



**Royal Surrey  
County Hospital**  
NHS Foundation Trust

# Calcium for infants and children

**Nutrition & Dietetics Department**

**Patient information leaflet**

## **This leaflet tells you about:**

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- The role of calcium and vitamin D in bone health
- The recommended amounts of calcium for children and young people
- Calcium rich food and drink

## **Why is calcium important for infants and children?**

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Calcium is essential for the formation and maintenance of strong bones and teeth.

Bone strength develops quickly during childhood and adolescence. 90% of bone strength is achieved before the age of 18 years in girls and 20 years in boys. It is very important to have adequate calcium at all ages and especially before these years.

Parents of infants and children on special diets need to take extra care that they are taking enough calcium.

## **Why is Vitamin D important to bone health?**

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Vitamin D is necessary for the body to absorb calcium. The body makes most of its vitamin D from exposure of the skin to sunlight although a small amount can be obtained from food.

The following foods contain vitamin D:

- Margarine
- Oily fish e.g. mackerel, tuna, salmon, trout, sardines
- Eggs
- Some types of children's fromage frais and yoghurts
- Cod liver oil
- Liver and red meat (small amounts)
- Some non dairy milk drinks

Children and young people get most of their vitamin D from day to day exposure to the sun and their diet. The Department of Health advises that all children from six months to 5 years should take a vitamin supplement which includes vitamin D unless they consume a minimum

of 500ml of infant formula milk daily. Children over the age of 5 years who do not eat vitamin D rich foods should also take a supplement containing vitamin D.

Children do not need to sunbathe to make vitamin D. Sunscreen should be used to avoid sun burn.

## How do I know how much calcium my child needs?

The following information is designed to help you check your child's calcium intake. List the calcium containing foods your child eats in a typical day and use the following information to add up their calcium content. Compare their total with the reference nutrient intake for your child's age and sex shown in the table below. If their calcium is less than the amount recommended, use the information to choose calcium containing foods to make up their total. Ensure they eat these foods regularly. If you are not able to do this speak with your dietitian or the health professional who gave you this leaflet.

Evidence has shown that the calcium from food and drink is better absorbed than the calcium from calcium supplements. However, in some circumstances calcium supplements can be useful. Please contact your dietitian or doctor for further advice.

This table shows how much calcium is recommended for children.

Age / Sex	Reference Nutrient Intake of calcium
Infants 0-12 months	525mg / day
Children 1-3 years	350mg / day
Children 4-6 years	450mg / day
Children 7-10 years	550mg / day
Teenage girls 11-18 years	800mg / day
Teenage boys 11-18 years	1000mg / day
Breastfeeding mothers	1250mg / day

The tables on the following pages tell you about the calcium content of a variety of foods. Every effort has been made to include frequently eaten calcium containing foods. Foods have not been listed where the calcium content is low.

## Infant formula milk

Milk	Portion size	Calcium mg
<b>SMA</b>	Per 100ml	
First		43
Extra Hungry		56
Comfort		42
Follow on		75
Toddler milk		80
Stay down		56
Lactose free		55
<b>Cow &amp; Gate</b>	Per 100ml	
First		55
Hungry baby		70
Follow on		68
Growing up 1-2 years		120
Growing up 2-3 years		120
Comfort		49
Anti reflux		77
<b>Aptamil</b>	Per 100ml	
First		55
Hungry baby		76
Follow on		65
Growing up 1-2 years		120
Growing up 2-3 years		120
Comfort		49
Anti reflux		77
<b>Hipp Combiotic</b>	Per 100ml	
First		50
Hungry infant		80
Follow on		73
Growing up		80

## Specialised infant formula milk

Milk	Portion	Calcium mg
<b>Soya formula</b> Wysoy	100ml	67
<b>Formula for milk allergy / sensitivity</b>	100ml	
Aptamil Pepti 1		47
Aptamil Pepti 2		63
Althera		66
Pepti Junior		50
Nutramigen Lipil 1		77
Nutramigen 2		94
Puramino		64
Pregestimil		78
Neocate LCP		66
Neocate Junior		90
Alimentum		71
<b>High Energy formula</b>	100ml	
SMA High Energy		57
Infatrini		100
Infatrini Peptisorb		80

## Cows' milk drinks

Cows' milk and drinks	Portion size	Calcium mg
Skimmed milk	100ml	120
Semi skimmed milk	100ml	120
Whole milk	100ml	115
Channel Islands milk (gold top)	100ml	130
1% milk	100ml	120
Lacto free milk	100ml	120
Friji®	1 bottle (471ml)	655
Yop®	1 bottle (500ml)	600
Horlicks light® (add water)	1 serving – 32g	597
Ovaltine original light®	1 serving – 25g	120

