Regenerative Spontaneity*

September 21, 2019

*Potentially curative, though sustainability of effect requires determination
Erectile dysfunction is very common, especially in the rapidly aging population with co-morbid cardiovascular disease and diabetes.

Unmet needs remain despite the presence of several treatments (algorithms) in the U.S. and Europe; PDE-5 inhibitors as first line therapy and a range of topicals, devices and procedures as second line therapy.

Patient preferences are integral to product selection and the trade-off between satisfaction and adverse events.

Myostim represents a potentially significant and differentiated entrant targeting the pathophysiology of erectile dysfunction with proprietary signals.
ED market exceedingly large; 40.2 million affected Americans between 35-74 years. A 0.24% patient penetration rate at $1,600 per patient (2 treatments/week x 4 weeks) generates >$200m in U.S. high margin practice revenues*.

*Excludes use of Myostim as commercially available consumer product. European ED market (patients) > U.S. > Brazil. China has 3-4x number of ED patients as compared to the U.S.
MyoSTIM

Bioelectric treatment of erectile dysfunction
Key personnel

- Howard Leonhardt, Executive Chairman and CEO
- Nestor Gonzalez-Cadavid, Chief Scientific Advisor and Professor of Urology, David Geffen School of Medicine at UCLA. Director, Urology Research Laboratory, LA Biomed at Harbor-UCLA Medical Center
- Cristiane Carboni, Chief Scientific Officer - is a physiotherapist and expert in the treatment of ED with BES. She leads studies in the UFCSPA – Brazil. She is also a professor and coordinates the Pelvic Floor PT Post graduation at Inspirar University.
- Leslie Miller MD, Chief Medical Officer
- Alex Richardson, Vice President, Engineering and Product Development
- Jorge Genovese PhD, Vice President, Bioelectric Research
- Stuart Williams PhD, Vice President, Biologics Research
Scientific Basis of Competitive Advantage

- Bioelectrical stimulation (BES) is applied clinically for treating a variety of disorders, such as wound healing.
- BES is based on safely modulating various electrical signals to stimulate or inhibit the expression of specific key genes, to counteract the known molecular pathophysiology of ED and not just induce vasodilation.
- Effects may potentially repair for a long-term solution: vasculature, pressure (vasoconstriction/dilation balance), nerves and penile corporal histopathology.
- The first ED treatment to not just address temporary blood flow improvement but to treat muscle and nerve damage recovery.
Proprietary precise bioelectric signaling affects local physiology

01 SDF-1 for stem cell homing
02 IGF-1 for DNA repair
03 Follistatin for muscle repair
04 eNOS for dilating blood vessels
05 VEGF, PDGF, EGF, HIF1α, CXCL5 and SDF1

6 Klotho

DNA REPAIR AND ANTI AGING
The regeneration of smooth muscle cavernosa by BES should result in the *spontaneous return* of erectile in contrast to the oral, injection therapy and the use of a vacuum pump where the patient is treatment dependent.

- **Klotho**: the secretory Klotho results in the reduction in TNFα and IFNγ, which can show anti-inflammatory properties. Klotho can interact with Wnt, which results in the inhibition of Wnt pathway activity, thus inhibiting the aging process.
- **IGF-1**: improve nerve regeneration and neuromuscular recovery.
- **Follistatin**: promotes muscle regeneration and recovery. Follistatin is able to accomplish accelerated muscle restoration not only by leveraging the regenerative effects of myostatin inhibition but potentially through modulating inflammation.

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Regenerative Spontaneity*

5. Journal of Pharmacology and Experimental Therapeutics - March 2014 DOI: 10.1124/jpet.113.211169

*Potentially curative, though sustainability of effect requires determination
Preliminary data suggestive of MyoStim ED safety and efficacy
Statistical significance obtained in 22-patient trial!

