Time	Narration
00:01	Welcome to the **spoken tutorial** on **WHO** length-for-age **percentile** growth charts.
00:10	In this tutorial, we will learn about:
00:13	2 types of **percentile** growth charts.
00:18	Growth indicators.
00:21	The plot points for growth indicators.
00:26	Let us begin by understanding what are **percentile** growth charts?
00:33	They are charts designed to help you follow a child's growth.
00:39	They were developed through the **World Health Organisation's MGRS**.
00:47	**MGRS** means **Multicentre Growth Reference Study**.
00:54	8,500 selected children from 6 different countries were measured.
01:01	The countries were India,
01:04	Brazil, Ghana,
01:06	Norway, Oman
01:08	and the USA.
01:11	The children were from different cultural backgrounds.
01:17	3 things were kept constant among them.
01:21	All the selected children were breastfed.
01:26	They all were vaccinated.
01:30	They all had access to a clean environment.
01:35	It showed that children from different countries grew in a similar way.
01:42	This means the environment played a major role in their growth.
01:48	Good nutrition, health and sanitation is required for proper growth.
01:55	The average weight and length for each age and gender were established.
02:03	Growth charts compare a child's length and weight with other children.
02:10	These children are of the same age and gender as the child.
02:17	These charts provide an early warning that a child has a growth problem.
02:24	In this tutorial, we will discuss 2 types of **percentile** growth charts.
02:32	Each growth chart is used to measure a specific growth indicator.
02:38	Growth indicators are used to assess growth.
02:44	They take a child's age and measurements together into consideration.
02:51	The first growth indicator is length-for-age.
02:57	The second one is weight-for-age.
03:02	These indicators are plotted on growth charts over weeks, months or years.
03:10	This helps us to identify any growth problems.
03:16	It is important to use growth charts as per the child's gender.

03:23	The growth charts used in this tutorial are from the **World Health Organisation**.
03:30	They are for children in the 0 to 2 years age group.
03:36	These growth charts are available on their website **www.who.int**
03:46	Please select the appropriate charts as per the child's gender.
03:52	Download and print them.
03:56	Next, let's learn more about the first type of **percentile** growth chart.
04:03	It is the length-for-age growth chart.
04:07	It is used to plot the length-for-age growth indicator.
04:14	This indicator can help identify children who are **stunted** or short.
04:21	Such children might have had prolonged undernutrition or repeated illness.
04:29	Children who are tall for their age can also be identified.
04:35	In these charts, the horizontal reference line at the bottom is the X-axis.
04:43	It shows age.
04:46	Exact age is plotted in weeks and months from birth until 2 years of age.
04:54	The vertical reference line at the left side is the Y-axis.
05:01	It shows length in centimetres.
05:06	The thin grey horizontal lines represent an increase in length by 1 cm.
05:15	Let's go through the steps to plot length-for-age in these charts.
05:22	First, mark the exact age, months and years, on the x-axis with a point.
05:31	Then, mark the length on the y-axis with a point.
05:36	Extend it over the connected horizontal line till the marked point for age.
05:44	Extend the marked point for age over the connected vertical line.
05:51	The point where two extended lines intersect is called a plotted point.
05:59	For every child, points are plotted over weekly or monthly measurements.
06:06	Check whether a plotted point seems sensible.
06:11	If necessary, re-measure the child.
06:15	For example, a baby's length should not be shorter than at the previous visit.
06:23	If it is, then one of the measurements was wrong.
06:28	Let us use an example to understand plotting on this chart.
06:35	This graph shows Anita's length-for-age plotted 3 times over a few months.
06:43	At this point, Anita was 3 months of age and 64 cm in length.
06:51	Now here, at this point, Anita was 70 cm in length at 6 months of age.
07:02	Finally, here at this point, she was 78 cm in length at 1 year of age.
07:12	Now, let's learn more about the 5 curved coloured lines on growth charts.
07:21	These 5 curved lines show selected **percentiles**.
07:28	They are 3rd, 15th, 50th, 85th and 97th **percentiles**.
07:38	The 3rd and 97th **percentiles** are shown by red coloured lines.
07:46	The 15th and 85th **percentiles** are shown by orange coloured lines.
07:54	The 50th **percentile** is shown by a green coloured line.
08:01	These **percentiles** indicate the rank of the child's measurement.
08:08	Let's understand each **percentile** line with specific examples.
08:15	In this graph, Madhav's length is plotted on the 3rd **percentile** line.
08:22	It means that 97% of children of his age are taller than him.

08:30	Only 3% of children of his age are shorter than him.
08:37	In this graph, Anu's length is plotted on the 15th **percentile** line.
08:44	It means that 85% of children of her age are taller than her.
08:52	Only 15% of children of her age are shorter than her.
09:00	In this graph, Priya's length is plotted on the 50th **percentile** line.
09:07	The length of 50% of children is on this **percentile** line.
09:14	Therefore, Priya's length is the average length among the children of her age.
09:21	In this graph, Rohan's length is plotted on the 85th **percentile** line.
09:29	It means that 15% of children of his age are taller than him.
09:37	85% of children of his age are shorter than him.
09:44	In this graph, Fatima's length is plotted on the 97th **percentile**.
09:51	It means that 3% of children of her age are taller than her.
09:58	97% of children of her age are shorter than her.
10:05	Next, let's discuss the average length of a child from birth to 2 years of age.
10:15	It is along the 50th **percentile** line in the length-for-age growth chart.
10:22	Average birth length of a girl is 49 cm.
10:28	At 1 month, the average length of a girl is 54 cm.
10:36	At 3 months, it is 60 cm.
10:41	At 6 months, it is 66 cm.
10:47	At 1 year, it is 74 cm.
10:53	At 2 years, the average length of a girl is 86.5 cm.
11:01	Average birth length of a boy is 50 cm.
11:07	At 1 month, the average length of a boy is 55 cm.
11:15	At 3 months, it is 61.5 cm.
11:21	At 6 months, it is 67.5 cm.
11:28	At 1 year, it is 76 cm.
11:34	At 2 years, the average length of a boy is 88 cm.
11:42	The second **percentile** growth chart is called the weight-for-age growth chart.
11:49	It is discussed in another tutorial in the same series.
11:55	Growth problems are also discussed in the same tutorial.
12:00	Please visit our website for more details.
12:05	This brings us to the end of this tutorial. Thank you for joining.