New research from ALSPAC (Children of the 90s) indicates that children born in late summer and early autumn are slightly taller and have wider bones than those born in winter and spring.

All the Children of the 90s were born in 1991 and 1992, and the researchers studied meteorological data from those years to determine their mothers' likely sun exposure in the last three months of pregnancy.

Nearly 7000 of their children were measured and given DXA scans at age 10 to determine their bone density.

Those children born to mothers with the highest sun exposure were 1/2 cm taller on average, and had 12.75 cm² extra bone area due to increases in bone width, compared with children born in the darkest months.

Taller people tend to have wider bones, but these children had increased bone width over and above that accounted for by their extra height.

The researchers believe that this increase in bone mass is attributable to Vitamin D levels. Sunlight on the skin generates Vitamin D, which works together with calcium to build bones. For most people, sunlight is their main source of Vitamin D.

ALSPAC’S research indicates that Vitamin D is important for bone-building even in the womb.

In addition to studying the meteorological data, the researchers measured Vitamin D levels in the blood of 350 of the mothers in the 37th week of pregnancy, and the results closely mirrored levels of sun exposure.

Professor Jon Tobias, researcher on the project, says:

“Wider bones are thought to be stronger and less prone to breaking as a result of osteoporosis in later life, so anything that affects early bone development is significant.

“Pregnant women might consider talking to their doctor about taking Vitamin D supplements, particularly if their babies are due between November and May, when sunlight levels are low.”
Reference:


NOTES

- ALSPAC The Avon Longitudinal Study of Parents and Children (also known as Children of the 90s) is a unique ongoing research project based in the University of Bristol. It enrolled 14,000 mothers during pregnancy in 1991-2 and has followed most of the children and parents in minute detail ever since.

- The ALSPAC study could not have been undertaken without the continuing financial support of the Medical Research Council, the Wellcome Trust, and the University of Bristol among many others.

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