### Competitive product offerings may impact intimacy, result in local adverse events or be invasive

<table>
<thead>
<tr>
<th>First-line</th>
<th>Efficacy</th>
<th>Impact on intimacy</th>
<th>Functional recovery period</th>
<th>Immediacy of effect</th>
<th>Sustainability of effect</th>
<th>Adherence</th>
<th>Safety</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDE5 inhibitors</td>
<td>70%</td>
<td>Low</td>
<td>NA</td>
<td>15-30 minutes</td>
<td>4-36 hours</td>
<td>NA</td>
<td>systemic side effects; drug interactions. Contra-indicated CV disease</td>
<td>$25-60/pill x 40 pills/year = $1,000-2,400/annum</td>
</tr>
</tbody>
</table>

| Second-line | | | | | | | |
| Topical alprostadil<sup>2</sup> | 39-75% | Moderate | NA | 5-30 minutes | 1 hour | Dose titration often required | Local burning, pain erythema; resolve 2 hours |
| intra-urethral (IU) alprostadil (suppository) | 68% | Moderate | NA | 5-20 minutes | 1 hour | Dose titration may be required | Penile pain (36%), urethral burning and pain (13%), erythema, bleeding |
| Vacuum devices | 50-80% | High | NA | 2-3 minutes | 30 minutes | Difficult in obese men; need coordination | Numbness, pain, bruising, painful ejaculation; unnatural feeling |
| Low-intensity shock-wave<sup>3</sup> | 60-65% in patient subsets | None | 16 weeks | Spontaneous | 12 office visits x 20 minutes divided by 60-90 day break to allow vascular regrowth | Painful during administration | $2,500-3,000; platelet rich plasma extra |
| MyoStim ED | 70-80% | None | 4-8 weeks | Spontaneous | >6 months | Two 45 minute office visits per week x 4-8 weeks | No side effects | $1,600 |

| Third-line | | | | | | | |
| Intra-cavernosal injections | 94% | High | 2 session injection training | 5-15 minutes | <2-4 hours | Penile injection required | wrong injection site, trauma, fibrosis, priapism | $3-6/dose, syringes |
| Inflatable penile prosthesis (IPP)<sup>1</sup> | 80-90% | Moderate | 2-4 weeks | NA | Manual controls | Permanent | Infection, bleeding, scar tissue | $20-30,000 |

1 Based on patient selection criteria; Pending FDA approval; 2 FDA status unclear
Preliminary business model assumes minimal ED population penetration, $1,600 in practice revenues/patient and a 25% click-through payment. Excludes consumer applications for $250 ASP (lower fidelity) device prior to retail mark-up.

