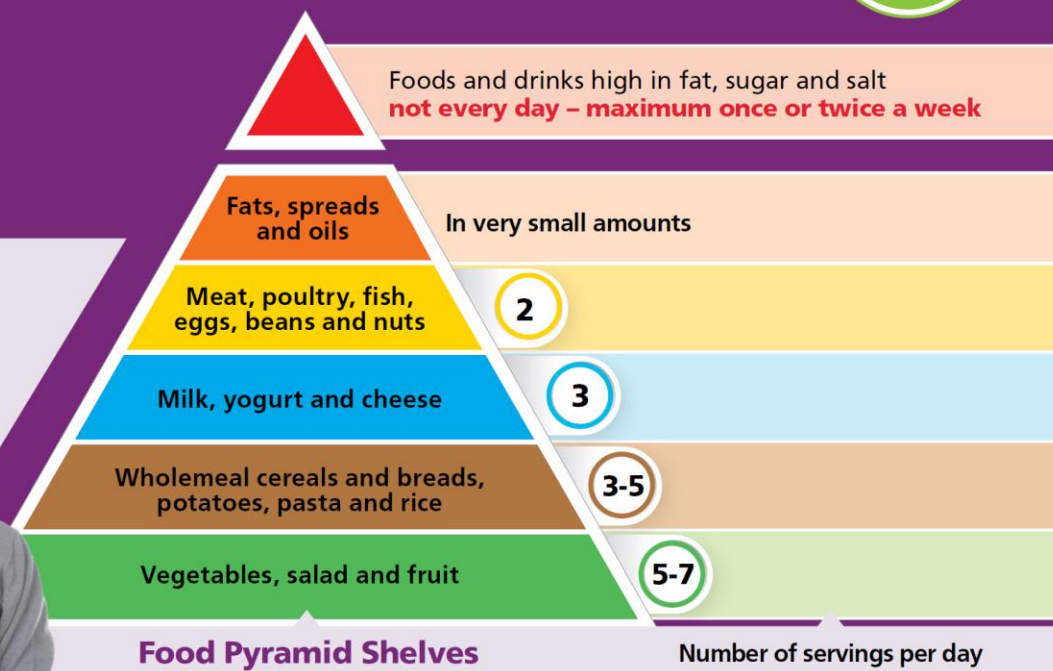


# Healthy Food for Life



## Food Pyramid to Daily Meal Plan

Jakub, an active boy aged 5, loves being outdoors playing with his friends. Jakub needs 3 servings from the *Wholemeal Cereals and Breads, Potatoes, Pasta and Rice shelf*.





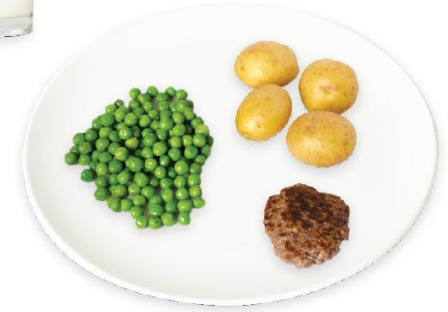
### Breakfast

- 1 200ml low-fat milk for cereal and drink
- 1 1 cup wholegrain cereal



### Lunch

- 1 75g tuna
- 1 1 wholemeal pitta bread
- 1 Sweetcorn, lettuce
- 1 150ml unsweetened orange juice



### Dinner

- 1 75g lean mince beef burger
- 1 200ml low-fat milk
- 1 4 boiled small potatoes
- 1 ½ cup peas

