

THE AMERICAN ACADEMY OF CLINICAL SEXOLOGISTS

NON-SURGICAL TREATMENT OPTIONS

FOR ERECTILE DYSFUNCTION: A RESOURCE GUIDE

A DISSERTATION PROPOSAL SUBMITTED TO THE FACULTY OF THE

AMERICAN ACADEMY OF CLINICAL SEXOLOGISTS

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DEGREE OF DOCTOR OF PHILOSOPHY

BY

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VITA

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ABSTRACT

Erectile Dysfunction (ED) is the inability to achieve an erection or sustain an erection firm enough for sexual penetration. It is estimated that thirty million men in the United States suffer from some degree of ED (Erectile Dysfunction, 1999). According to the National Institutes of Health (1993), approximately four percent of men in their fifty's and seventeen percent of men in their sixty's experience ED. This figure increases to forty-seven percent for men older than age seventy-five.

The purpose of this project is to provide concise information in a resource guide format on four non-surgical treatment options for erectile dysfunction. A closer look at cock rings, vacuum erection devices, penile injections, and oral medications is presented. This guide is designed to be utilized by clinicians, and educators for the benefit of their clients. The project is composed of three parts; an instructional video, a supplemental guide for the professional, and a practical client resource guide.

Erectile Dysfunction Supplemental Guide for Professionals

What is Erectile Dysfunction?

Erectile dysfunction, also known as ED is the inability to attain or sustain an erection satisfactory for sexual penetration. ED “may also involve a lessened or absent sense of excitement and pleasure” (Wincze & Carey 1991, 28). Although an occasional inability to maintain an erection is considered normal and happens to most men, ongoing erection difficulties may indicate erectile dysfunction and further evaluation is recommended. The website *Web MD* distinguishes ED from normal and occasional impotence as follows. If the inability to achieve and sustain an erection occurs less than twenty percent of the time, it is often temporary and rarely requires treatment. However, if a man is unable to gain and maintain an erection more than fifty percent of the time, ED is highly likely and treatment is often indicated.

Who is affected by ED?

ED is estimated to affect approximately thirty million men in the United States (Erectile Dysfunction 1999). Approximately four percent of men in their fifties and seventeen percent of men in their sixties experience ED. The incidence drastically increases to forty seven percent of men seventy-five and older. Although the incidence of ED increases with age, it is very important to note that ED is treatable at all ages (National Institutes of Health 1993).

Is ED a natural part of the aging process in men?

The incidence of ED appears to increase with age. However, aging does not directly cause ED. Erectile Dysfunction is not normal at any age. A common myth about ED is that it is a natural part of the aging process and should be expected as men enter middle age and beyond. Instead, men may experience increased health concerns due to injury, the use of medications, or from other medical conditions that may worsen or develop over time in the aging body. ED may result from one or a combination of these factors, but not from simply aging itself.

What Causes ED?

In order to understand what causes erectile dysfunction, it is helpful to know how a natural erection occurs. This knowledge can assist in targeting the cause of the dysfunction. An erection begins in the brain. Physical (sensory) or mental stimulation, or both cause impulses from the brain to send chemical messages to the nerves in the penis. These signals instruct the muscles of the penis to relax. The relaxed penis muscles allow blood to flow freely through the arteries of the penis which causes an erection, also known as engorgement. Once an erection is achieved, the structure in the penis called the tunica albuginea (may be thought of as the gate keeper) retains the blood in the penis. The erection ends when the muscles in the penis contract to stop the inflow of blood and open the veins for blood outflow (National Institutes of Health 1993).

There are many possible causes of ED. Causes can be psychological or physical in nature, or a combination of both. According to Wm. Granzig, PhD, president of the The American Academy of Clinical Sexologists, at one time therapists believed ED was caused predominately by psychological factors. However, per Dr. Granzig, therapists now believe the causes of ED are ninety percent physical and ten percent psychological in nature. Terms used to distinguish the cause of ED as physical are organic or primary ED. Psychological terms used are functional or secondary ED.

