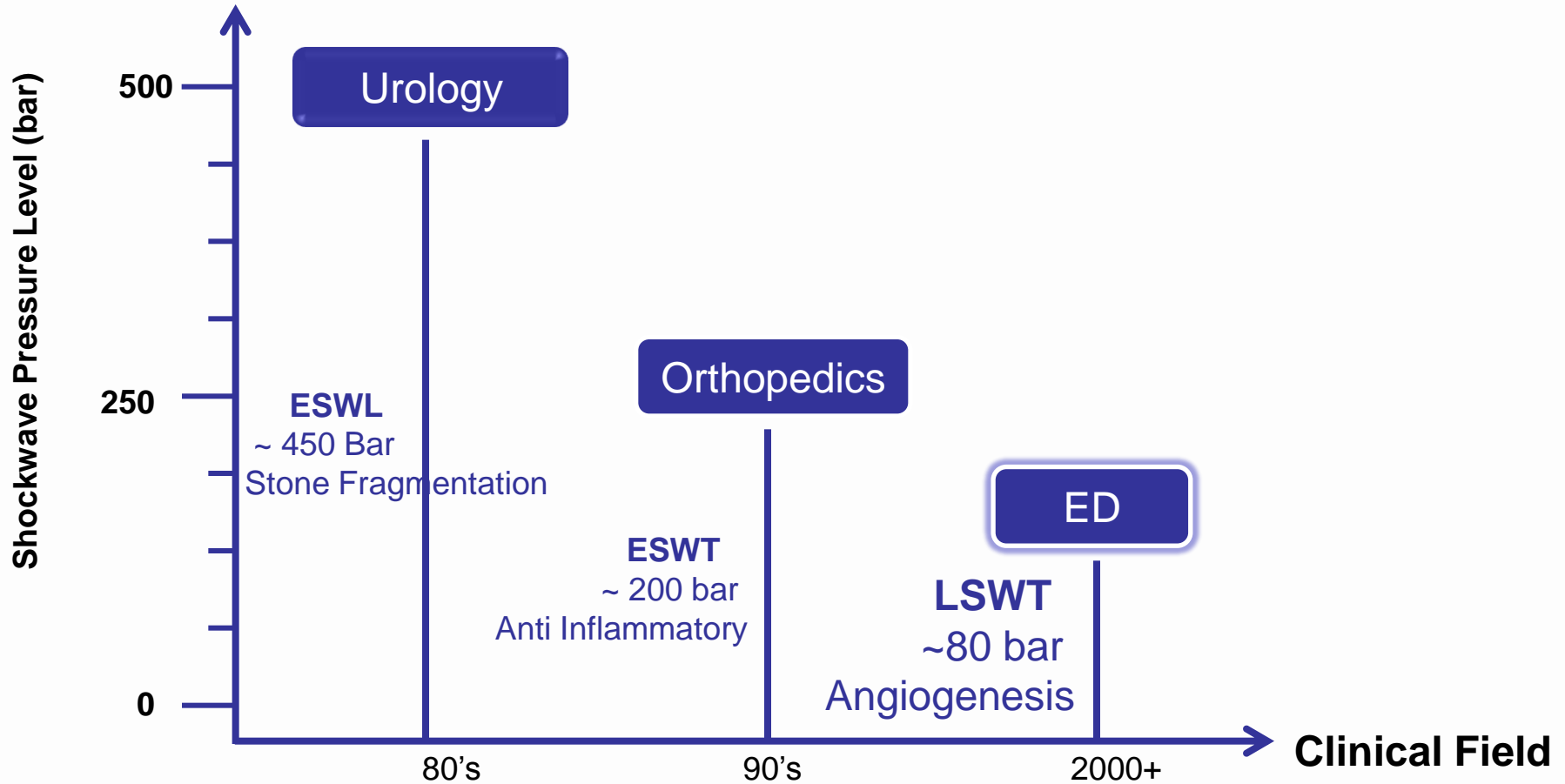
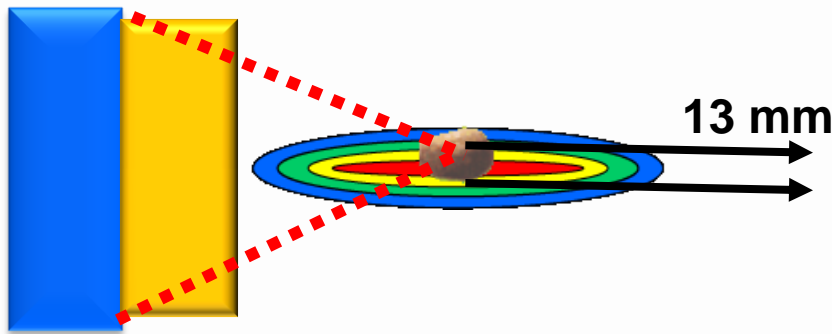