water



### Mid-morning snack

- 1 Grapes



### Afternoon snack

- 1 Low-fat fruit yogurt drink



### Evening snack

- 1 Apple

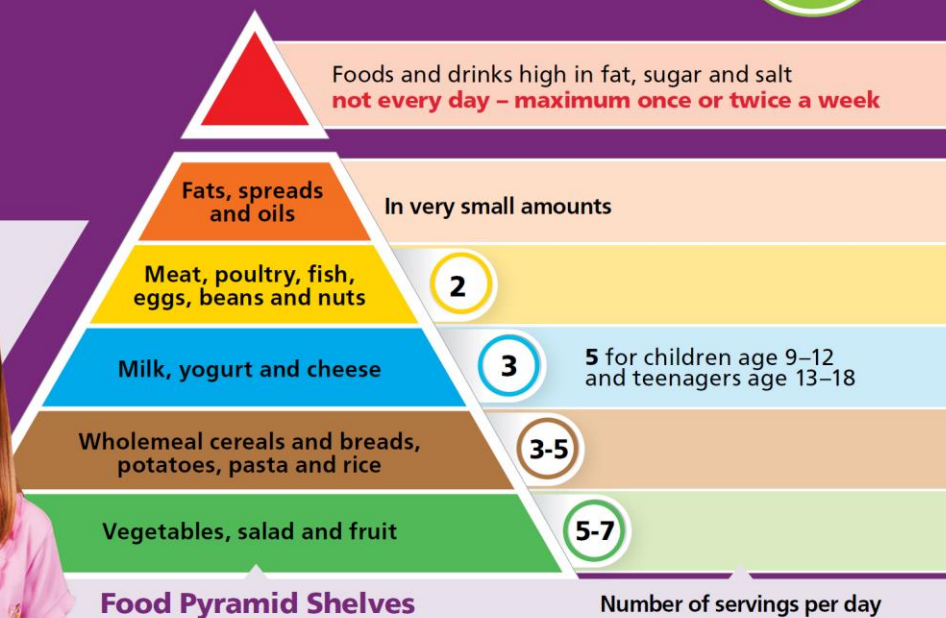


# Healthy Food for Life



## Food Pyramid to Daily Meal Plan

Niamh is a very active 10 year old, plays GAA and loves to dance. Niamh needs 4 servings from the *Wholemeal Cereals and Breads, Potatoes, Pasta and Rice shelf*. As a child between 9 and 18 years, she needs 5 servings from the *Milk, Cheese and Yogurt shelf*.





### Breakfast

- 1 200ml low-fat milk for cereal and drink
- 1 2 wholemeal breakfast biscuits
- 1 Strawberries



### Lunch

- 1 50g chicken
- 1 Low-fat fruit yogurt drink
- 1 2 thin slices wholemeal bread
- 1 Cucumber, iceberg lettuce, tomato



### Dinner

- 1 75g lean mince
- 1 200ml low-fat milk
- 1 1 cup pasta
- 1 Carrots, onion, celery, tinned tomatoes cooked in sauce



### Mid-morning snack

- 1 25g reduced-fat cheese
- 1 Grapes



### Afternoon snack

- 1 Apple



### Evening snack

- 1 200ml low-fat milk for cereal and drink
- 1 1 cup wholegrain flakes
- 1 Banana



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## Other key points

Breakfast – very important for children  
encourage it as part of morning routine




*nutrients*



*Article*

### **And yet Again: Having Breakfast Is Positively Associated with Lower BMI and Healthier General Eating Behavior in Schoolchildren**

Peggy Ober <sup>1,2,3,†</sup>, Carolin Sobek <sup>1,2,\*,†</sup>, Nancy Stein <sup>3</sup>, Ulrike Spielau <sup>2,3</sup>, Sarah Abel <sup>1,2,3</sup>, Wieland Kiess <sup>1,2</sup>, Christof Meigen <sup>1,2</sup>, Tanja Poulain <sup>1,2</sup>, Ulrike Igel <sup>1,2,4</sup>, Tobias Lipek <sup>1,2,3,†</sup> and Mandy Vogel <sup>1,2,†</sup> 



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## Healthy Snacks

### Other key points

#### Healthy Snacks

Five quick and easy snacks:

- Whole grain toast,
- Fruit and Veggie matchsticks (cucumber or carrot can work well) and humous
- Cheese cubes and grapes
- Banana or Apple and nut butter
- Small pot of yogurt with some chopped fruit



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# Healthy Lunches

## Other key points

### Here's what should go in a healthy lunchbox

#### Vegetables, salad and fruit

At least one portion from the fruit and vegetables food group...

#### Meat, poultry, fish, eggs, beans and nuts

One portion from the meat and meat alternatives food group...

#### Wholemeal cereals and breads, potatoes, pasta and rice

One portion from the bread and cereals group which would be...

#### Milk, yoghurt and cheese

One portion from the dairy products food group...

