

## Teen boy checklist: Graduate high school, freeze sperm, go to college

By now, we've all seen media stories of young, career-minded women entering their mid-thirties who are wondering if they should [freeze some of their eggs](#) in the hopes it will help them have a family later in life. There are even reports of [egg-freezing parties](#) with complementary champagne. Despite the fact that live births from frozen eggs are far from a sure thing with only a [2 to 12 percent success](#) rate many women think the hedge is worth it.

But what about young men? Well, they are now getting their share of fertility fear-mongering as well. Bioethicist Kevin Smith at Abertay University says all men should have their [sperm frozen at age 18](#) and the UK's National Health Service should pay for it. From [the BBC](#):

"I think on a society-wide basis, we do need to worry about it – it is a very real and pronounced effect. It's time we took seriously the issue of paternal age and its effect on the next generation of children." His solution is sperm banking for everyone on the NHS so that in older age men can turn to the sperm from their younger selves. He said there was no fixed age when someone could become an "older dad" but that people in their 40s might want to return the sperm bank freezer.

Smiths' argument is that as father's age the chances of producing sperm with random genetic mutations increases. Those mutations can potentially cause disease. There are many population-level studies that link paternal age to development of medical conditions like cancers, schizophrenia and autism. But it's been incredibly difficult to really quantify these risks. They are tiny. Most of these thousands upon thousands of mutations have no effect at all. This is especially true when we compare with maternal age effects that have long been shown to increase risk of severe genetic disorders like Down Syndrome and Trisomy 18. Those conditions arise because whole chromosomes have ended up in the wrong place.

For example, This [review article](#) found that risk of lymphoblastic leukemia increased 50 percent for dads over age 35. Important to note, that's a risk increase not an increase in the number of children who develop the cancer. They also cited a study that estimated paternal age might be a cause of 10% of new cases of schizophrenia in the UK, but that effect is contested and other studies have shown it only applies to dads [older than 55](#). Given the rarity of both these conditions, the true effect of having an older dad remains quite small. But aggregate these tiny risks over a whole population, Smith argues, and you've got a potential problem.

On the other hand, the potential benefits of a national sperm-freezing campaign are small, says Cambridge University embryologist Stephen Harbottle, and the cost certainly does not outweigh the benefit. "I think that's unnecessary scaremongering. What he's saying is not based on any brilliant evidence. I think to suggest that we take reproduction to that level where everybody has a bank of sperm is not morally or ethically acceptable," Harbottle told the Cambridge News.

It costs between \$400 and \$600 to initially freeze sperm and \$200 to \$300 each year to store it, according

to Harbottle. So, at the minimum, a man who banked at 18, then waited until 33, the average age of first fatherhood in the UK, would cost the National Health Service \$3,400 if he had only one child. Harbottle also noted that there is a population of men who already freeze sperm before undergoing chemo and radiation that often leave people infertile. But only 1/3 of these men ever decide to use the banked sperm. The number of healthy men without underlying fertility issues would likely be less.

Moreover, the idea that men would use banked sperm necessitates the fact that these children would be conceived using advanced reproductive technologies including artificial insemination at a minimum level of invasiveness. This is a paradigm shift spun out of science fiction, and a highly controversial one. The idea of engaging these reproductive technologies when they are not needed will be hashed over by medical ethicists and embryologists before sperm-bank babies become close to the majority.

Beyond the universal sperm banking idea, Smith jumps on a pretty well regarded bandwagon of experts now urging people to consider their fertility when making life plans and life choices. From a health perspective, younger parents are more desirable. While today people in Western countries are delaying childbearing by only a few years, if that trend continues, a significant percentage of parents could start waiting until retirement to conceive. Smith, Harbottle and others urge people to plan for families in the favorable window of late 20s to early 30s after they've established their work life and education but before fertility begins to decline.

But, as Guardian columnist Yvonne Roberts notes, delaying childbirth isn't necessarily a question of simply [having better things to do](#). Economic necessity headily dictates when people feel financially secure enough to get away with taking time out to have kids. That's a societal failing that no amount of attention-grabbing calls for sperm banking will address:

Postponed parenthood isn't due to ignorance about fertility or the lack of forward sperm planning. The real cause of delay (apart from failing to find Mr or Ms Right) is lack of systemic change. Provide free, good-quality, accessible childcare; a genuine career structure for part-time work; real flexibility in the workplace without losing your footing on the promotion ladder; use-it-or-lose paternal leave with a realistic income, and then see how the age of first-time parenthood returns to the chronological norm.

Maybe instead of fear-mongering over fertility we should focus on programs that would allow people to reproduce at a younger age but not have to entirely jump out of the workforce for a few years to raise young children. Why not put that \$3400 per capita sperm banking fund toward subsidized nanny shares or part-time work programs? Then we can see what happens to fertility trends over the next decade.

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#### **Additional Resources:**

- [Are older dads genetically risky?](#) Genetic Literacy Project
- [Genetic changes in father's sperm might explain autism risk](#), NHS

- [Does sperm from teenage fathers carry more mutations?](#) Bio News