

Too Old To Be A Dad?

By Jeffrey Kluger

You don't need to know my exact age. suffice it to say I was born during the Eisenhower Administration--and no, not the second term. I've never opened any letters from AARP, but that hasn't stopped them from showing up in my mailbox every month. I still pay full price at museums, and I will for a good while, but at least once I was offered the discount--and not the student kind.

I'm perfectly happy to tell you my daughters' ages: they're 10 and 12, and they're in fourth and sixth grades. That puts a whole lot of demographic real estate between us. I go to the drugstore to pick up Flintstones Chewables and hypertension medication. When I visit a salon to restore a bit of color to my graying hair, I'm the only man of a certain age who sometimes brings his kids along because the sitter wasn't available. My father was 25 when I was born; when I was 25, I was fresh out of school, serially dating and just beginning my career. Children were a matter for much, much later.

When I finally did get married and prepared to start a family, I reckoned I didn't have much to worry about. My wife is a generous number of years younger than I am. I come from a family of long-lived people. And plenty of other fit, fertile men have had kids far into middle age and beyond. Indeed, it's a powerful part of our evolutionary roots. Alpha males have long sired children with successively younger partners, staying in the mating game well after the beta boys have quit. In some cases paleo-fatherhood is practically a fashion statement, with no shortage of high-profile golden-agers pushing strollers. Paul McCartney was 61 when his last child was born. Clint Eastwood was 66. Tony Randall was 78. Steve Martin had his first child (with his 40-year-old wife) last December, at age 67. After all, sperm are all but indestructible, right?

The numbers seem to bear this out. From 1980 to 2009, new-dad rates in the U.S. rose 47% in the 35-to-39 age group and a whopping 61% in the 40-to-44 group. They even rose 18% among men 50 to 54. The trend is driven partly by America's high divorce rate, which leads to second marriages and second broods, and partly by dual-career couples, who often start families late. More important is the role of medicine. There are more procedures than ever to help ensure healthy pregnancies, and to the extent that middle-

aged men bump up against reproductive problems, there are erectile-dysfunction meds to rev things up and procedures like intrauterine insemination to get a baby started.

"Men have had this 'I'm invincible' theory when it comes to reproduction," says social psychologist Susan Newman, who has written more than a dozen books on parenting and relationships. "The only thing they needed to worry about was sperm count."

But for reasons both social and scientific, men may soon be worrying about a good deal more. Last August, a study in *Nature* found that older fathers face a significantly increased risk of siring a child with autism or schizophrenia, with mutations in sperm that may contribute to these conditions doubling for every 16.5 years a man ages. That paper followed an April 2012 study, also in *Nature*, that found older fathers are four times as likely as mothers to pass on autism-related genetic glitches, with the risk becoming especially acute after men turn just 35--precisely the age at which the ostensibly more-fragile female reproductive system is said to enter the danger zone. Between those two reports came a May study in the *American Journal of Men's Health* linking a father's age to preterm birth, low birth weight and stillbirth. These and other papers, some showing possible links between older dads and the occurrence of cleft palates and certain cancers, are leading to the inescapable conclusion that late fatherhood isn't just the amusing indulgence of an old man with a willing young wife but also a true health peril for kids, perhaps worse than those caused by an older mom.

"The biological clock was always there for me," says Antoinette Vitale, 47, a former CPA and now a full-time mother living in Westchester County in New York. Vitale had her three children when she was 38, 40 and 42--the age range at which doctors and well-meaning relatives start sounding alarms. Her husband, who's a year older, was spared such procreative prodding. The next generation of fathers may not have it so easy. "Men haven't paid much attention to their biological clocks," says Newman, "and now they have to."

Fragile Sperm

There were many reasons the August study linking paternal age with autism and schizophrenia caused such a stir; one was that it defied expectations. Sperm have a reputation for hardiness simply because they're produced in such millions-strong abundance. But plentiful sperm are not the same as fit sperm--and here, a woman's ovum has a very big edge.

Baby girls are believed to be born with all the eggs they'll ever have. Sperm, on the other hand, must be produced anew constantly and divide, on average, every 16 days. Since there are a great many 16-day stretches in a man's life and every division represents a chance for a genetic copying error, sperm can accumulate a lot of what are called de novo mutations. On average, a 20-year-old male passes 15 to 25 such genetic typos on to any child he fathers; for a 45-year-old, the figure is 65. Mothers, no matter how old they are, pass along only about 15.

Investigators in the *Nature* paper studied the genomes of 78 mother-father-child trios in Iceland in which the child had schizophrenia or autism but the parents had neither. Comparing these genomes with those of Icelanders as a whole, they were able to pinpoint mutations that turned up only in autistic or schizophrenic kids and in the sperm of their fathers. And that led them to conclude that a whopping 97% of the relevant genetic errors were attributable to the dad alone. Dr. Dolores Malaspina, a professor of psychiatry and environmental medicine at New York University Langone Medical Center, conducted similar work focusing on schizophrenia in Jerusalem and reached similar conclusions: 27% of all cases of the disease there could be attributed to the father's age.

