

Teenage and 60-year-old mums are consequences of evolution

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Before society criticises teenage girls for having sex behind the bike sheds and becoming pregnant, or women in their 60s for seeking IVF treatment, it is important to consider fertility not just in terms of the 21st century but in the context of the past 150,000 years, a fertility expert will say tomorrow (Tuesday 20 June).

Dr Laurence Shaw will tell the 22nd annual conference of the European Society of Human Reproduction and Embryology, that it is only in the past 150 years or so that better hygiene, living conditions and medical advances have made it relatively common for people to live into their 60s, 70s, 80s and sometimes beyond. Before that time men and women would have been more likely to die around the age of 50. For women this often meant they died at or before their menopause.

Dr Shaw, deputy medical director, at the Bridge Centre, London, UK, will say: “Homo sapiens has existed for 150,000 years and for all of that time until about 100 to 150 years ago, women had their babies when they were in their late teens and early twenties when their fertility was at its peak. In the subsequent 20 to 30 years, they raised their children, and their declining fertility meant that they were less likely to have further children of their own and could help their daughters to tend their own babies. Most women died before they reached menopause or shortly after.

“Therefore, the accelerated decline in fertility, rather than the menopause itself, is the evolutionary adaptation that has occurred in the

human line over the past 2.8 million years, and, until the last 150 years, the postmenopausal state and the prior decline in fertility was positively useful. Living through the menopause and beyond is not a part of our natural life.

“Our improved longevity and other aspects of industrialised society have some incompatibilities with this evolutionary strategy. In particular, there are three serious issues:

1. Our natural time to have children, and the peak of our fertility, is late teens and early twenties, yet Western society regards teenage pregnancy as a ‘problem’ and cannot cope well with them.
2. We delay our childbearing until we have wealth and stability in later life when women’s fertility is declining and then require medical assistance that is often poorly funded by governments.
3. Women now expect to spend more than a third of their life in the post-reproductive part of their life – an unnaturally prolonged hormone deficient state when they encounter problems such as osteoporosis with increasing frequency, which they never had to face until recent decades. Worry about the risks of hormone replacement therapy is still seen by some as more relevant than the risk of prolonged hormone deficiency.

“Therefore, before we condemn our teenagers for having sex behind the bike sheds and becoming pregnant, we should remember that this is a natural response by these girls to their rising fertility levels. Society may ‘tut, tut’ about them, but their actions are part of an evolutionary process that goes back nearly two million years; whilst their behaviour may not fit with Western society’s expectations, it is perhaps useful to consider it in the wider context.

“Similarly, we should not be quite so prejudiced about older women who

want fertility treatment. Before we criticise 62-year-old women who want to have babies, we should remember that it was not so long ago that women would only have had about 20 or 30 years to care for their offspring and help with the next generation. Nowadays 60-year old women in many industrialised countries, have a life expectancy of 80 or 90, so there is no difference in terms of the length of their survival after the birth of a baby than there would have been for most of human existence.”

Although Dr Shaw says that he feels that IVF treatment for women in their 60s would reasonably be considered an excessive burden for state-funded national health services, he thinks the problems associated with women wanting to start families after their fertility has started to decline and their longer life after menopause should be addressed by society, including the medical profession.

“The menopause is not natural because, until recently, we generally didn’t live that long. Rapidly declining fertility after the late 20s is a long-term evolutionary adaptation, but a more recent adaptation is our longevity, helped by better hygiene, medicine and so on. So I believe that we should use this same technology to help further with finding better and safer hormone replacement therapies, and with fertility treatments for those seeking pregnancy in their 30s and 40s. We need to look at things not just in terms of the 21st century, but in the overall context of evolutionary progress.”

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