


# Retrograde Ejaculation—a Commonly Unspoken Aspect of Prostatectomy for Benign Prostatic Hypertrophy

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## Abstract

The vast majority of men undergoing prostatectomy experience permanent retrograde ejaculation (RE). While newer, selective techniques of prostatectomy result in lower rates of RE by preserving the innervation to the urethra, the vast majority of men undergoing the classical techniques experience permanent RE due to destruction of the natural mechanisms preventing backflow of the ejaculate into the urinary bladder. A review of online information available to men reveals a lack of information on the importance of RE and explanation of the methods used for prostatectomy. This review provides evidence that the true effects of RE in men can be serious. With the lack of studies aiming at the psychological effects of RE on men's response, it is important for practicing family physicians and urologists to present RE as a serious adverse effect and not to trivialize it.

## Keywords

Retrograde ejaculation, benign prostatic hypertrophy, physiological and endocrine disorders

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Half of the men beyond 51–60 years of age and up to 90% of men older than 80 years experience benign prostatic hyperplasia (BPH) characterized by lower urinary tract symptoms, leading many of them to consider prostatectomy (NIDDK, 2019). Different proportions of men with BPH undergo prostatectomy; for example, the 1-year outcome data for 612 men with symptoms of BPH showed that surgery was eventually performed in 6% of men with scores in the mild range, 18% of men with scores in the moderate range, and 34% of men with severe scores at baseline (Wennberg, 1990).

The vast majority of men undergoing prostatectomy experience permanent retrograde ejaculation (RE). While newer, selective techniques of prostatectomy result in lower rates of RE by preserving the innervation to the urethra, the vast majority of men undergoing the classical techniques experience permanent RE due to destruction of the natural mechanisms preventing backflow of the ejaculate into the urinary bladder (Sun et al., 2018).

## What Are Men Told?

Most official texts published by urology societies are silent on the impact of RE, leaving men to seek information on Internet-based sources. Employing “Google search,” we

conducted a review of online information made available on the Internet by searching the term “retrograde ejaculation.” The objective of this review was to identify the information given to men on the nature and complications of RE. This analysis reveals that these statements commonly trivialize the issue as highlighted by the following examples:

- “In retrograde ejaculation, this muscle fails to contract. Because it stays relaxed, the ejaculate ends up in your bladder. The result is what’s called a dry orgasm. *Despite the lack of ejaculate, it feels like a normal orgasm and doesn’t usually affect sexual pleasure*” (Pietrangeto, 2017).
- “Most men associate ejaculation with orgasm, but not all orgasms involve ejaculation. *It can be unnerving to orgasm without ejaculating, but it is not harmful—changing expectations may be all*

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*it takes to live comfortably with retrograde ejaculation*" (Medical News, 2019).

- "If the problem is caused by a medicine, normal ejaculation will often come back after the drug is stopped. Retrograde ejaculation caused by surgery or diabetes often can't be corrected. This is most often not a problem unless you are trying to conceive. *Some men do not like how it feels and seek treatment. Otherwise, there is no need for treatment. Men with retrograde ejaculation still experience the feeling of an orgasm and the condition does not pose a danger to health*" (NHS, 2019).
- "*Retrograde ejaculation isn't harmful or painful, but it may cause a small change in sensation during sex because no semen exits the penis.* This is called a dry ejaculate. A dry ejaculate doesn't affect erection (getting hard for sex) or orgasm. *You will still be able to enjoy sexual activity.* After sexual activity, your urine (pee) may be cloudy because it has semen in it" (Memorial Sloan Kettering, 2019).
- "*The good news for men with this condition is that retrograde ejaculation does not affect their ability to get an erection or to have an orgasm*" (Samadi, 2019).
- "If the problem is caused by a medicine, normal ejaculation will often come back after the drug is stopped. Retrograde ejaculation caused by surgery or diabetes often can't be corrected. This is most often not a problem unless you are trying to conceive. Some men do not like how it feels and seek treatment. Otherwise, there is no need for treatment" (University of Florida Health, 2019).

## What is the Honest Reality?

It is evident that RE is acknowledged as an inevitable result of prostate surgery, but it does not really gain the classification of an adverse event. It is described more as "something some men find uncomfortable but learn to live with."

But is it true?

A 2005 review article has listed the incidence of several complications following radical prostatectomy: mortality <0.3%, impotence >50%, **ejaculatory dysfunction 100%**, orgasmic dysfunction 50%, incontinence <5%–30%, pulmonary embolism <1%, rectal injury <1%, urethral stricture <5%, and transfusion 20% (McCullough, 2005). In a 2019 systematic review and network meta-analysis, RE was reported in 17 out of 109 trials (Huang et al., 2019).

One would expect that for urology, as a specialty where BPH is one of the most common presenting conditions and prostatectomy is by far the most common

surgery, there should be studies investigating how men feel about losing their antegrade ejaculation.

A systematic review of the published literature on PubMed, EMBASE, and Cochrane from inception to October 2019 has failed to identify even a single study investigating this aspect. There are scores of studies comparing success in preserving antegrade ejaculation with different surgical techniques, but not a single study to support or refute the claim presented earlier that "despite the lack of ejaculate, it feels like a normal orgasm and doesn't usually affect sexual pleasure" (Pietrangeto, 2017).

## The True Effects of RE

In attempting to answer the question of whether RE is truly a trivial and negligible adverse event in men, a narrative review of the processes involved in ejaculation was conducted. In their groundbreaking studies, Masters and Johnson (1989) have documented that the more seminal volume ejaculated, the greater the subjective sensation of pleasure, secondary to the effect of the volume of seminal fluid on distending the urethra (Puentes & Alfonso, 2008).

This view has been refuted by more recent research published during the past 15 years, not showing a direct relationship between the ejaculated volume and level of pleasure (Levine, 2008; Rosenberger et al., 2006). Specifically, recent research has suggested that ejaculation frequency, mood, cognitive perceptions, timing, and circumstances may be as, or even more, important than the volume itself (Haning et al., 2007; Palmieri et al., 2012). However, it is critical to acknowledge that none of these research efforts compared normal antegrade ejaculation with RE, and there is no published evidence that RE is "the same as" antegrade ejaculation.

## Data Synthesis

The fact that no urology society worldwide has tackled this issue beyond the evident attempts to prevent it by better surgery is troubling. In many cases, the indications to perform prostatectomy are relative and not absolute, with the use of medications such as alpha-1 blockers and hormones potentially changing the prospect of prostatectomy. A man who believes that antegrade ejaculation is an important part of his pleasure and well-being is likely to react very differently from a man who is sexually inactive or from a man who believes he will have similar pleasure.

The review presented herein suggests that unless RE is presented as part of the pros-and-cons arguments before prostatectomy is offered, many men are likely to feel misled. With the lack of studies aiming at the

psychological effects of RE on men's response, it is important for practicing family physicians and urologists to present RE as a serious adverse effect and not try to trivialize it.

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