Primary Erectile Dysfunction (or organic), tends to be more common than secondary ED and is due to physical causes. Some physical causes of ED are disease, injury, or side effects of drugs (National Institutes of Health 1993). Major organic causes of ED are vascular, hormone, and neurologic disorders (Erectile Dysfunction 1999). When exploring the possible physical causes of ED, whether it is disease, injury, or the use of medications which is identified-- in many cases, it is the adverse effect on the blood flow to the penis that impedes the initial erection or interrupts the existing erection prematurely. In other words, it is not diabetes specifically that causes erectile dysfunction, but the effect diabetes has on the blood flow to the penis that is directly correlated with ED. Other physical causes such as stroke or paralysis may cause nerve damage in and around the penis, and therefore result in ED. An explanation of some of the most common physical factors identified in the diagnosis of ED is provided in the next section.

Possible Physical Causes of ED

Disease

Diabetes

It is estimated that between 35 and 50 percent of men with diabetes suffer from ED (Erectile Dysfunction 1999). Diabetes and hypertension are two diseases that are known to increase atherosclerosis and contribute markedly to ED (Erectile Dysfunction 1999).

Vascular Disease

Two major types of vascular disorders that significantly contribute to ED are atherosclerosis of the penile arteries and inadequate impedance of venous outflow, also termed venous leakage (Wincze & Carey 1991, 30). In some cases, both vascular disorders can be present at the same time. With age and co morbid heart disease, there is often a decrease in the dilation of the arterial vessels and smooth muscle relaxation in and around the penis (Wincze & Carey 1991, 30). When this happens, the amount of blood that can enter into the penis to achieve engorgement is diminished. If venous leakage coexists, the blood that does make it into the penis will not stay long enough to maintain an erection. The blood will leak back out into the larger veins away from the penis (Erectile Dysfunction 1999).

Peyronie's Disease

Peyronie's is common in men ages 40 to 60 years old and is most frequent in alcoholics,

diabetics, as well as men who suffer from arthritis and other related diseases. Peyronie's disease is the accumulation of scar tissue in the shaft of the penis which is likely caused by inflamed blood vessels (Granzig 2002).

Other diseases that have been linked to ED are kidney disease, alcoholism, heart disease, hypertension, and obesity.

Hormonal Causes

Cushing's syndrome

“Is a hormonal disorder caused by prolonged exposure of the body's tissues to high levels of the hormone cortisol... Cushing's syndrome is relatively rare and most commonly affects adults aged 20 to 50. People who are obese and have type 2 diabetes, along with poorly controlled blood glucose—also called blood sugar—and high blood pressure, have an increased risk of developing the disorder” (National Endocrine and Metabolic Diseases Information Service 2009). ED is a symptom of Cushing's syndrome.

Hypogonadism

This disease affects men with significantly low testosterone levels and is associated with reduced libido. Hypogonadism may contribute slightly to ED both physically and psychologically (lack of desire for sex), but studies suggest that increasing the testosterone levels does not always correct the ED (National Institutes of Health 1993).

Other possible hormonal causes of ED are hyperthyroidism (overactive thyroid), hypothyroidism (under active thyroid), and elevated prolactin levels.

Neurologic Causes

Prostate Surgery (transurethral resection of the prostate)

This procedure has a forty percent incidence of erectile dysfunction. The more extensive the surgical prostatic resection is the higher the likelihood of ED. These surgeries cause injury to the nerves and arteries near the penis (Erectile Dysfunction 1999).

Multiple sclerosis

This disease impairs nerve functioning much like that caused by a stroke and therefore, ED is a common condition for those who are diagnosed with MS.

Spinal cord injuries

Loss of function and paralysis are common with spinal cord injuries and may impair the person's ability to get an erection.

Stroke

A stroke may cause nerve damage and loss of function to the penis or areas surrounding the penis. This loss of function prohibits the penis from being able to produce an erection.

In addition to the physical factors which have been linked to ED, many common psychological factors have been identified as contributing to the presence of ED. Secondary erectile dysfunction (or functional ED), is directly related to psychological factors. It is easily identified in men who were previously able to attain and sustain an erection for penetration, but are no longer able to do so. Secondary ED may result from performance anxiety or adverse effects of a mood disorder such as depression (Erectile Dysfunction 1999). Secondary ED may be the total cause of ED, but more commonly it is present among one or more physical factors and further compounds the erectile difficulties.

