We report on our experience using sildenafil citrate (Viagra) in patients with erectile dysfunction following nerve sparing (NS) or non-nerve sparing (non-NS) RP. Baseline and follow-up data from 28 patients was obtained. Patients receiving any neoadjuvant/adjuvant hormones or adjuvant radiation therapy were excluded. Both the patients and their spouses were interviewed using the CCF post-prostatectomy questionnaire. The patients were compared based on the type of surgical procedure (NS vs non-NS). A positive response to sildenafil was defined as an erection sufficient for vaginal penetration. Twelve of the 15 patients (80%) who had bilateral nerve-sparing procedures had a positive response to sildenafil with a mean duration of 6.92 minutes of vaginal intercourse. All 12 patients responded positively within the first 3 doses. The three patients who underwent unilateral NS procedure and all ten of the non-NS patients showed no response to sildenafil. The two most common side effects seen were transient headaches (39.5%) and abnormal color vision (10.7%). No patients discontinued the medication due to the side effects. The efficacy of sildenafil citrate in treating erectile dysfunction in the post-prostatectomy patient may depend on the presence of bilateral neurovascular bundles. These findings should encourage urologists to perform more nerve-sparing procedures, especially in patients with low volume cancers. The ability to salvage potency with an oral agent after RP will change our concepts on the morbidity of surgical therapy.