



The giant of Alton

When Robert Wadlow was born in Alton, Illinois in 1928 he looked like a normal baby weighing 8 pounds and measuring 53 cm. Nobody thought that he should soon become known as the "giant of Alton".

Shortly after he was born he began to grow and to put on weight so fast, that he measured 1,12 m and weighed 28 kg on his first birthday. To the surprise of his concerned family and neighbourhood he continued to grow at such an exceptional rate that at the age of 13 his nine-year-old brother just reached up to his hips and his father could stand comfortably under his stretched out arms. When Robert died at 22 he weighed 215 kg and was 2,72 m tall.

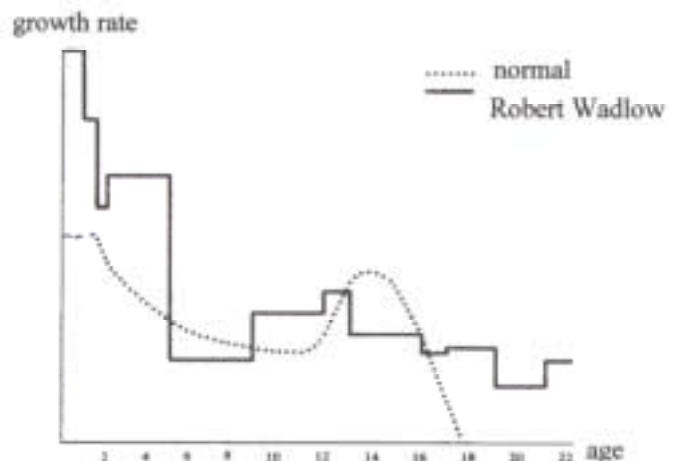
Robert Wadlow is the only case of gigantism of which we have a full medical report. X-ray photographs of R. Wadlow's skull show that he suffered from a tumour of the pituitary gland.

The pituitary gland - situated at the base of the brain - has two main functions.

- It produces the human growth hormone (HGH), which controls the growth rate until the end of puberty.
- It functions as a so-called master gland by setting free various hormones, which control the activity of the other endocrine glands.

In R. Wadlow's case the tumour was situated in the area of the pituitary producing the growth hormone, which explains his extraordinary growth.

But why did he not stop growing at 18? Obviously the tumour pushed against the area responsible for the production of those hormones that from puberty onwards stimulate the endocrine glands that produce sex hormones. These are necessary to bring about the closure of the growth areas in bones at the end of puberty by causing all the remaining cartilage cells to turn into bone cells.



¹ Robert Wadlow at 15 with his brother aged 11.

Image source: <http://www.altonweb.com/history/wadlow/p3.html>

Tasks:

1. Give a short summary of Robert Wadlow's biography. Can you imagine what his short life was like?
2. Why is his case so important in the context of studying gigantism?
3. Describe the two graphs. Why is the normal growth curve smooth, the growth curve of Robert Wadlow more rugged?
4. What caused his exceptional growth.
5. Why did he not stop growing?