Possible Secondary or Psychological Causes of ED:

- Guilt (infidelity, homosexuality, masturbation etc.)
- Depression
- Fear of intimacy
- Severe anxiety including sexual performance anxiety
- Stress
- Mood disorders
- Inhibited sexual desire
- Low self-esteem
- Poor body image
- Fatigue
- Negative feelings toward partner
- Concern related to penis size
- Lack of sexual desire or drive
- Preoccupation
- Fear of being perceived as undesirable or disgusting by partner

Treatment for Erectile Dysfunction

ED lasting for three months or longer warrants evaluation and consideration of treatment (American College of Physicians 2009). Referring the patient to his primary care provider for a medical evaluation to rule out underlying physical conditions directly related to the ED may be indicated especially if the patient is unable to achieve an erection while sleeping.

A comprehensive client interview can be helpful in directing the client toward the most appropriate forms of treatment. What follows is a list of questions that may be asked by the therapist to develop a clearer picture of the client's health as it relates to the erectile dysfunction.

Erectile Dysfunction
Client Assessment Interview

What is the date of your last physical exam?

Were there any medical problems identified at that time of your last exam?

Do you suffer from, or have a history of any of the following medical conditions:

Obesity

Diabetes

High Cholesterol

Depression

Atherosclerosis

Kidney Disease

Stroke

Spinal cord injury

Multiple Sclerosis

Peyronie's disease

Hypertension

Heart disease

Hyperthyroidism

Hypothyroidism

Alcoholism

Drug Dependency

Hypogonadism

Do you smoke cigarettes?

Do you drink alcohol? How often?

Do you take any medications? Which ones?

Please describe the problem you are currently experiencing in your own words (you want to determine if the difficulty is achieving an erection, maintaining an erection, or both).
When did you first notice that it was a problem?

Were there any significant life events or changes that occurred around the time you noticed the problem? Please explain.

Are you experiencing this difficulty with regular frequency or just occasionally?

Are you able to get an erection while sleeping?

Are you able to manually stimulate an erection on your own?

What information, if any have you been given regarding your concern?

Have you discussed this concern with your doctor? If so, what has been recommended?

Identify any current life stressors you have been experiencing.

What are your thoughts about what may be the possible cause of this problem?

What have you tried so far to treat the erectile dysfunction?

Non-Surgical Interventions

Non-surgical interventions include mechanical and pharmacologic interventions. Pharmacologic interventions require a referral to a physician or nurse practitioner for implementation and include both oral and injection therapies. Mechanical interventions can be suggested by the sex therapist or sex educator. Two mechanical interventions discussed here are the cock ring and the vacuum erection device, or (VED).

Mechanical interventions

Cock Rings

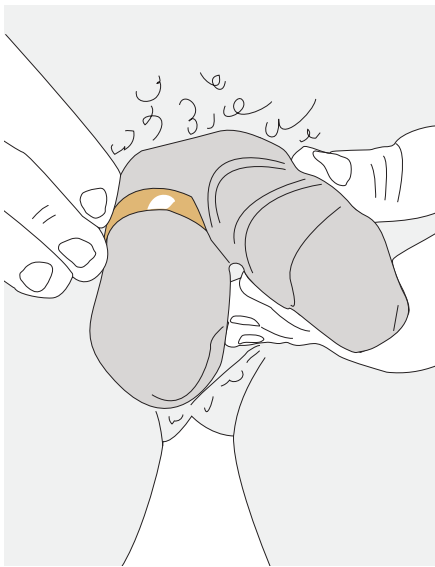
What are cock rings?

Cock rings come in a variety of materials and are used to maintain an erection. Cock rings can be worn around the penis or around the penis and the scrotum. They are available as a metal ring, an elastic stretch, and as a leather strap which snaps to wrap firmly around the penis, or the penis and scrotum.

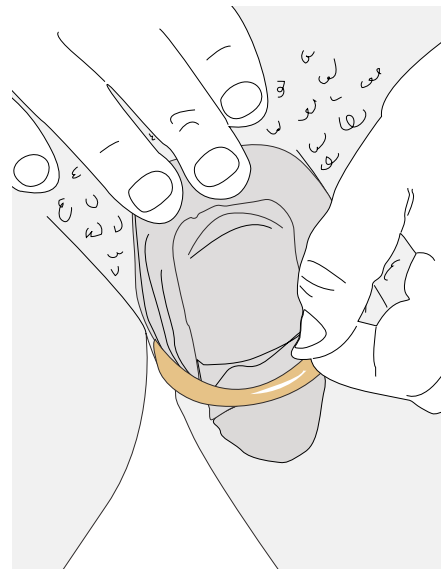
How do cock rings work?

