

More sunlight months during pregnancy gives newborns longer thighbones, study says

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(Medical Xpress)—The seasonal variation of sunlight in Ireland means newborns from Caucasian women who had more sunlight months during their pregnancy (April – Sep) are more likely to have longer thighbones, according to new research.

The findings published in [Fertility and Sterility](#) are linked to the seasonal availability of sun [[UVB](#) sunlight] in northern latitude countries above 42 degrees north of the equator.

Our skin naturally produces vitamin D through exposure to the sun (UVB sunlight). But in northern latitude countries the skin's natural production of vitamin D essentially stops between November and March

because of the lack of sun.

"While inside the womb, the developing baby is entirely dependent upon the maternal pool of vitamin D which is critical for the normal development of the baby's bones," says study author, Fionnuala McAuliffe, Professor of [Obstetrics and Gynaecology](#) at the UCD School of Medicine and Medical Science, University College Dublin, and the National Maternity Hospital, Dublin.

The study involved 60 Caucasian pregnant women in Ireland. Thirty of the women (the winter group) delivered in Mar/April, while the other thirty (the summer group) delivered in Sep/Oct.

"Our findings showed low levels of vitamin D among nearly all the women in the study across both groups, ranging from 33% to 97% with a significant [seasonal variation](#)," explains Professor McAuliffe.

"In turn, we identified a link between the mother's and baby's vitamin D level and the length of the baby's [thigh bone](#) at 20 weeks, at 34 weeks, and the baby's length at birth."

"The women with lowest vitamin D levels in early pregnancy [the winter group] had babies with slightly shorter thighbones than those born from mothers with normal vitamin D levels [the summer group]," she adds.

The study by researchers from University College Dublin and the National Maternity Hospital, Ireland, funded by Health Research Board, measured the vitamin D levels in the mothers' blood in early pregnancy and again at 28 weeks. The study measured the cord blood vitamin D value which reflects the baby's vitamin D level.

Deficiencies in vitamin D during pregnancy can lead to reduced bone growth in babies before birth and poor bone development in early

childhood.

According to Dr Jennifer Walsh, one of the researchers involved in the study, vitamin D supplements should be considered for pregnant women in Ireland and in other northern countries with poor dietary intakes of vitamin D, and in particular for women who will go through more of their [early pregnancy](#) during the darker months (Oct – March).

Previous scientific studies have shown that vitamin D supplementation during pregnancy has no adverse effects in women and their newborns.

A planned mixed diet including one to two portions of oily fish such as salmon or mackerel per week, more eggs, and fortified breakfast cereals can also help women increase their [vitamin D](#) intake during pregnancy.

More information: Walsh, J. et al. Pregnancy in dark winters: Implications for fetal bone growth? *Fertility and sterility* 2013 Jan; 99 (1):206-11.

Provided by University College Dublin

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