

# Treatment Options for Erectile Dysfunction

A combination of the therapies may be used

Treatment	Advantages	Disadvantages
<p><b>Vacuum erection device</b> A plastic cylinder is placed over the penis. Using a small hand pump, air is pumped out of the cylinder causing a partial vacuum which draws blood into the penis and creates the erection. Once the erection is obtained, a tension ring is applied to the base of the penis. This acts like a tourniquet to keep the blood in the penis and to maintain the erection.</p>	<ul style="list-style-type: none"> <li>• Safe</li> <li>• Least expensive</li> <li>• No systemic side effects</li> <li>• Reliable</li> <li>• Effective in 60-90% of men</li> </ul>	<ul style="list-style-type: none"> <li>• Side effects: Can cause pain or numbness, lowers the penile temperature</li> <li>• Less "natural" erection</li> <li>• Trapped ejaculate</li> <li>• Pulling of scrotal tissue into the cylinder</li> <li>• Awkward and inconvenient to use</li> </ul>
<p><b>Oral Medications</b> Phosphodiesterase inhibitors (PDE-5 inhibitors) These medications improve erectile function. Products: Viagra (sildenafil), Cialis, Levitra, Stendra, Staxyn</p> <p>(One study* published in June 2014 reported that Sildenafil use may be associated with increased risk of developing melanoma. The study is insufficient to alter clinical recommendations and needs further investigation but it is recommended that patients taking sildenafil be aware of these findings. *JAMA Intern Med)</p>	<ul style="list-style-type: none"> <li>• Taken by mouth</li> <li>• Successful in 65-70% of men</li> <li>• Successful in 50-60% of men with diabetes or spinal cord injury</li> </ul>	<ul style="list-style-type: none"> <li>• Side effects: headache, nasal congestion, muscle and back pain, hypotension, visual disturbance</li> <li>• Not effective in patients who have had a prostatectomy unless the nerves were spared</li> <li>• 30-60 minute wait before response</li> <li>• Can be expensive</li> <li>• Do not take with alpha blockers medications</li> <li>• <b>Absolutely not to be taken</b> by men who are on nitrates or have serious heart disease</li> </ul>
<p><b>Penile injection therapy</b> Self-injection of drug into the penis. Drugs include Alprostadil and TriMix.</p>	<ul style="list-style-type: none"> <li>• Highly effective</li> <li>• Few systemic side effects</li> <li>• Works in 3 to 5 minutes</li> <li>• 80-90% success rate</li> </ul>	<ul style="list-style-type: none"> <li>• Side effects: pain from medication, priapism (erection lasting 4 hrs or more), scarring or bleeding at injection site</li> <li>• Can be expensive</li> <li>• Requires training in the office</li> </ul>
<p><b>Intra-urethral Suppository</b> Small pellet inserted in the urethra without needles. Product: MUSE</p>	<ul style="list-style-type: none"> <li>• Few systemic side effects</li> <li>• Effective in 65% of men</li> <li>• May be effective in men with vascular disease or with diabetes</li> </ul>	<ul style="list-style-type: none"> <li>• Side effects: penile aching</li> <li>• Requires training in the office</li> <li>• Can be expensive</li> </ul>
<p><b>Penile Prosthesis</b> Inflatable rods are surgically implanted within the erection chambers of the penis. Erection is achieved by activating a pump which pushes fluid into the penis. The pump and reservoir are implanted in the testis.</p>	<ul style="list-style-type: none"> <li>• Effective in 90%-95% of men</li> <li>• Satisfaction rates with the prosthesis are very high.</li> </ul>	<ul style="list-style-type: none"> <li>• Side effects: Bleeding or infection after the surgery possibly leading to re-operation, infection, scar tissue formation, erosion (tissue around the implant may break down) requiring removal, mechanical failure leading to re-operation and removal. Prosthesis placement destroys the tissue that normally fills during a spontaneous erection. So, prosthesis placement is considered permanent.</li> </ul>
<p><b>Corewave Low Intensity Shock Wave Therapy</b> The mechanism of action involves angiogenesis, and is best suited for patients with vasculogenic ED. Corewave therapy is painless and takes about 20 min per session for 6-8 weeks.</p>	<ul style="list-style-type: none"> <li>• Potential to reduce the need for oral ED medications.</li> </ul>	<ul style="list-style-type: none"> <li>• Unlikely to help men with neurogenic ED</li> <li>• Treatment is not covered by insurance and costs \$2,400 for a complete treatment protocol.</li> <li>• This is an off-label use of the technology. There are no reports of complications in the literature but theoretically could cause fibrosis or hematoma of the penis.</li> </ul>