



## Understanding growth charts: what they tell you about your child's growth

The notes on this page give information about the UK-WHO growth charts. For more information on your child's growth, read the notes in your Personal Child Health Record ('red book'), and Chapter 2 in Birth to Five.

### The UK-WHO growth charts

The UK-WHO growth charts, launched in 2009, are based on measurements collected by the World Health Organization in six different countries. Healthy breastfed babies whose mothers did not smoke and were not deprived were measured over time. The centile curves drawn using these measurements show how all healthy children are expected to grow, wherever they come from and however they are fed.

### What do regular measurements tell us?

Weighing and measuring helps us to check that your child is growing and developing as expected. It also helps us to tell if your child may have a problem that is affecting their development.

### Why do we use growth charts?

By plotting a child's growth on the chart, we can see whether it is following the expected pattern. The lines on a growth chart are called centile lines, and are based on the measurements from many children. They show the range of normal weights and heights, and how one child compares with other children of the same age and sex. For example, if your child's height is on the 25th centile, it means that if you lined up 100 children of the same age and sex in order of height, your child would probably be number 25; 75 children would be taller than your child, and 24 would be shorter. Weights and heights that are anywhere within the centile lines on the chart are considered normal.

Every child is different, so no two filled-in charts will look the same. Even twins may have different growth patterns.

If a child's pattern looks unusual, your health visitor or doctor may want to have a closer look to see what may be going on. This may involve taking more measurements, looking closely at feeding, or investigating other things. Most children who have such investigations are found to be perfectly normal; however, it is important to check an unusual pattern on the chart to make sure of this.

### Frequently asked questions:

#### *I didn't breastfeed or I stopped early – are these charts still right for my baby?*

The charts show how breastfed babies grow if they are healthy and there are no problems. Babies grow most naturally when fed on breastmilk. If you use formula milk you want to know that your baby is still growing in the same healthy pattern that they would on breast milk. This chart helps you see if that is happening.

#### *What are the preterm charts in my book?*

These charts show the weights of babies born more than 3 weeks early (before 37 weeks). If your baby was born early, weight and head circumference will be plotted on these charts until they are 2 weeks past your due date. This will help you and the health professionals tell how your baby is doing compared with other preterm babies. After this, weights and other measurements will be plotted on the main chart. On this chart they should be plotted at your child's actual age but with an arrow drawn back the number of weeks your baby was early.

#### *Why are there no centile lines on the charts between birth and 2 weeks?*

Most babies lose some weight and then regain it during the 2 weeks after birth, and growth patterns vary widely during this time; the growth chart cannot show this. Your baby's weight at about 2 weeks of age should be compared with their birth weight.

#### *How do I know my baby's weight is OK in the first 2 weeks?*

Weighing in the early days is important. Babies usually lose some weight to start with but then put it back on. This regain of weight helps to show that your baby is well and that feeding is going well.

If your baby loses quite a lot of weight or is slow to get back to their birth weight, this is a sign to look a little closer. If the weight loss seems a lot, your midwife or health visitor will calculate this as a percentage. If your baby has lost 10% or more of their birth weight, your midwife or health visitor will probably check how your baby is feeding. If you are breastfeeding, your midwife or health visitor will look at what you are doing to see that the baby is attaching to the breast properly. They may suggest some changes to the way you hold your baby, or that you feed more often. If you are giving formula milk, they may suggest that you hold your baby or the bottle differently, or that you feed more often. Your midwife or health visitor may also suggest that your baby has a medical examination.

If you make a change to how you feed your baby, it may take a little time for their weight to improve. Your midwife or health visitor may want to weigh them again to follow their progress.

### ***How often should my baby be weighed?***

After the early days, your baby only needs to be weighed at the time of routine checks and injections (that is at around 2, 3, 4 and 13 months of age), as long as all is well. Many mothers like to have their babies weighed more often than this. However, this is not always helpful, and can cause unnecessary worry. For example, if one week your baby was weighed just after a big feed but the next week they were weighed after a big nap and before a feed, this could make it look as if they had not gained weight.

Weights measured over a longer time are more likely to show the true weight change. This is why it is recommended that babies should not be weighed more often than once a month from 2 weeks to 6 months of age, no more than every 2 months up to 1 year of age, and no more than every 3 months after that, unless there are special reasons. The time between weighing is longer for older babies because they are growing less quickly.

Your health visitor may suggest that your child is weighed more often than this if there are concerns about their health or growth.

### ***My baby's weight was on one centile and now it is nearly down to the next line – is this normal?***

It is normal for the dots of your child's weight to 'wobble' up and down a bit, or to move gradually from being near one centile to the next one (up or down). It is less common for a child's weight to cross two lines; if this happens your health visitor may want to keep a closer eye on your child for a while.

### ***My child was ill and lost some weight, what should I do?***

Children often lose some weight when they are not well. Once your child recovers from the illness, their weight should go back to the centile it was on before the illness within 2–3 weeks. If this does not happen, speak to your health visitor. The health visitor may measure your child's length or height or investigate other issues.

### ***When should length or height be measured?***

For babies and children under 2 years, length rather than height is measured. This can be helpful if there is any concern about weight gain. However, it is quite difficult to measure length accurately, so this will not be done every time your child is seen. It is not usually necessary to measure length or height if your child is growing as expected.

### ***Can I tell how tall my child will be as an adult?***

Once your child is between 2 and 4 years old, you can use a height measurement to find their height centile. You can then put this on the 'Adult Height Predictor' on the height chart page in your Personal Child Health Record to get an idea of how tall your child will be. This reading is only accurate to within 6cm (2½"). So if, for example, the predicted height is 160cm (5'3"), that means as an adult your child's height is likely to be between 154 and 166cm (5'½" and 5'5½").

### ***Why is it recommended that only a trained health professional plots on the chart?***

It takes some practice to plot accurately on a centile chart. Any mistake can make your child's growth pattern look as if they have a problem when they don't. Or it can look as if they don't have a problem when they do. All health professionals using the chart have had training so that they plot on the chart and read it accurately.

If you want to weigh your baby for other reasons – to get an idea of the nappy size, for example -- you can do this, but should remember that this may not be a medically accurate weight. If you do weigh your baby and are concerned about their weight, speak to your health visitor before making a change to how you feed or care for your baby.

### ***How do I make sure my child is not overweight?***

Your health visitor can discuss any concerns you have about this with you. After the age of 2 years, your child's weight and height can be used to calculate your child's centile for body mass index (BMI). If the BMI shows that your child is overweight or obese, you will be able to discuss diet and physical activity so that your child loses some weight in a healthy way.