## Cows' milk free drinks

Cows' milk free drinks	Portion size	Calcium mg
Oat milk enriched with calcium e.g. Oatly®	100ml	120
Rice milk enriched with calcium e.g. Rice Dream®	100ml	120
Hemp milk enriched with calcium e.g. Good Hemp®	100ml	118
Almond milk enriched with calcium e.g. Almond breeze®	100ml	120
Hazelnut milk e.g. Alpro Hazelnut®	100ml	120
Coconut milk drink e.g. Koko®	100ml	120
Soya milk enriched with calcium e.g. Alpro®, Provamel®, So Good®	100ml	120
Alpro soya Growing up milk 1-3	100ml	120
Goats' milk	100ml	120
Sheeps' milk	100ml	170
Tropicana Calcium®	1 glass – 200ml	244
Ribena Plus	1 carton – 200ml	120

Non dairy milks such as soya, oat, rice and coconut contain very small amounts of calcium unless calcium is added. Always use calcium enriched brands.

Organic milks cannot be fortified so should be avoided.

**For food safety reasons rice milk should not be used as a main drink in children under 4½ years of age and soya milk should not be used as a main drink in infants under 6 months of age. For more information contact your dietitian or the dietetic department.**

## Yoghurts and desserts

Cows' milk yoghurts and fromage frais	Portion	Calcium mg
Fruit yoghurt	1 pot – 150g	200
Muller light®	1 pot – 175g	230
Muller corner® (fruit)	1 pot – 150g	210
Munch bunch®	1 pot – 100mg	153
Greek yogurt	1 pot – 150g	190
Petit Filous®	Large pot – 85g Small pot – 47g	128 70.5
Frube® / Chube®	One tube – 40g	60
Fromage frais	1 tablespoon – 40g	44
Actimel®	1 pot – 100ml	120
Cows' milk containing desserts	Portion	Calcium mg
Vanilla ice cream	1 scoop – 60g	60
Choc ice	One – 50g	40
Creme Caramel	1 pot – 120g	120
Custard	1 serving – 150g	210
Ambrosia Custard®	1 pot – 125g	133
Rice pudding	1 serving – 200g	200
Single cream	1 serving – 50g	45
Milk chocolate	1 bar – 125g	120

## Yoghurts and desserts (continued)

Cows' milk free yoghurts and custards	Portion	Calcium mg
Alpro® Soya yoghurt	1 pot – 125g	150
Alpro® Soya dessert	1 pot – 125g	150
Arla Lactofree yoghurt	1 pot – 125g	126

## Cheese

Cheese	Portion size	Calcium mg
Cheddar	30g	20
Babybel®	30g	140
Cheese string®	1 string	156
Cheese spread	1 triangle – 17.5g	91
Dairylea®	1 triangle – 15.6g	70

## Savoury dishes

Savoury dish	Portion	Calcium mg
Cauliflower cheese	1 serving – 300g	360
Cheese Omelette	1 serving – 100g	280
Macaroni cheese	1 serving – 350g	510
Cheese quiche	1 thin slice – 90g	250
Cheese scone	1 scone – 60g	150
Cheese and tomato pizza	1 slice – 220g	470

## Fish

Fish	Portion size	Calcium mg
Sardines (tinned with bones)	1 serving – 60g	300
Pilchards (tinned with bones)	1 serving – 60g	150
Salmon (tinned with bones)	1 serving – 60g	55

## Vegetables, fruit, pulses and nuts

Vegetables / fruit	Portion size	Calcium mg
Spinach	1 tablespoon – 30g	50
Broccoli	1 spear – 45g	18
Cabbage	1 serving – 60g	20
Spring greens	1 serving – 60g	45
Orange	1 medium – 120g	56
Dried Apricots	6 medium	44
Pulses / nuts	Portion size	Calcium mg
Baked beans	1 tablespoon – 45g	20
Kidney beans	1 serving – 120g	13
Soya bean curd / tofu (steamed)	1 serving – 50g	175
Brazil nuts	12 kernels – 60g	102
Hazlenuts	50 kernels – 60g	84
Tahini	1 tbsp – 30g	200
Sesame seeds	2 tsp – 10g	67
Almonds – raw / toasted	1 tbsp – 30g	72