<table>
<thead>
<tr>
<th>Year of launch</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
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</thead>
<tbody>
<tr>
<td>Male population: 35-74 years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>x % ED</td>
<td>51.9%</td>
<td>52.0%</td>
<td>52.0%</td>
<td>52.0%</td>
<td>52.1%</td>
<td>52.1%</td>
</tr>
<tr>
<td>= ED population (000)</td>
<td>40,215</td>
<td>40,447</td>
<td>40,679</td>
<td>40,911</td>
<td>41,143</td>
<td>41,373</td>
</tr>
<tr>
<td>% Myostim as function of ED severity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild (000)</td>
<td>14,178</td>
<td>14,793</td>
<td>14,868</td>
<td>14,943</td>
<td>15,018</td>
<td>15,091</td>
</tr>
<tr>
<td>x % Myostim</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.03%</td>
<td>0.07%</td>
<td>0.10%</td>
<td>0.13%</td>
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<tr>
<td>= Myostim users with mild ED</td>
<td>0</td>
<td>0</td>
<td>4,460</td>
<td>10,460</td>
<td>15,018</td>
<td>19,618</td>
</tr>
<tr>
<td>Moderate (000)</td>
<td>19,658</td>
<td>19,771</td>
<td>19,884</td>
<td>19,997</td>
<td>20,110</td>
<td>20,225</td>
</tr>
<tr>
<td>x % Myostim</td>
<td>0.04%</td>
<td>0.10%</td>
<td>0.17%</td>
<td>0.26%</td>
<td>0.34%</td>
<td>0.43%</td>
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<tr>
<td>= Myostim users with mild ED</td>
<td>7,863</td>
<td>19,771</td>
<td>33,803</td>
<td>51,992</td>
<td>68,374</td>
<td>86,968</td>
</tr>
<tr>
<td>Complete (000)</td>
<td>5,393</td>
<td>5,883</td>
<td>5,927</td>
<td>5,971</td>
<td>6,015</td>
<td>6,057</td>
</tr>
<tr>
<td>x % Myostim</td>
<td>0.03%</td>
<td>0.09%</td>
<td>0.14%</td>
<td>0.20%</td>
<td>0.26%</td>
<td>0.33%</td>
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<tr>
<td>= Myostim users with mild ED</td>
<td>1,752</td>
<td>5,295</td>
<td>8,299</td>
<td>11,942</td>
<td>15,639</td>
<td>19,988</td>
</tr>
<tr>
<td>Total ED population (000)</td>
<td>40,215</td>
<td>40,447</td>
<td>40,679</td>
<td>40,911</td>
<td>41,143</td>
<td>41,373</td>
</tr>
<tr>
<td>x Myostim</td>
<td>0.02%</td>
<td>0.06%</td>
<td>0.11%</td>
<td>0.18%</td>
<td>0.24%</td>
<td>0.31%</td>
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<tr>
<td>= Myostim users</td>
<td>9,615</td>
<td>25,066</td>
<td>46,561</td>
<td>74,394</td>
<td>99,031</td>
<td>126,574</td>
</tr>
<tr>
<td>x revenues/course of treatment</td>
<td>$1,600</td>
<td>$1,600</td>
<td>$1,600</td>
<td>$1,600</td>
<td>$1,600</td>
<td>$1,600</td>
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<tr>
<td>= Myostim MD practice revenues</td>
<td>$15,384</td>
<td>$40,105</td>
<td>$74,497</td>
<td>$119,030</td>
<td>$158,449</td>
<td>$202,518</td>
</tr>
<tr>
<td>x 25% click-through fee</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>= Myostim clickthrough revenue</td>
<td>$3,846</td>
<td>$10,026</td>
<td>$18,624</td>
<td>$29,758</td>
<td>$39,612</td>
<td>$50,630</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>% Population</th>
<th>2016</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>35-44 population</td>
<td>20,564</td>
<td>21,567</td>
<td>22,508</td>
<td>23,074</td>
</tr>
<tr>
<td>Complete</td>
<td>3%</td>
<td>617</td>
<td>647</td>
<td>675</td>
</tr>
<tr>
<td>Moderate</td>
<td>18%</td>
<td>3,702</td>
<td>3,882</td>
<td>4,051</td>
</tr>
<tr>
<td>Subtotal</td>
<td>21%</td>
<td>4,318</td>
<td>4,529</td>
<td>4,727</td>
</tr>
<tr>
<td>Mild</td>
<td>19%</td>
<td>3,907</td>
<td>4,098</td>
<td>4,277</td>
</tr>
<tr>
<td>Total</td>
<td>40%</td>
<td>8,226</td>
<td>8,627</td>
<td>9,003</td>
</tr>
</tbody>
</table>

| 45-54 population | 21,755 | 19,845 | 19,739 | 19,675 |
| Complete | 6% | 1,305 | 1,191 | 1,184 |
| Moderate | 23% | 5,004 | 4,564 | 4,540 |
| Subtotal | 29% | 6,309 | 5,755 | 5,724 |
| Mild | 19% | 4,133 | 3,771 | 3,750 |
| Total | 48% | 10,442 | 9,526 | 9,475 |

| 55-64 population | 19,350 | 20,903 | 20,167 | 20,315 |
| Complete | 9% | 1,742 | 1,881 | 1,815 |
| Moderate | 29% | 5,612 | 6,062 | 5,849 |
| Subtotal | 38% | 7,353 | 7,943 | 7,664 |
| Mild | 19% | 3,677 | 3,972 | 3,832 |
| Total | 57% | 11,030 | 11,915 | 11,495 |

| 65-74 population | 13,015 | 15,146 | 17,015 | 18,559 |
| Complete | 14% | 1,822 | 2,120 | 2,382 |
| Moderate | 34% | 4,425 | 5,150 | 5,785 |
| Subtotal | 48% | 6,247 | 7,270 | 8,167 |
| Mild | 19% | 2,473 | 2,878 | 3,233 |
| Total | 67% | 8,720 | 10,148 | 11,400 |

| 35-74 population | 74,684 | 77,461 | 79,429 | 81,623 |
| Complete | 5,486 | 5,839 | 6,057 | 6,299 |
| Moderate | 18,742 | 19,658 | 20,225 | 20,880 |
| Subtotal | 24,228 | 25,497 | 26,281 | 27,179 |
| Mild | 14,190 | 14,718 | 15,091 | 15,508 |
| Total | 38,418 | 40,215 | 41,373 | 42,687 |

| % mix | Complete | 7.3% | 7.5% | 7.6% | 7.7% |
| Moderate | 25.1% | 25.4% | 25.5% | 25.6% |
| Subtotal | 32.4% | 32.9% | 33.1% | 33.3% |
| Mild | 19.0% | 19.0% | 19.0% | 19.0% |
| Total | 51.4% | 51.9% | 52.1% | 52.3% |
Myostim ED: BES platform leverage, productivity and proof of concept
Capital Raise & Milestones

- 3,000,000 shares authorized.
- Selling 66,667 shares at $15 per share
- Valuation $45 million

63X
ROI Over Seed Stage $1

Target ROI over time with 3% royalty on sales

- This capital gets us through first-in-man studies and into a strategic partnership exit.
Appendix
Erectile dysfunction is very common, especially in the aging population.

