

Aquablation vs. TURP: Ejaculatory Function Durability in BPH

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Benign prostatic hyperplasia (BPH) treatment often involves a trade-off between symptom relief and the preservation of sexual function, particularly antegrade ejaculation. Transurethral resection of the prostate (TURP) remains a standard, but its impact on ejaculatory function is well-documented. A systematic review published in *Int J Impot Res* in 2026 examined how a newer, minimally invasive option, robotic waterjet ablation (RWJA), compares on this patient outcome, which is critical for quality of life.¹

KEY TAKEAWAYS

- **The Pivot:** Robotic waterjet ablation (Aquablation) offers comparable efficacy to TURP for BPH while significantly preserving antegrade ejaculation.
- **The Data:** Antegrade ejaculation preservation rates post-RWJA ranged from 72% to 99.6% across 15 studies.
- **The Action:** Clinicians should consider RWJA for BPH patients prioritizing ejaculatory function, noting its durable preservation up to five years.

Benign prostatic hyperplasia, a common condition affecting aging men, frequently necessitates intervention when symptoms become bothersome or lead to complications. For decades, TURP has served as the gold standard, effectively reducing prostatic volume and improving urinary flow. But the procedure carries a known risk of ejaculatory dysfunction, a side effect that significantly impacts quality of life for many patients. This concern has driven the development of numerous minimally invasive surgical therapies (MISTs) aiming to achieve similar symptomatic relief with a more favorable side effect profile, especially regarding sexual function.¹

A systematic review by Bettencourt, Wu, and Borrell evaluated the ejaculatory function outcomes following robotic waterjet ablation (RWJA), commercially known as Aquablation, for BPH.¹ The authors conducted a comprehensive literature search through January 1, 2025, across PubMed, Embase, and Cochrane databases. They identified 15 studies, encompassing 1533 patients, that specifically reported on sexual outcomes, with a particular focus on ejaculatory dysfunction and the preservation of antegrade ejaculation.¹

The Aquablation Mechanism and its Promise

Aquablation distinguishes itself from traditional thermal therapies by employing a high-velocity waterjet to ablate prostatic tissue. This heat-free approach, guided by real-time ultrasound imaging and robotic precision, allows for targeted tissue removal while sparing critical structures involved in ejaculatory function. The theoretical advantage lies in its ability to precisely resect adenomatous tissue without causing thermal damage to the ejaculatory ducts or bladder neck,

which are often implicated in retrograde ejaculation following TURP. This mechanism offers a compelling argument for its potential to preserve sexual function, a key differentiator in patient preference.¹

The preservation of antegrade ejaculation post-RWJA ranged from 72% to 99.6% across the 15 studies included in the review.¹ This wide range reflects variations in study design, patient populations, and follow-up durations. But even at the lower end, these rates compare favorably to historical data for TURP, where retrograde ejaculation rates can be as high as 65-75%.¹ Erectile function, another critical aspect of sexual health, remained stable across all reviewed studies, indicating that RWJA does not appear to negatively impact this domain.¹ This stability in erectile function is a consistent finding across many BPH interventions, but its explicit confirmation here reinforces the overall sexual function benefit. For patients concerned about prostatectomy leakage, the precision of these newer techniques offers a different set of considerations.

Comparing Aquablation to TURP

One randomized controlled trial (RCT) within the systematic review directly compared RWJA to TURP. This trial demonstrated significantly lower rates of ejaculatory dysfunction in the RWJA group.¹ This benefit, which was the durable preservation of ejaculatory function, was maintained for up to five years.¹ This long-term data is particularly important, as many patients considering BPH surgery are looking for sustained relief and minimal impact on their quality of life over many years. The durability of antegrade ejaculation preservation is a significant clinical advantage for RWJA, addressing a major concern for sexually active men.¹

The comparable efficacy of RWJA to TURP in terms of symptom improvement and flow rates has been established in previous research, making the ejaculatory function data a key differentiator. When considering treatment options, the balance between symptom relief and side effect profile is paramount. For patients who prioritize the preservation of antegrade ejaculation, RWJA presents a strong case. This is especially true for younger men with BPH, for whom sexual function often holds greater importance.¹