# Linear Shockwave Therapy (LSWT) for Erectile Dysfunction

# Shockwave Therapy Applications



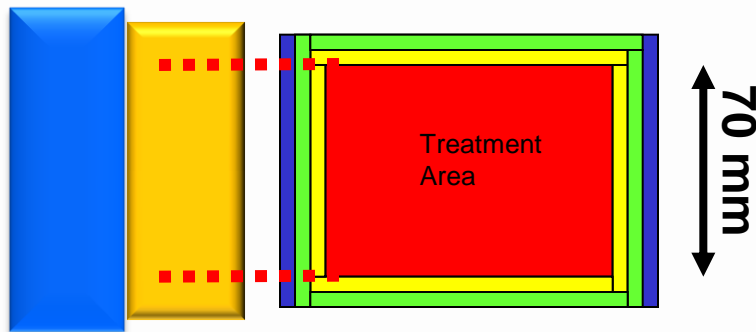
# Focal Zone ESWL vs. ED



*Tripter Compact X-1*

**ESWL: Stone Fragmentation**

**Electrohydraulic Technology**

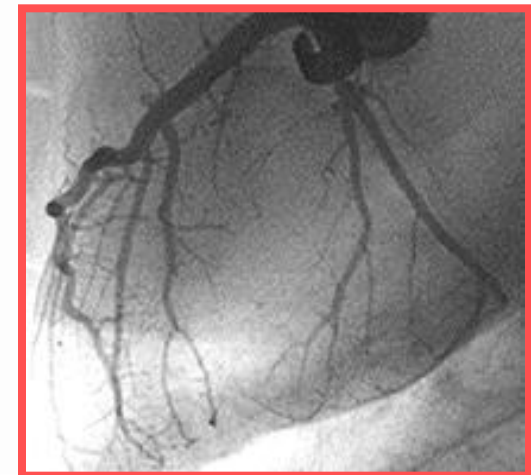
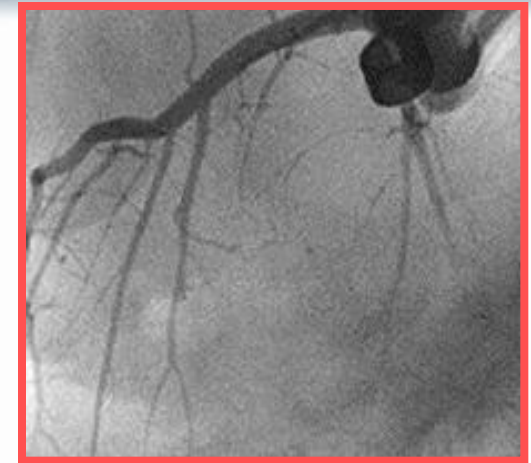
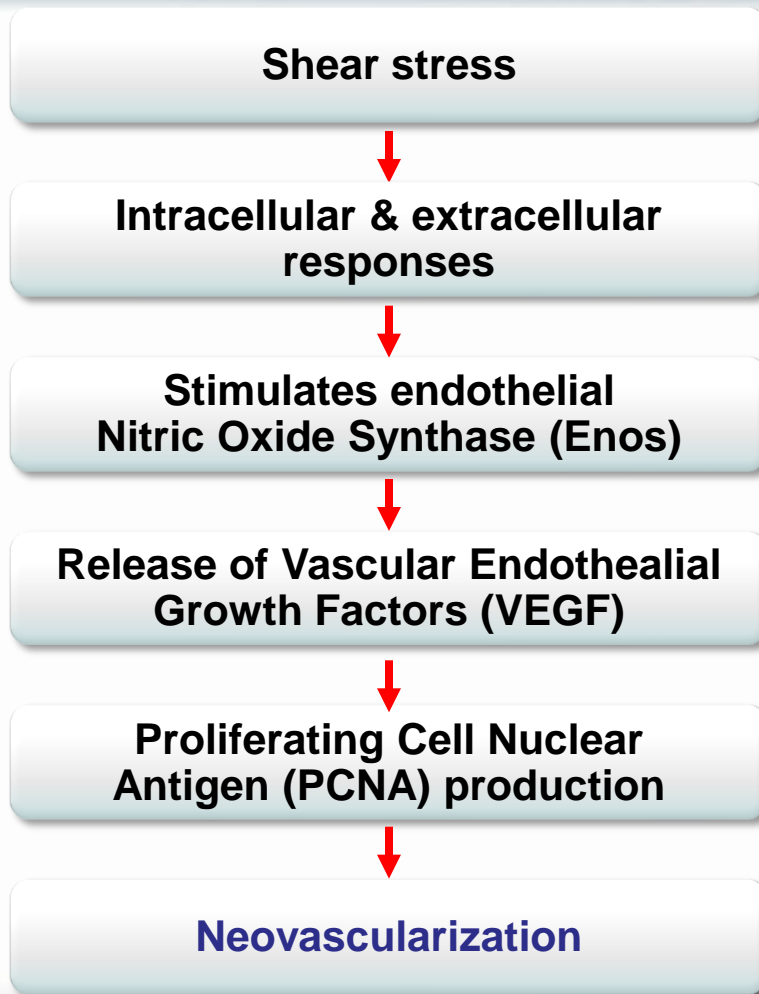