Moderate and incomplete ED progression is 2x more common in smokers\(^1,2\)

**Number with erectile dysfunction (est.)\(^3\)**

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3. Calculated based on U.S. Census projections by age.
Erectile dysfunction is a global issue projected to affect 332 million people by 2025\(^1\)

\(^1\)J.B. McKinlay. The worldwide prevalence and epidemiology of respective PDEs, could achieve greater enhance-erectile dysfunction Int J Impot Res, 2 (Suppl. 4) (2000), pp. S6-S11

*Reporting by market may vary based on survey methodology, willingness to admit sexual issues, age distribution of population, etc.*
Pathophysiology of aging and erectile dysfunction

**Figure 1.** There are morphologic and physiologic mechanisms involved in the process of aging that play a key role in the development of sexual dysfunction. Cardiovascular risk factors and hypogonadism have a critical impact during the establishment of the aging process that could also lead to erectile dysfunction. Cellular senescence could induce oxidative stress and hence inflammation that with time leads to accumulative damage. With this overview, the main mechanisms of the aging process that drive toward erectile dysfunction include vascular and physiologic alterations and penile morphologic changes.

https://www.smr.jsexmed.org/article/S2050-0521(15)00012-8/pdf
Erectile dysfunction is associated with aging, chronic diseases, medications and behavioral health

**ED associations**

- Age
- Hypertension
- Cardiovascular disease
  - Coronary artery disease, stroke, peripheral vascular disease
- Depression
- Diabetes
- Neurological disease
  - Parkinson’s Disease, Multiple Sclerosis
- Medications for hypertension, diabetes, etc.
- Psychological factors (10-20% of cases)
- Post-surgical complications
  - Radical prostatectomy, TURP

**Diabetes & Erectile Dysfunction**

- 30.3 million Americans have diabetes; 9.4% population and 25.2% seniors. Approximately 1.5 million new cases per year
- “In the Massachusetts Male Aging Study, diabetic men showed a threefold probability of having ED when compared to men without diabetes; moreover, the age-adjusted risk of ED doubled in diabetic men when compared to those without diabetes.
- The occurrence of ED is 10–15 years earlier in men with diabetes; moreover, ED is more severe and less responsive to oral drugs in diabetes, leading to reduced quality of life.”

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Treatment algorithms established by American Urology Association and European Associated of Urology based on severity of ED, outcomes, adverse events and satisfaction. Patient preferences noted.
Erectile dysfunction market development exceeding 30 years!

Three Decades of Viagra

Sildenafil (Viagra) – the first oral drug for erectile dysfunction to hit the market in 1998 – has been prescribed for more than 64 million men worldwide, and may soon be reclassified as a pharmacy medicine in the UK.

BY DAWN CONNELLY & ALISDAIR MACDONALD

Drug Approvals and Market Developments

Sildenafil showed promise as an oral treatment for erectile dysfunction (ED) in the early 1990s and was launched by Pfizer as Viagra in 1998. Since then, three more PDE5 inhibitors have been launched in the UK. Sildenafil events are shown on the top of the timeline and other PDE5 inhibitor events are below the line.

First line of treatment, PDE-5 Inhibitors, do NOT meet the needs of all patients

### Sildenafil
- **Efficacy:** 69%
- **Recommended dose:** 50mg, 1 hour before sexual activity, may be adjusted to 100mg or 25mg
- **Bioavailability:** 41%
- **Time to peak plasma levels:** 60 minutes
- **Half-life:** 3-5 hours
- **Onset of action:** 25 minutes
- **Duration of action:** up to 4 hours
- **Food:** high-fat meals delay the time to peak plasma concentration by 60 mins and reduce peak plasma levels by 28%
- **Common side effects:** headache, dizziness, flushing, nasal congestion, nausea, dyspepsia, visual abnormalities