Where the Evidence Falls Short

Despite these findings, which show high rates of antegrade ejaculation preservation, the systematic review highlighted several limitations. A scarcity of randomized controlled trials directly comparing RWJA to other minimally invasive BPH treatments remains a significant gap.¹ Most of the included studies were single-arm observational studies or retrospective analyses, which inherently carry a higher risk of bias than RCTs. While the single RCT comparing RWJA to TURP provided robust data (n=181, 95% CI for ejaculatory dysfunction rates), more head-to-head comparisons against other MISTs would strengthen the evidence base.¹

Another limitation is the restricted long-term follow-up beyond 12 months in many studies. While the RCT showed five-year durability for ejaculatory function, comprehensive long-term data for other outcomes and across diverse patient cohorts is still developing.¹ Future comparative studies evaluating RWJA against other minimally invasive BPH treatments, such as prostatic urethral lift (PUL) or steam ablation, are needed to further validate these findings and better define the sexual function outcomes associated with this innovative procedure. This would provide a more complete picture for clinicians advising patients on the full spectrum of available options. For a broader understanding of general clinical practice, the Oxford Handbook of General Practice, 5th Edition offers a comprehensive overview.

The review also did not detail the specific patient characteristics that might predict better ejaculatory outcomes with

RWJA. Factors such as prostate size, baseline ejaculatory function, or prior medical therapies could influence results. Future research should aim to identify these predictors to better personalize treatment recommendations. Similarly, while erectile function remained stable, the review did not explore other aspects of sexual health, such as orgasm quality or libido, which also contribute to overall sexual satisfaction.¹

The systematic review did not provide granular data on adverse events beyond ejaculatory dysfunction and erectile function stability. While RWJA is generally considered safe, a detailed comparison of all potential complications, including urinary incontinence or infection, against TURP and other MISTs would be beneficial. Understanding the full risk-benefit profile is essential for informed patient consent. The absence of such detailed safety comparisons represents a missed opportunity to provide a more holistic view of RWJA's place in the BPH treatment algorithm.¹

The authors also noted the potential for publication bias, given the nature of systematic reviews. Studies with positive outcomes are more likely to be published, which could skew the overall impression of RWJA's benefits. This is a common challenge in medical literature, and while the authors performed a thorough search, the inherent limitations of the available data persist. Clinicians should interpret these findings with an awareness of these potential biases.¹ Still, the consistent finding of ejaculatory function preservation across multiple studies, particularly the five-year data from the RCT, provides a strong signal. It suggests that RWJA offers a genuine advantage for patients for whom this outcome is a priority. The field needs more direct comparative trials with longer follow-up, but the current evidence positions Aquablation as a compelling alternative to TURP, especially when considering the patient's sexual health.¹

CLINICAL IMPLICATIONS

For many men with BPH, the prospect of retrograde ejaculation following TURP is a significant deterrent to surgery. The data on robotic waterjet ablation, particularly its durable preservation of antegrade ejaculation up to five years, directly addresses this concern. This makes Aquablation a compelling option for sexually active patients who prioritize maintaining ejaculatory function, shifting the conversation beyond mere symptom relief. The comparable efficacy of Aquablation to TURP, combined with its superior ejaculatory outcomes, means GPs and specialists now have a stronger argument for a minimally invasive approach. While the evidence base still needs more head-to-head randomized trials against other MISTs, the existing data provides enough confidence to discuss Aquablation as a primary surgical option, especially for patients who might otherwise delay intervention due to fears about sexual side effects.

But the scarcity of long-term follow-up beyond five years and the limited number of direct comparative trials against other MISTs remain important caveats. Clinicians must manage patient expectations, acknowledging that while initial results are strong, the full long-term picture is still emerging. Further research is essential to solidify Aquablation's position against the broader spectrum of BPH therapies and to identify ideal patient profiles for this specific intervention.

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REFERENCES

1. Bettencourt A, Wu J, Borrell JA. Ejaculatory function after robotic waterjet ablation for the treatment of benign prostatic hyperplasia: a systematic review. Int J Impot Res. 2026;38(1):1-8. doi:10.1038/s41443-025-00000-0

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