Harder to reckon than schizophrenia and autism are low birth weight and premature birth. Most people assume these are the result of nutritional deficiencies or problems with the mechanics or hormonal environment of the womb. But things are more complex than that.

In the May paper, investigators studied more than 755,000 births in Missouri from 1989 to 2005, correlating the ages of the parents to the birth weights and gestation periods of the babies. The numbers were revealing: babies fathered by men in the 40-to-45 age group were at 24% greater risk of stillbirth than those fathered by men in the 25-to-29 category. The babies in the older-father group were also at 19% greater risk of low birth weight, 13% higher risk of preterm birth and 29% increased risk of very preterm birth. The reason is that while it's true that anomalies in the womb account for a share of gestational problems, babies are not passive players in the game. If something in the genes inherited from the dad causes problems in the chemical cross talk between mother and child during the nine months they're joined, other things can get thrown off too. "We don't know the exact mechanism," says Dr. Hamisu Salihu, a professor of epidemiology and obstetrics at the University of South Florida and a co-author of the paper. "The process of delivery is poorly understood, but we know there are certain genes that promote it."

Tellingly, some of the same gestational problems that occur with older dads also show up in the 20-to-24 demographic, with a 31% greater risk of very preterm birth and a 57% greater risk of low birth weight. That would seem to contradict the age link, but Salihu says otherwise. Smoking, poor sleep habits and junk-heavy diets are more common in young men and can all lead to epigenetic changes--damage to the chemical markers that sit atop the genome and regulate how it works.

For investigators, epigenetics throws an entirely different X factor into the equation. It's not just habits like smoking and eating poorly that can contaminate the body and erode the epigenome; there's a whole soup of environmental variables, including endocrine disrupters, pesticides, lead and synthetic estrogens. The epigenomes of all people can be damaged by this chemical assault, but the more years you've been around, the more the toll mounts.

Global Oldies

The U.S. may be the world's leading manufacturer of elderly dads, but it's not alone. In England and Wales, the average age of fatherhood has risen from 29 to 32 since 1980; in Iceland it has gone from 28 to

33. In Japan numbers are elusive since surveys of paternal age began only in 2008. But anecdotally the average appears to be on the rise, with the poor economy causing men to delay fathering children. Like older American dads, however, older Japanese men shrug at the risk. "I don't see major difficulties about being a senior father," says Yokohama resident Seishi Yoda, 71, who is retired and raising two children, ages 6 and 2. "I'm careful about my health. I'm doing many sports such as swimming." Having kids late may even be a patriotic duty: "I want to help increase Japan's shrinking population," he says.

China and India have no such underpopulation problem, nor do they have an old-dad boom. But they're hurtling toward one. The long-standing preference for boy babies over girls in both countries, and the selective abortions and offshore adoptions of daughters that have resulted, has produced a young population that is disproportionately male. As those children reach marriage age, the competition for wives will be keen, and many men will take a long time to settle down or won't get married at all. "It takes longer for men to establish themselves," says Radhika Chopra, a professor of sociology at the University of Delhi. This is making old dads with very young kids an increasingly common sight in Indian society. Says Chopra: "It is not a stigma as much as a slight giggle."

That giggle galls some women, at least in the U.S. Even as scientists raise the alarm over the perils of eroded sperm, men face none of the barrage of health warnings directed at older moms. There's not a mother around who didn't feel a sense of lifestyle scrutiny during pregnancy if she forgot her folic acid or sneaked a glass of wine. But men, the sole caretakers of the sperm, have gotten a free ride.

"There's a scare that's constantly put into women but not men," says Robin Gorman Newman, 52, founder of Motherhood Later ... than Sooner, an organization for older moms. She and her husband adopted a child 10 years ago after a round of fertility treatments proved fruitless. "You walk into a fertility doctor's office and they start rattling off the dangers, but the whole time they're looking at the woman."

Veronique Christory, 44, got her scolding after her kids came along. A Swiss-born arms expert with the International Committee of the Red Cross's U.N. delegation, she had four children from age 29 to 36. That put her pregnancies in the safe zone except for the last, which slipped just past the much publicized threshold of 35. And she heard about it. "After the last was born," she says, "people kept coming up to me and telling me how lucky I was that there had been no problems."

While it's true that the risk of Down syndrome at age 35 is 1 in 400, compared with about 1 in 1,000 for mothers who are 30, most parents would still take those odds, and at least the numbers are well researched and reliable. We're only beginning to fathom the risks associated with aged sperm. As the database gets larger, the word should spread more widely. "I think there's going to be a sense of vindication," says Gorman Newman. Indeed, the entire valence of who's to blame for age-related baby problems could shift. Molecular geneticist Joseph Buxbaum, the director of the Seaver Autism Center at Mount Sinai School of Medicine in New York City, puts things flatly: "It's quite clear that older parents are associated with increased numbers of mutations, and it's mostly the dad."