*Renova*

**LSWT: ED Therapy**

**Electromagnetic Technology**

# Low Energy Shockwaves Induce Angiogenesis



# Clinical Background/ SWs induce angiogenesis

**Extracorporeal Cardiac Shockwave Therapy  
Markedly Ameliorate Ischemia - Induced Myocardial  
Dysfunction in Pigs in Vivo**

**Nishida T, Shimokawa H et al.** Department of Cardiovascular Surgery,  
Cardiovascular Medicine, Kyushu University, Fukuoka, Japan

## **Conclusions:**

These results suggest that extracorporeal  
cardiac SW therapy is an effective and noninvasive  
Therapeutic strategy for ischemic heart disease.

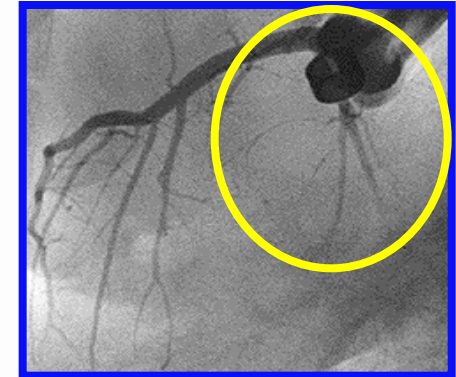
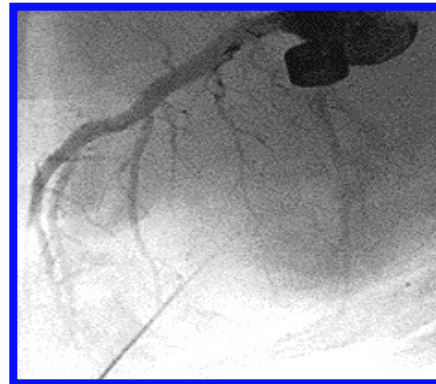
**Circulation. 2004;110:30553061**

# Clinical History/ Enhancement of Coronary Collaterals

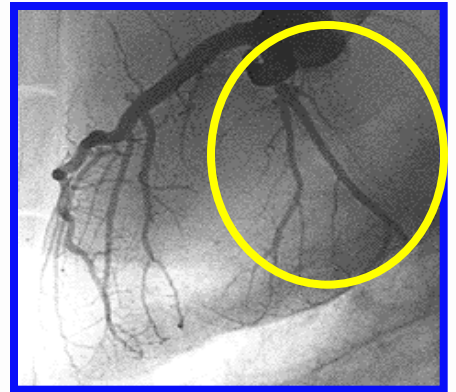
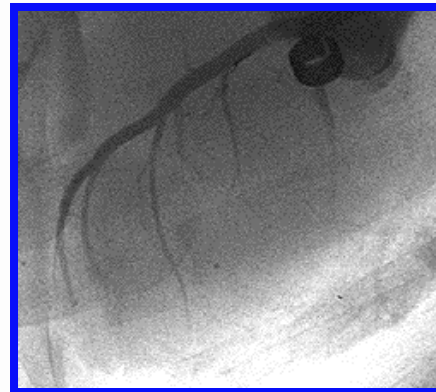
**Control Group**