## Cereals and bread

Cereals	Portion size	Calcium mg
<b>Kelloggs:</b> Coco pops®, Rice Krispie Multigrain Shapes®, Frosties®	1 portion / individual packet – 30g	135
<b>Nestle:</b> Cheerios®, Golden Nuggets®, Golden Grahams®	1 portion / individual packet – 30g	135
Sainsbury's Ready Oats	30g dry cereal	400
Ready Brek®	30g dry cereal	400
Nutrigrain soft bake bars®	1 bar	200
Baby cereals	Portion size	Calcium mg
<b>Cow &amp; Gate:</b> Creamy porridge®, Fruity porridge®, Banana porridge®	25g dry cereal	133-185

Baby cereals (continued)	Portion size	Calcium mg
<b>Heinz:</b> Creamy oat porridge®, Oat & apple cereal®	30g dry cereal	177
<b>Aptamil:</b> Creamed banana porridge®	28g dry cereal	115
Farley's rusk®	1 rusk	66
Bread	Portion size	Calcium mg
White bread	1 medium slice – 36g	65
Wholemeal bread	1 medium slice – 38g	40
Hovis Best of Both®	1 medium slice – 40g	179
Warburton- white sliced bread	1 medium slice – 42.7g	82

## How do I check if my child's calcium is enough for their age?

1. Make a list of the foods your child eats each day that contain calcium.
2. Note down the calcium content of the food using the tables above.
3. Add up the total and compare it with their Reference Nutrient Intake from the table on page 3.

You will then be able to see if they are having enough calcium. If they are not, then use the tables to look for a food which you may be able to give them every day to make up their calcium. If this is not possible, contact your dietitian or the health professional who gave you this leaflet to discuss what to do. Here are two examples to help you:

### **My 8 year old boy's calcium rich foods are:**

- Rice Krispies multi grain stars® 30g = 135mg calcium
- With oat milk 100ml = 120mg calcium
- 1 slice of Hovis Best of Both bread® = 179mg calcium
- Broccoli – 2 spears = 36g calcium

**Total = 470mg calcium in a typical day.**

**His reference nutrient intake is 450mg a day as he is 8 years old. He is therefore having enough calcium.**

### **My 10 month old daughter's calcium rich foods are:**

- Neocate LCP® 20floz or 600ml a day = 396mg
- Another 120ml of Neocate LCP® is used to mix baby rice and other solids during the day = 79mg calcium

**Total = 475mg calcium in a typical day.**

**Her reference nutrient intake is 525mg a day as she is under a year so she is not getting enough calcium.**

**If I use oat milk to mix her solids instead of Neocate LCP® she will get 120mg instead of 66mg. This gives her a total of 540mg so she will be getting enough calcium.**

## **Key reference sources**

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- Dietary Reference Values for Food Energy and Nutrients for the United Kingdom. Department of Health Report on Health and Social Subjects No41. HMSO 1991
- Arsenic in rice milk: [www.food.gov.uk/multimedia/pdfs/fsis0209arsenicinrice](http://www.food.gov.uk/multimedia/pdfs/fsis0209arsenicinrice)
- Soya milk: Paediatric group of the British Dietetic Association Position Statement. Use of Infant formula based on soya protein for infants. October 2010
- Scientific Advisory Committee on Nutrition. Dietary Reference Values for Energy. SACN, London, 2011

This leaflet is produced by the dietetic department at Royal Surrey County Hospital, NHS Foundation Trust. It is not a substitute for dietary advice given to a specific individual by a dietitian. If you need to see a dietitian, ask your GP or consultant for a referral.

Please note that the information in this leaflet was correct at time of writing. The ingredients of manufactured products can change.

## Dietetic Department contact details

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If you have any questions about the information in this leaflet please contact the Dietetic Department at the address below:

### **Nutrition & Dietetics Department**

Royal Surrey County Hospital, Egerton Road, Guildford, Surrey, GU2 7XX.

**Telephone:** 01483 464119

**Fax:** 01483 464868

**Email:** [rsch.dietitians@nhs.net](mailto:rsch.dietitians@nhs.net)

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## PALS and Advocacy contact details

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Contact details of independent advocacy services can be provided by our Patient Advice and Liaison Service (PALS) who are located on the right hand side as you enter the main reception area. PALS are also your first point of contact for health related issues, questions or concerns surrounding RSCH patient services.

**Telephone:** 01483 402757

**Email:** [rsc-tr.pals@nhs.net](mailto:rsc-tr.pals@nhs.net)

**Opening hours:** 9.00am–3.00pm, Monday to Friday

If you would like information documents in large print, on tape or in another language or form please contact PALS.

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