Once an erection is achieved, the cock ring will fit tightly in the desired position and is designed to slow the blood flow from emptying out of the penis. Cock rings have been worn to maintain the penile erection for longer periods of time and are often used in combination with the VED after pumping to maintain the blood within the penis by impeding venous leakage.

If a solid metal ring is selected, the client will darn the ring by first placing the testicles through the ring, one at a time, and then tucking the flaccid penis into the ring and pulling the ring back for proper seating around the base. The illustrations below demonstrate the proper application of the metal cock ring.



1. Place the testicles through the ring.



2. Tuck the penis through the ring.



3. Pull the ring back to the base of the penis and scrotum.

What are the advantages of the cock ring?

Advantages of a cock ring include the low cost, easy accessibility for purchase, and relatively easy self application. The client can purchase, apply and use the cock ring freely without the need of a referral or a prescription.

What are the disadvantages of the cock ring?

If the pubic hair is not trimmed at the sight of application, the ring may pull or pinch the hair or skin in that area. In some, but rare cases, if it is worn for extended periods of time, it can lead to nerve damage (Erectile Dysfunction 1999). Ejaculation may be slightly impeded due to application of the ring around the base of the penis possibly causing a partial block of the semen traveling through the urethra.

Vacuum Erection Device (VED)

What is a VED?

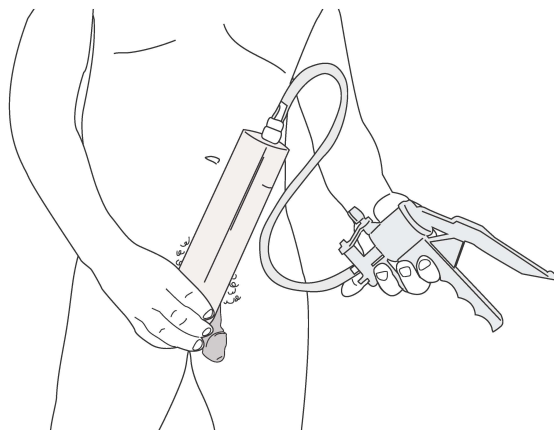
A vacuum erection device typically have three components--a plastic cylinder, a pump, and an elastic or tension ring (cock ring).

How does the VED work?

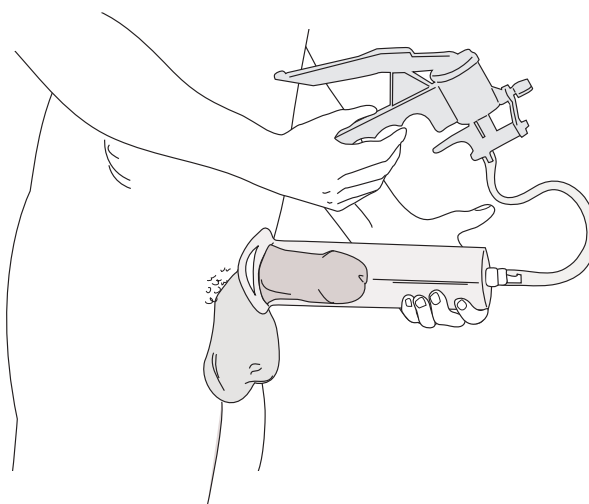
The pump removes air out of the cylinder creating negative air pressure in the cylinder. The negative pressure surrounding the penis inside the cylinder causes an increase in blood flow through the vessels of the penis much like a normal erection. Once an erection is attained, the user slips a tension ring on to the base of the penis to maintain the blood from exiting the penis. The tension ring will sustain the erection after the cylinder is removed. This erection can last up to thirty minutes.

How is the VED used?

The user places the clear plastic cylinder over the penis. It is helpful, but not necessary to both trim the pubic hair around the base of the penis and to apply a light amount of lubricant around the open end of the cylinder. Doing this will assist in creating a good seal between the base of the penis and the cylinder for suction. Once a seal has been made, the user will squeeze the handle of the pump slowly in short intervals until the penis is erect. The ring is then applied to the base of the penis and the pump is removed. The illustrations below demonstrate the proper use of the VED.



1. Place the clear cylinder over the penis.



2. Slowly squeeze the pump handle in short intervals.

What are the advantages of the VED?

The advantages of the VED is that it typically works for almost everyone. The VED allows the user to achieve an erection quickly without the use of medication. It is relatively economical, and has no serious side effects. According to some studies, approximately 50%-80% of men reported being satisfied with the results of the VED (WebMD).