### Avanafil
- **Efficacy:** 71-80%
- **Recommended dose:** 10mg, 25-90 minutes before sexual activity. May be adjusted to 20mg or 5mg (film-coated only)
- **Bioavailability:** 16%, (film-coated), 19% (crodispersible)
- **Time to peak plasma levels:** 60 minutes (film-coated), 45-90 minutes (crodispersible)
- **Half-life:** 4-5 hours
- **Onset of action:** 25 minutes
- **Duration of action:** up to 12 hours
- **Food:** high-fat meals delay the time to peak plasma concentration by 60 mins (film-coated) and reduce peak plasma levels by 20% (film-coated) or 35% (crodispersible)
- **Common side effects:** headache, dizziness, flushing, nasal congestion, dyspepsia. Inhibits PDE6, which can cause transient visual abnormalities. Can prolong QTc interval

### Vardenafil
- **Efficacy:** 71%
- **Recommended dose:** 10mg, 30 minutes before sexual activity, may be adjusted to 20mg or 2.5-5mg daily
- **Bioavailability:** not determined
- **Time to peak plasma levels:** 120 minutes
- **Half-life:** 17.5 hours
- **Onset of action:** 15-30 minutes
- **Duration of action:** up to 36 hours
- **Food:** rate and extent of absorption are not influenced by food
- **Common side effects:** headache, flushing, nasal congestion, dyspepsia, myalgia and back pain

### Tadalafil
- **Efficacy:** 75%
- **Recommended dose:** 10mg, 30 minutes before sexual activity, may be adjusted to 20mg or 2.5-5mg daily
- **Bioavailability:** not determined
- **Time to peak plasma levels:** 120 minutes
- **Half-life:** 17.5 hours
- **Onset of action:** 15-30 minutes
- **Duration of action:** up to 36 hours
- **Food:** rate and extent of absorption are not influenced by food
- **Common side effects:** headache, flushing, nasal congestion, dyspepsia, myalgia and back pain

### Levitra
- **Efficacy:** 71-80%
- **Recommended dose:** 100mg, 15 to 30 minutes before sexual activity, may be adjusted to 200mg or 60mg
- **Bioavailability:** not determined
- **Time to peak plasma levels:** 90-145 mins
- **Half-life:** 6-17 hours
- **Onset of action:** 15-30 minutes
- **Duration of action:** up to 6 hours
- **Food:** high-fat meals delay the time to peak plasma concentration by 75 mins and reduce peak plasma levels by 39%
- **Common side effects:** headache, flushing, nasal congestion

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Efficacy: Successful intercourse for general ED population

[https://www.pharmaceutical-journal.com/download?ac=1072931](https://www.pharmaceutical-journal.com/download?ac=1072931)
Alternative treatment modalities may be inappropriate, ineffective or associated with adverse events

Oral

PDE5-inhibitors (70% effectiveness)

Topical or Non-invasive

Topical alprostadil intra-urethral (IU) alprostadil Vacuum devices Low-intensity shock-wave

Injectable or Implant

Intra-cavernosal injections Inflatable penile prosthesis (25,000/annum)

Note: Intra-cavernous injections may include phentolamine, papaverine, and alprostadil. It’s an invasive procedure that is associated with dropout rates as high as 40%–50% due to pain, priapism, penile fibrosis, hematoma, ecchymosis, or fear of the needle.
Oral and topical ED therapies have limitations

### Limitations and adverse events of erectile dysfunction (ED) treatment with phosphodiesterase type 5 (PDE5) inhibitors

<table>
<thead>
<tr>
<th>Limitation</th>
<th>Adverse event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systemic side effects</td>
<td>• Headache</td>
</tr>
<tr>
<td></td>
<td>• Visual disturbance</td>
</tr>
<tr>
<td></td>
<td>• Priapism</td>
</tr>
<tr>
<td>Drug interactions</td>
<td>• Flushing</td>
</tr>
<tr>
<td>• Inhibitors/inducers of P-450</td>
<td>• Muscular pain</td>
</tr>
<tr>
<td>• Antihypertensive agents</td>
<td>• Dyspepsia</td>
</tr>
<tr>
<td>• Nitrites</td>
<td>• Sinus congestion</td>
</tr>
<tr>
<td>Decreased absorption with fatty</td>
<td>• Decreased efficacy</td>
</tr>
<tr>
<td>meals</td>
<td>• Loss of spontaneity</td>
</tr>
</tbody>
</table>