#### Did you know?

Including wholegrain varieties of breads and cereals in our diet can help us feel fuller for longer and prevent constipation.

#### Did you know?

Dairy products are especially important in the diets of children and teenagers as they provide calcium to support growing bones and teeth. Low-fat natural yoghurt with fruit is the best option.

#### Did you know?

Lean cuts of meat such as chicken breast are lower in salt than processed meats such as ham and bacon. Choose lean meat more often than processed meat.

#### Did you know?

To avoid soggy sandwiches put juicy vegetables between some lettuce and other sandwich fillings for example, cheese. For younger children cutting fruit into manageable size chunks will encourage them to eat more fruit.



## Guide to make changes – START campaign

### Let's do this together

Children are better at making changes when the whole family does it together:

“We're all going to do this together.”

“Every day we are going to try our best to try new things as a family.”

“We are doing this so we can all be a bit healthier.”



# Guide to make changes – START campaign

## Four tips to get started

### 1. **Make one change at a time**

- Change from a sugary breakfast cereal to a wholegrain one.
- Change to water or milk between mealtimes instead of sugary drinks or cordials.
- Delay turning on the TV or tablet for half an hour and encourage play instead.

### 2. **Involve the children**

Ask your child what change they could make.

### 3. **Be consistent and stick with it**

- Decide on one or two simple rules to guide you through the change.
- Reward the good changes.
- Don't use treat foods as a reward.



## Guide to make changes – START campaign

### What you say matters when it comes to change

Be specific when praising your child, so that they know what they are doing well

### Cut down on fat, salt and sugar

Reduce the amount of foods like:

- sweets
- chocolate
- cakes
- biscuits
- bars
- crisps
- ice cream

Limit these foods to once or twice a week.



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101 square meals

<https://www2.hse.ie/file-library/health-eating-active-living/healthy-meal-recipe-book.pdf>

Healthy Lunch boxes

<https://www2.hse.ie/file-library/health-eating-active-living/healthy-lunchboxes.pdf>

Healthy Snacks

<https://www.safefood.net/recipes/snacks-for-kids/129>

Healthy Eating for kids

<https://www.gov.ie/en/publication/da7f19-eat-well/#healthy-eating-guidelines-for-kids>

[https://www.fsai.ie/science\\_and\\_health/healthy\\_eating.html](https://www.fsai.ie/science_and_health/healthy_eating.html)

**Get expert advice:** <https://www.indi.ie/>



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#### Previous Lectures

- 20th September 2021 "Making Sense of Food Labels" Dr Fiona Lalor & Dr Celine Murrin
- 14th June 2021 "Meat as Part of a Balanced Diet" Prof Frank Monahan & Prof Clare Corish
- 22nd March 2021 "Food Waste" Associate Professor Tom Curran
- 18th January 2021 "*Nutrition & Healthy Immune Function*" Prof Helen Roche
- 16th November 2020 "*Nutrition & Sports Performance*" Dr Katy Horner
- 16th October 2020: "*Nutrition & Cancer: Prevention and Survivorship*" Dr Amy Mullee
- 21st September 2020: "*What is a Sustainable Healthy Diet?*" Dr Aifric O'Sullivan
- 15th June 2020 "*Adolescent Nutrition - What is Important?*" Dr Breige McNulty
- 18th May 2020 "*Nutrition and Exercise in Weight Management - Facts & Fiction*" Prof Clare Corish and Dr Katy Horner
- 16th January 2020 "*Healthy School Lunches*" Dr Celine Murrin
- 19th November 2019 "*Role of Nutrition in Early Childhood Health*" Dr Aifric O'Sullivan
- 16th September 2019 "*Healthy mum and baby: What's the best nutrition for pregnancy?*" Dr Sharleen O'Reilly
- 17th June 2019 "*Nutrition and Mental Health: The Scientific Evidence*" Professor Lorraine Brennan
- 20th May 2019 "*Nutrition and Heart Health- What Really Matters?*" Dr Breige McNulty
- 7th March 2019 "*Nutrition and Women's Health*" Associate Professor Clare Corish
- 14th January 2019 "*Nutrition and Healthy Ageing*" Professor Helen Roche



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THANK YOU.

