Sex, Prescription Drugs and Rock ‘n’ Roll: Men’s Sexual Health after 40

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Increasing Life Expectancy
Men’s Health Over 40
Continuing Your Active Lifestyle

- Low Testosterone
- Erectile Dysfunction
Prevalence of Low Testosterone: 13.8 Million Men in the US

Overall, 38.7% of men ≥45y have T-levels < 300 ng/dL

Low Testosterone is Increasingly Common as Men Age

1 in 10 • Men in their 40s and 50s

The Impact of Testosterone

Skin
Hair growth, balding, sebum production

Liver
Synthesis of serum proteins

Male Sexual Organs
Penile growth, spermatogenesis, prostate growth, and function

Brain
Libido, mood

Muscle
Increase in strength and volume

Kidney
Stimulation of erythropoietin production

Bone Marrow
Stimulation of stem cells

Bone
Accelerated linear growth, closure of epiphyses

Aging Males and Mortality
Men with Low T May Not Live as Long

- 800 Men, age 50-91 y, followed for 18 yrs
- 1/3 had low T
- Comparing men with low T versus those with higher T:

  - Increased levels of inflammatory chemicals
  - Increased waist girth
  - 3x more likely to have obesity-related DM
  - 40% greater risk of death

Diagnosis of Low Testosterone:

- Symptoms
- Signs
- Decreased T
## Symptoms of Low Testosterone

<table>
<thead>
<tr>
<th>Sexual symptoms</th>
<th>Nonsexual symptoms</th>
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<tbody>
<tr>
<td>Low sexual desire (low libido)</td>
<td>Low energy or fatigue</td>
</tr>
<tr>
<td>Erectile dysfunction (ED)</td>
<td>Bad mood or poor concentration</td>
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<tr>
<td>Weaker and smaller erections</td>
<td>Reduced muscle mass/strength</td>
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<tr>
<td>Reduced sex activity</td>
<td>Increased body fat</td>
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ADAM Questionnaire:
Androgen Deficiency in the Aging Male

1. Do you have a decrease in libido (sex drive)?
2. Do you have a lack of energy?
3. Do you have a decrease in strength and/or endurance?
4. Have you lost height?
5. Have you noticed a decreased “enjoyment of life”?
6. Are you sad and/or grumpy?
7. Are your erections less strong?
8. Have you noted a recent deterioration in your ability to play sports?
9. Are you falling asleep after dinner?
10. Has there been a recent deterioration in your work performance?

If you answered "Yes" to question 1 or 7, or if you answered "Yes" to any 3 questions in total, you may wish to talk to your doctor about having a blood test to determine your testosterone level. Take this questionnaire to your doctor to help start the discussion.

Testosterone Replacement Therapy: Treatment Options
TRT Treatment Options

- Oral Tablets
- Intramuscular Injections
- Transdermal Patches
- Transdermal Gels
- Pellet Implants
Transdermal Gels are the most commonly prescribed form of TRT
Significant and Sustained Improvement in Low T Symptoms

**Improved Sexual Desire**

- Mean Daily Score
- Dean Study
- Steidle Study

**Improved Sexual Performance**

- Mean Weekly Score
- Change (%)
- Steidle Study

Significant and Sustained Improvement in Body Composition

Increased Lean Body Mass

Mean Change from Baseline

+4.8 lb

Decreased Fat Mass

Mean Change from Baseline

-4.0 lb

Dean Study

Steidle Study

Months

0 3 6 9 12

0 0.5 1 1.5 2 2.5

Mean Change from Baseline

Months

0 3 6 9 12

0 0.5 1 1.5 2 2.5


Testosterone Replacement Therapy: Understanding the Benefit & Risk
High Risks Conditions for TRT

Very high risk of serious adverse outcomes
- Metastatic prostate cancer
- Breast cancer
- Men desire fertility

Moderate-to-high risk of adverse outcomes
- Prostate nodule or induration
- Unexplained PSA elevation
- Erythrocytosis (hematocrit >50%)
- Unstable severe congestive heart failure (class III or IV)

Adapted from The Endocrine Society Guidelines, 2006.
Summary

• Testosterone is an important part of a man’s total health

• Men should be aware of the signs, symptoms associated with low T and obtain testing when indicated

• Testosterone Replacement Therapy (TRT) has both sexual and non-sexual benefits

• TRT is safe but patients taking T should be monitored regularly by their physicians
Update on the Treatment of Erectile Dysfunction
Erectile Dysfunction (ED)

• Definition: “...the consistent inability of a man to obtain an erection sufficient for sexual activity.”

• Causes are multiple and can impact one’s total health and quality of life.
How Common Is ED?

• 1 in 5 men
• Over 30 million American men
• 90% physical, 10% psychological
Physical Causes of ED

- Diabetes
- Heart disease
- Medications
- Spinal injury
- Hormone imbalance
- Cancer treatment
**Major Risk Factors for ED: Lifestyle Issues**

- Depression
- Obesity
- Lack of exercise/sedentary lifestyle
- Heavy drinking
- Recreational drugs
- Cigarette smoking

Esposito K et al. *JAMA*. 2004;291:2978-2984.
Male Sexual Function: Why be Concerned?

• Affects quality of life
• Influences general health perception of men
• Unmet medical need
• May be the first sign of other common and important disorders: cardiovascular disease

Mechanism of Erections: Vascular Circulation

Blood-filled spaces of penile erectile tissue

Flaccid Penis

Erect Penis
Shared Risk Factors:
ED and Cardiovascular Disease (CVD)

- Smoking
- Obesity
- Sedentary lifestyle
- Hypertension
- Diabetes
- Dyslipidemia
- Depression

ED may be the first sign of underlying CVD!

Levine LA, Kloner RA. Am J Cardiol. 2000;86:1210-1213
Current Treatment Options

• Medical (hormonal): Testosterone
• Oral therapy: PDE Inhibitors
• Intraurethral Rx: MUSE
• Vacuum Constriction Device
• Injection therapy
• Penile Prosthesis
Testosterone Replacement Therapy
Medical Therapy of ED

Sildenafil (Viagra): April 1998

Tadalafil (Cialis): November 2003

Vardenafil (Levitra): August 2003
Orally Dissolving!
New Strategies for the Treatment of ED:

Daily Dosing
MUSE Intrarurethral Suppository

MUSE for treating erectile dysfunction.

- Button
- Body
- Collar
- Stem
- Medicated pellet
- Cover

UC San Diego Health System
• Not as effective as originally predicted
• May be used with Viagra-like drugs
Vacuum Erection Device

Non-Prescription Vacuum Therapy System

User Guide

NOW AVAILABLE WITHOUT PRESCRIPTION
Intracavernosal Injection Therapy (ICI)
Overall Patient Satisfaction with ED Treatments

- **Penile Injection**: 40%
- **Oral Medications**: 51%
- **Penile Implant**: 93%

Penile prosthesis is an important consideration for men who have failed or cannot tolerate oral/injection therapy.
Summary

• Erectile dysfunction is a common problem and can be the first sign of other serious illnesses

• Nearly every man can be successfully treated

• Patients should discuss treatment options with their physicians and with their partners → what is “best for them”
Thank You