**SW Group**

**4 weeks post  
AC implantation**



**4 weeks post  
treatment**



# Clinical History/ ED Application

## Can Low-Intensity Extracorporeal Shockwave Therapy Improve Erectile Function? A 6-Month Follow-up Pilot Study in Patients with Organic Erectile Dysfunction

Yoram Vardi\*, Boaz Appel, Giris Jacob, Omar Massrwi, Ilan Gruenwald

### Conclusions:

This is the first study that assessed the efficacy of Low Intensity ESWT for ED. This approach was tolerable and effective, suggesting a physiologic impact on Cavernosal hemodynamics. Its main advantages are the potential to improve erectile function and to contribute to penile rehabilitation without pharmacotherapy. The short-term results are promising, yet demand further evaluation with larger sham-control cohorts and longer follow-up

**2010 European Association of Urology.**

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# Clinical History/ ED Application

**Low-intensity extracorporeal shockwave therapy- a novel effective treatment for erectile dysfunction in severe ED patients who respond poorly to PDE5 inhibitor therapy.**

[Gruenwald I](#), [Appel B](#), [Vardi Y](#).

## **Conclusions:**

Penile LI-ESWT is a new modality that has the potential to treat a subgroup of severe ED patients. These preliminary data need to be reconfirmed by multicenter sham control studies in a larger group of ED patients.

**© 2011 International Society for Sexual Medicine.**



# Clinical History/ ED Application

**Does low intensity extracorporeal shockwave therapy have a physiological effect on erectile function? Short-term results of a randomized, double-blind, sham controlled study.**

**Vardi Y, Appel B, Kilchevsky A, Gruenwald I.**

## **Conclusions:**

This is the first randomized, double-blind, sham controlled study to our knowledge that shows that low intensity extracorporeal shockwave therapy has a positive short-term clinical and physiological effect on the erectile function of men who respond to oral phosphodiesterase type 5 inhibitor therapy. The feasibility and tolerability of this treatment, coupled with its potential rehabilitative characteristics, make it an attractive new therapeutic option for men with erectile dysfunction.

© J. Urol. 2012 May;187(5):1769-75. Epub 2012 Mar 15.

# System Description - Renova



# Treatment Protocol - Renova

**LSWT is applied to the entire penile shaft and crura (at an energy intensity of 0.09 mj/mm<sup>2</sup>)**

**Treatment parameters are as follows**

- **Treatment frequency: 120 shocks/min**
- **Application areas: 4**
- **Number of shockwaves: 900 per application area**
- **Number of treatment sessions: 4 - once a week for four weeks.**
- **Evaluation assessment: IIEF, QOL, RS**

# Renova Inclusion Criteria

- ED for at least 6 months.
- International Index of Erectile Function (IIEF-ED) between 7 to 24 (= mild to moderate)
- Positive response to PDE – 5i (able to penetrate on demand = ‘Responder’)
- Negative response to PDE – 5i (unable to penetrate on demand even with maximum PDE – 5i dosage = ‘Non-responder’).
- Non-hormonal, neurological or psychological pathology

# Renova Exclusion Criteria

- **Psychogenic ED**
- **Neurological pathology**
- **Past radical prostatectomy**
- **Any unstable medical, psychiatric, spinal cord injury and penile anatomical abnormalities**
- **Clinically significant chronic hematological disease**
- **Anti-androgens, oral or injectable androgens**
- **Radiotherapy in pelvic region**

# Advantages of LSWT - Renova

**Renova is the first SW therapy device developed especially for treatment of ED.**

- \* LSWT technology allows for optimal shockwave organ coverage of both the penis and crura**
- \* Hands free application**
- \* Patient and physician friendly treatment protocol, 4 short treatment sessions**
- \* Simple, non-invasive treatment, set in the clinic/office setting**