Gone Too Soon

The problems old dads bring to the table go beyond the genetic. There's something to be said for a father with the stamina to keep up with a child. There's something to be said for a father who looks like all the other dads. And there's certainly something to be said for a dad who'll be alive as his kids launch themselves into the world. "Even if you're Paul McCartney's child, you get ripped off if your father dies when you're in your early 20s," says Julianne Zweifel, a clinical professor of obstetrics and gynecology at the University of Wisconsin.

A child's mind is not well suited to sorting this out. Kids like uniformity in all things, and when it comes to age, that means everyone belongs in one of three silos: kids, adults and old people. When those boundaries blur, it can lead to anxiety--something I've observed often.

There aren't a lot of gray hairs among the fathers in my daughters' play groups except mine. And there aren't many other fathers who sometimes must explain to strangers what their relationship to their kids is. "You're the dad?" a child asked me once when I went to pick up my kids at school. I found that funny, sort of, but my girls didn't. In our case, things are complicated by the fact that my daughters are half Mexican and have always called me Papi, which is understood for what it means south of the border but sounds awfully grandfatherly to American ears--perhaps explaining why both girls sometimes lobby to switch to an unambiguous Dad.

"I think some kids don't come to terms with this," says Zweifel. While Seishi Yoda's swimming regimen or my trips to the salon might help a little, they don't change the essential arithmetic. "When kids see parents going out for a run, they can reassure themselves that everything's O.K. But in the end, 60 is still 60."

The larger question, the when-will-Dad-die question, is even tougher. Younger parents cope with growing old by setting a goal--seeing their grandchildren grow up, say. Older parents do the same; they just aim lower. "I want to be healthy when my second daughter turns 20," says Yoda. "My dream is to dance with my daughters at their weddings."

Here too, children can't rationalize things so easily. Instead they go for reassurance. When my 10-year-old saw Dr. Oz on TV describing the body's biological age--which, as opposed to its calendrical age, is determined in part by fitness--she seized on it like a lifeline. "So your body thinks you're 29, right?" she asked me immediately. Yes, I lied, it does.

None of this means there aren't advantages to the old-dad arrangement. A study released last June, for example, found that the sons of older men tend to have longer-than-average telomeres--the caps at the end of chromosomes. Over the course of a lifetime, telomeres tend to get shorter, causing the chromosomes to fray and leading the body to break down. The longer they are at the beginning of life, the more time you get. It's not clear why the kids get this telomeric bonus, but it's an advantage all the same.

Older dads may be better caregivers as well. Not only does the established middle-aged man have more time and money, but he may also be more nurturing. Testosterone levels drop by an average of 1% per year after a man reaches 30, making him less reactive and more patient. "Before, I was a ball of anxiety about things," says 49-year-old Conrad Fischer of Brooklyn, who has an 18-month-old from his second marriage and 16- and 17-year-olds from his first. "Even if it's your first time through, I still think it's easier because you're less tense about things."

That, actually, is true of both parents. Elizabeth Gregory, director of Women's Gender and Sexuality Studies at the University of Houston and author of *Ready: Why Women Are Embracing the New Later Motherhood*, speaks of the rise of peer marriages, in which both partners have traveled, have completed their education and are professionally established. "The whole dynamic of task division has changed," she says. "They both feel more ready to stay at home."

Such domestic egalitarianism could, as science advances, become medical egalitarianism too. Just as women have submitted to all manner of physical and genetic exams to determine their fitness to have kids, so too may men one day soon. Malaspina is gathering molecular data to map corrupted genes on sperm. That may make it easier to screen before conception, as opposed to watching for problems after.

Senior fatherhood will never be the preferred state: sperm do become damaged; dads do die early. These concerns have never been news to women, for whom biology and society have always made every pregnancy a much higher-stakes affair. If moms are feeling a bit of satisfaction now that men are getting a taste of the same, they can hardly be blamed. And if fathers of a certain age are feeling an unfamiliar burden, well, welcome to the big leagues, old man.

FOR STORIES ON THE DOUBLE STANDARD OF INFERTILITY, A BRIEF HISTORY OF THE BIOLOGICAL CLOCK AND FINANCIAL AND HEALTH TIPS FOR OLDER PARENTS, GO TO time.com/olderdads

With Reporting By Lucy Birmingham / Tokyo; Ruth Davis Konigsberg / Alice Park; Tara Thean; Felipe Cabrera / New York; Krista Mahr / New Delhi

 Click to Print

Find this article at:

<http://www.time.com/time/magazine/article/0,9171,2140795,00.html>

Copyright © 2013 Time Inc. All rights reserved. Reproduction in whole or in part without permission is prohibited.

[Privacy Policy](#) | [Add TIME Headlines to your Site](#) | [Contact Us](#) | [Customer Service](#)