

# Introduction: What to do with older prospective fathers: the risks of advanced paternal age

Mark Sigman, M.D.

Warren Alpert Medical School of Brown University and the Miriam and Rhode Island Hospitals, Providence, Rhode Island

Increasing numbers of men are attempting conception at older ages. Adverse changes in male fertility and sexual function occur with age. In addition, there are potential consequences for children born to older fathers—some medical and some psychological. This month's Views and Reviews section discusses the biologic changes in reproductive function, medical conditions that increase with age that affect reproductive function, the risks to children of older fathers, genetic mechanisms responsible for these risks, and issues clinicians should know to be able to counsel these couples. (Fertil Steril® 2017;107:299–300. ©2016 by American Society for Reproductive Medicine.)

**Discuss:** You can discuss this article with its authors and with other ASRM members at <https://www.fertsterdialog.com/users/16110-fertility-and-sterility/posts/14160-23584>

Over the last three decades increasing numbers of older men are fathering children. Although the ability of women to conceive by intercourse terminates with menopause, male fertility declines much more gradually. Thus for many men of advanced age the option of fathering children remains a biologic option. The age at which men are often classified as advanced age is commonly after age 40 years, although many of the risks continue to increase with age. This raises a variety of questions that will be addressed in this month's Views and Reviews section. What are the age-related changes that occur in male fertility? How do the semen parameters change over the years, and what are the effects on pregnancy rates through intercourse, IUI, and ART?

Even with adequate semen parameters male sexual function may decline with age, which may limit fertility potential. Both of these topics will be addressed in the article "Effects of age on fertility and sexual function."

As men age a variety of medical conditions, such as enlargement of the prostate and cancers of the bladder and prostate, become prevalent. The conditions themselves or the treatment of these conditions may adversely affect male reproductive potential through impairment of spermatogenesis or of sexual function and the ability to deliver sperm. These issues are explored in "Urological diseases more common to the older male and their treatments: how they impact fertility."

It is known that a variety of conditions, including psychiatric and

neurocognitive disorders such as autism spectrum disorder, are more common in children born to older men. In addition, paternal age has been linked to increased rates of still-birth and certain childhood cancers. These issues and the evidence supporting these associations are discussed in "Is advanced paternal age a health risk for the offspring?"

What are the genetic mechanisms underlying paternal age-related conditions in children? Significant advances have been made into understanding the basis of many of these conditions which is explored in "Age-related alterations in the genetics and genomics of the male germ line."

Clinicians involved in managing couples presenting for help with conception are commonly faced with older men and women. How should we counsel these couples? Should we be recommending sperm cryopreservation in young men so they may use "younger" sperm when they are of advanced age? Should older men be discouraged from attempting

Received December 19, 2016; accepted December 19, 2016.

M.S. has nothing to disclose.

Reprint requests: Mark Sigman, M.D., Warren Alpert Medical School of Brown University and the Miriam and Rhode Island Hospitals, Suite 174, 2 Dudley St., Providence, Rhode Island 02905 (E-mail: [mark.sigman@brown.edu](mailto:mark.sigman@brown.edu)).

Fertility and Sterility® Vol. 107, No. 2, February 2017 0015-0282/\$36.00  
Copyright ©2016 American Society for Reproductive Medicine, Published by Elsevier Inc.  
<http://dx.doi.org/10.1016/j.fertnstert.2016.12.020>

paternity because of the risks? These issues are discussed in “Management of counseling with the male of advanced paternal age.”

Finally, older parents face challenges that are not concerns for younger parents. Psychological and physical health conditions may arise for both older parents and their children. These challenges and the ethical dilemmas they pose to

patients and medical professionals are discussed in the unique article “Old, older, and too old: age limits for medically assisted fatherhood?”

This series of articles covers the breadth of conditions, challenges, and risks that advanced paternal age couples may face. An understanding of these issues will help us all become better clinicians for these patients.