**Mothers who are overweight before becoming pregnant can rob their baby of up to 17 years of life**

* **Almost a third of women of child-bearing age are overweight or obese**
* **Study shows that every extra BMI point amounts to 18 months off child's life expectancy**
* **Most obese can knock 17 years off their baby's life, but a healthy lifestyle can help to reclaim some of this lost time**

By [Victoria Allen Science Correspondent For The Daily Mail](http://www.dailymail.co.uk/home/search.html?s=&authornamef=Victoria+Allen+Science+Correspondent+For+The+Daily+Mail)

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* [e-mail](mailto:?subject=Read%20this:%20Mothers%20who%20are%20overweight%20before%20becoming%20pregnant%20can%20rob%20their%20baby%20of%20up%20to%2017%20years%20of%20life%C2%A0&body=Mothers%20who%20are%20overweight%20before%20becoming%20pregnant%20can%20rob%20their%20baby%20of%20up%20to%2017%20years%20of%20life%C2%A0%0A%0AWomen%20who%20are%20overweight%20before%20they%20get%20pregnant%20knock%20about%2018%20months%20off%20their%20child%27s%20life%20expectancy%20for%20every%20extra%20BMI%20point.%20Belgian%20scientists%20worked%20it%20out%20using%20telomeres%20on%20DNA.%0A%0Ahttp%3A%2F%2Fwww.dailymail.co.uk%2Fhealth%2Farticle-3846088%2FMothers-overweight-pregnant-rob-baby-17-years-life.html%3Fito%3Demail_share_article-top%0A%0A%0AMost%20Read%20Articles%3A%0A%0ADr%20Pimple%20Popper%20bursts%20a%20huge%20cyst%20from%20the%20corner%20of%20a%20man%27s%20eye%20in%20possibly%20her%20most%20repulsive%20video%20yet%0Ahttp%3A%2F%2Fwww.dailymail.co.uk%2Fhealth%2Farticle-4028510%2FDr-Pimple-Popper-bursts-huge-cyst-corner-man-s-eye-possibly-repulsive-video-yet.html%3Fito%3Demail_share_article-top_most-read-articles%0A%0ATeenager%20whose%20painful%20skin%20condition%20left%20her%20covered%20in%20SCALES%2C%20bleeding%20and%20in%20agony%20is%20cured%20by%20a%20cancer%20drug%0Ahttp%3A%2F%2Fwww.dailymail.co.uk%2Fhealth%2Farticle-4028006%2FTeenager-painful-skin-condition-left-covered-SCALES-bleeding-agony-cured-cancer-drug.html%3Fito%3Demail_share_article-top_most-read-articles%0A%0ATom%2C%20who%20was%20so%20full%20of%20life%2C%20was%20killed%20in%20a%20tragic%20hockey%20accident%20at%20the%20age%20of%2022%3A%20Now%20his%20organs%20have%20helped%20up%20to%2050%20people%20in%20need%20of%20transplants%0Ahttp%3A%2F%2Fwww.dailymail.co.uk%2Fhealth%2Farticle-4026676%2FTom-life-killed-tragic-hockey-accident-age-22-organs-helped-FIFTY-people-need-transplant.html%3Fito%3Demail_share_article-top_most-read-articles%0A%0A)

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Women who are overweight before becoming pregnant could take years off their baby’s life.

Almost a third of women of child-bearing age are obese or overweight, as the nation’s waistlines expand.

A study now shows every point increase in a mother’s BMI, from a healthy level and above, before they fall pregnant can cut the equivalent of 18 months off their child’s life expectancy.



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Women who are overweight before getting pregnant could take up to 17 years off their baby's lives. File photo

The most obese women could rob their baby of 17 years of life, though some time can be regained if they grow up with a healthy lifestyle.

Scientists at Hasselt University in Belgium worked this out using telomeres - structures on the end of each strand of DNA, which protect it like the plastic tip at the end of a shoelace.

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Telomeres are directly linked to how many times our cells can divide during their lifetime – and their length in newborns is believed to predict how long we will live. Babies with shorter telomeres also have less of a ‘buffer’ before they can develop killer diseases in later life, such as heart disease and type 2 diabetes.

Professor Neena Modi, President of the Royal College of Paediatrics and Child Health, said: ‘This intriguing study provides further evidence of the life-long impact of maternal obesity on a child’s life. The study makes clear that babies born to obese mothers may be at greater vulnerability to chronic diseases in adult life.

‘The study provides a strong justification for intervention in pregnancy, infancy, childhood and young adult life to tackling the national burden of obesity. It means advising women of reproductive age to maintain a healthy weight, supporting parents, and creating healthy societies to ensure infants and children do not become overweight.’



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The research, carried out by a Belgian team, shows that 18 months are lost on average for every extra BMI point. File photo

The Belgian study of 743 mothers aged 17 to 44, and their newborn babies, is the latest to suggest a woman ‘programmes’ her baby’s life chances in the womb. Obese women are already known to have much larger ‘sumo babies’, already at greater risk of heart disease as adults before they draw their first breath.

The latest study is the first, however, to report a strong link between pre-pregnancy weight and a baby’s telomere length.

Telomeres, taken from the babies’ umbilical cord blood and placenta, were measured in pairs of chemical letters, or ‘bases’, which contain our genetic code.

Adults normally lose about 32.2 to 45.5 base pairs a year, but the research shows every one-point increase in a woman’s pre-pregnancy BMI shortens her baby’ s telomeres by about 50 bases.

This works out as potentially 1.1 to 1.6 years, or just over 18 months, shaved off a baby’s life. For the most obese women, the total adds up to 17 years, based on animal experiments which show telomere length in early life predicts lifespan.

It was not clear at what BMI level the one-point increase kicks in - and therefore what happens when mothers have a BMI figure under a healthy level. A healthy BMI ranges from between 18 and 25.

Scientists are also quick to point out this is just an estimate, which could change depending on how healthy a child is growing up.



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The experts say the figures are an estimate and a healthy lifestyle can help. The research is based on telomeres, which are shortened if a mother is overweight. File photo

But it means these babies start life in a worse position, with less to lose of their telomeres than other children. It is so important to hang on to these biological shoelace caps because they protect our chromosomes and allow our DNA to replicate properly without faults creeping in.

Shorter telomeres in adulthood have been linked to age-related diseases such as cardiovascular disease, type 2 diabetes and increased mortality, although research on its effects on newborns remains limited.

The study is published in the journal BMC Medicine and lead author Professor Tim Nawrot said: ‘Our results add to the growing body of evidence that high maternal BMI impacts foetal programming, which could lead to altered foetal development and later life diseases.

‘The public health impact of our findings is considerable as in affluent societies about 30 per cent of women of reproductive age are overweight.’

Read more: <http://www.dailymail.co.uk/health/article-3846088/Mothers-overweight-pregnant-rob-baby-17-years-life.html#ixzz4So6df4am>   
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