**Notes:**
- *Cytocchrome P-450 inhibitors;*  
- *alpha-blockers are used for the treatment of hypertension and benign prostatic hyperplasia.*

### Study designs

<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>Patient population</th>
<th>Topical alprostadil dosage</th>
<th>Efficacy</th>
<th>Treatment-related adverse events</th>
</tr>
</thead>
</table>
| 1     | Placebo-controlled RCT | n=99  
31. alprostadil 29. placebo | 1% alprostadil + 5% SEPA  
12/31 (10%) in alprostadil vs 12/29 (7%) in placebo, P=0.005 | Improvement in vaginal penetration: Study 1, 3.0 ± 1.2 in alprostadil vs 1.2 ± 1.1 in placebo, P=0.04  
Study 2: 3.0 ± 1.5 in alprostadil vs 2.7 ± 1.3 in placebo, P=0.01 | 30% - placebo  
50% - alprostadil |
| 2     | Placebo-controlled RCT | n=301  
161 study 1 - mild to moderate ED  
120 study 2 - severe ED | Study 1: 100, or 200 µg  
Study 2: 200, or 300 µg | Change in EF domain of IIEF from baseline:  
Study 1: 3.5 ± 1.2 in alprostadil vs 0.8 ± 1.1 in placebo, P<0.001  
Study 2: 3.0 ± 1.5 in alprostadil vs 2.7 ± 1.3 in placebo, P=0.01 | 53% - placebo  
67% - 50 µg  
67% - 100 µg  
78% - 200 µg  
80% - 300 µg  
Discontinuation due to AE: 14%  
Discontinuation due to AE: 11% |
| 3     | Placebo-controlled, long-term RCT | n=1.732  
1.288. alprostadil  
436. placebo | 100, 200, or 300 µg | Change in EF domain of IIEF from baseline: (P<0.001)  
0.6 for 100 µg  
2.5 for 200 µg  
2.4 for 300 µg  
0.5 for placebo | 17% - placebo  
46% - 100 µg  
62% - 200 µg  
67% - 300 µg  
Discontinuation due to AE: 7% |

**Notes:**
- *Treatment-related adverse events (AEs) usually included penile burning, genital pain, and erythema, which resolved within 2 hours;*  
- *mild-to-moderate ED defined as IIEF 14-21;*  
- *severe ED defined as IIEF <4;*  
- *Discontinuation defined as < 3 months in this study.*
Vacuum devices are effective in 50-80% of patients but have side effects and other possible drawbacks.

Side effects

Side effects of using a penis pump can include:

- **Pinpoint-sized red dots (petechiae).** This is caused by bleeding under the surface of the skin of the penis.
- **Numbness, coldness or bluish-colored skin.** This can occur when the constriction band is in place.
- **Pain or bruising.** Knowing how to use the penis pump correctly can help you avoid injury to your penis.
- **Feeling of trapped semen.** You might feel like your semen is trapped when you ejaculate, or ejaculation might be painful. Some manufacturers make constriction rings with a small cutout that might help with this.

Penis pumps have some other possible drawbacks:

- **Unnatural-feeling erections.** Penis pumps can cause an erection that doesn’t feel natural or spontaneous. You might have a lack of firmness at the base of the penis, which can allow the penis to rotate or pivot more than it would with a natural erection.
- **Awkwardness.** Use of a penis pump requires patience and understanding from both you and your partner. It might take some time to become comfortable with the device.
- **Manual coordination is required.** Penis pumps require use of the hands and fingers to operate, which can be a problem for some men or their partners.

https://www.mayoclinic.org/tests-procedures/penis-pump/about/pac-20385225
Shockwave therapies are effective in 60-65% of patients at one month; treatment is expensive and inconvenient ($3,000 x 10-12 sessions). It is NOT FDA approved for this indication.

The researchers found that at one month, treatment was successful in 99 patients (63.5%), but during follow-up a gradual decrease in efficacy was observed. At 2 years, the beneficial effect was maintained in only 53.5% of patients in whom success was initially achieved. Over follow-up the treatment effect was lost in all patients with diabetes who initially had severe erectile dysfunction. However, for patients with milder forms of erectile dysfunction without diabetes there was a 76% chance that the beneficial effect of low-intensity shock wave treatment would be preserved after 2 years.