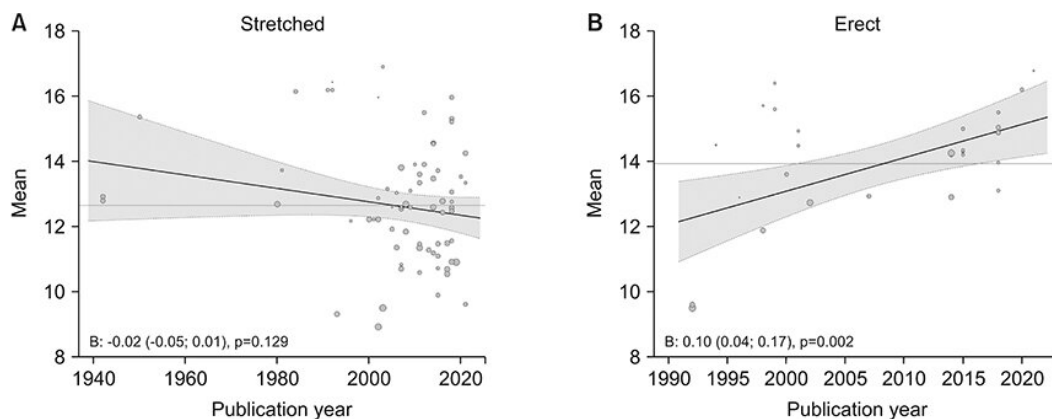


Is an increase in penile length cause for concern?

February 22 2023, by Emily Moskal



Meta-regression model for mean (A) stretched length and (B) erect length over the year of publication. Credit: *The World Journal of Men's Health* (2023). DOI: 10.5534/wjmh.220203

According to trends in male reproductive health data, sperm quality and testosterone levels have declined over the last few decades, sounding alarm bells for Michael Eisenberg, MD, a professor of urology at Stanford Medicine. It's made him wonder: Should we be concerned about other differences in men's reproductive health? Surmising that there may be more to uncover, Eisenberg set out to determine if physical anatomy has changed.

In a study published Feb. 14 in the *World Journal of Men's Health*,

Eisenberg and his colleagues compiled data from 75 studies, conducted between 1942 and 2021, that reported on the penile length of 55,761 men. The team found that the average erect penis length increased by 24% over 29 years, a trend they saw around the world.

Eisenberg said that the increase may be another indicator that [environmental exposures](#)—such as environmental pollutants or increasing [sedentary lifestyles](#)—are causing reproductive-related changes.

Eisenberg discussed the motivation for the study, the (potential) implications of the findings for men's [health](#), and new opportunities to investigate the impact of external environmental factors on [human health](#).

Can you speak to the motivations behind the study?

A lot of studies have taken a broad look at changes in men's reproductive health. For example, sperm counts and [testosterone levels](#) have been declining for a long time. There are also higher rates of male congenital birth defects, like hypospadias, where the opening for the urethra is not at the tip of the penis, and cryptorchidism, where the testicles don't properly descend. Another measurement we've seen reported in some men's health research is penile length, and no one has taken a systematic look at that.

Given the trends we'd seen in other measures of men's [reproductive health](#), we thought there could be a decline in penile length due to the same environmental exposures. We conducted a [meta-analysis](#) in which we examined all reports, to our knowledge, of penile length. We looked at flaccid, stretched and erect length and created one large database of measurements. What we found was quite different from trends in other areas of male fertility and health. Erect penile length is getting longer,

from an average of 4.8 inches to 6 inches, over the past 29 years.

What are the health implications of this trend?

The increase happened over a relatively short period of time. Any overall change in development is concerning, because our reproductive system is one of the most important pieces of human biology. If we're seeing this fast of a change, it means that something powerful is happening to our bodies. We should try to confirm these findings and if confirmed, we must determine the cause of these changes.

There could be a number of factors at play, such as chemical exposure, like pesticides or hygiene products, interacting with our hormonal systems. These endocrine-disrupting chemicals—there are many—exist in our environment and our diet. As we change our body's constitution that also affects our hormonal milieu. Chemical exposure has also been posited as a cause for boys and girls going into puberty earlier, which can affect genital development.

Where does this research go from here? What questions remain unanswered?

The big next step is to look at other patient populations—such as the pediatric population—to see if there are similar changes. Just as we measure height and weight every year across the U.S., this is something else we could measure in a systematic fashion, because it may turn out to be an early indicator of changes in human development.

Also, if there's granular data on lifestyle factors or environmental exposures, we could try to understand why this may be happening. Lastly, I think it's important to ask if there are similar changes occurring to women's reproductive organs.

More information: Federico Belladelli et al, Worldwide Temporal Trends in Penile Length: A Systematic Review and Meta-Analysis, *The World Journal of Men's Health* (2023). [DOI: 10.5534/wjmh.220203](https://doi.org/10.5534/wjmh.220203)

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