What are the disadvantages of the VED?

Some disadvantages of the VED include lack of ease in using the vacuum for the first few times. Some practice may be necessary to increase ease of use. Men who have use the VED have also reported the experience of the penis feeling numb, being discolored, or cold to touch once erect (Erectile Dysfunction 1999; J. P. Jarow 2000). Occasional bruising on the shaft of the penis has also been reported, but is usually painless and very temporary. Just as with the cock ring, ejaculation may be slightly impeded due to application of the ring around the base of the penis which can cause a partial block of the semen traveling through the urethra (NIH 1993).

Injection Therapies

What are injection therapies?

Injection therapies are prescription drugs that are typically injected via needle directly into the penis in order to cause an erection to occur automatically within a short period of time. Injection therapies require a prescription from a doctor or nurse practitioner. (A pellet of this type of medicine may also be inserted into the urethra by way of a pre filled applicator. This intervention, however will not be discussed here).

What drugs are being injected into the penis?

Prostaglandin E is a hormone that is manufactured under the brand name of Caverject or Edex, (also known as Alprostadil) and is one of the common injection drugs used. Other injection drugs include, Papaverine, Regitine, Invicorp.

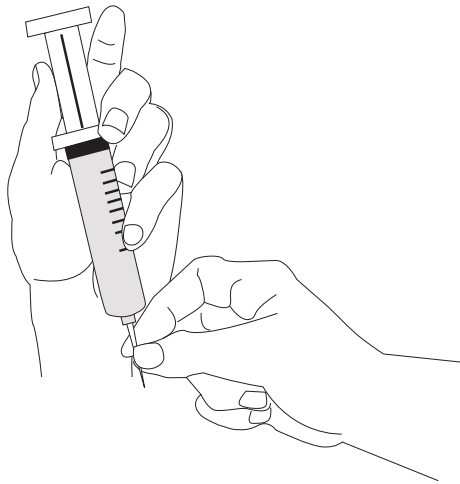
How does the injection cause an erection?

Once the drug is injected into the penis it begins to relax the muscle tissue in the penis and widen the blood vessels. This increases the blood flow into the penis causing the penis to become erect.

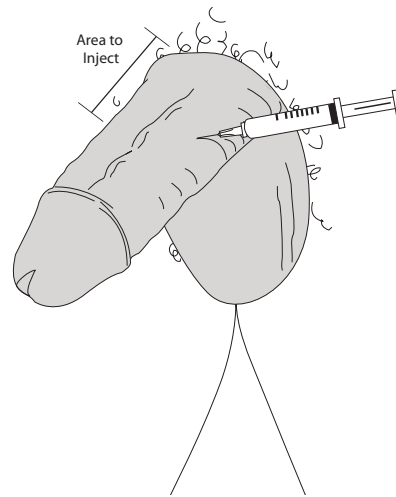
What is the proper way to administer an injection?

It is important to carefully follow the directions provided by the prescribing medical professional and pharmacist. Detailed instructions are provided with the prescription on how to

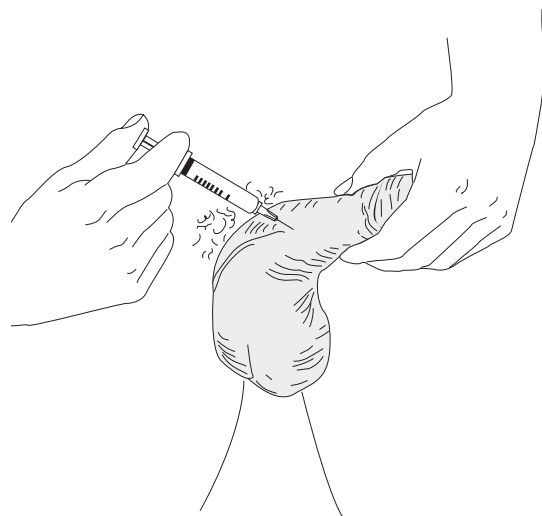
administer the injection from preparing the injection sight and the syringe, to establishing the proper location of the injection, as well as how to hold and inject into the penis. The illustrations below demonstrate three of the steps using injection therapy: preparing the syringe, determining the injection site, and how to hold the penis and inject the medicine properly to produce an erection.



1. Prepare the syringe



2. Determine the injection site



3. Hold the penis tightly toward the opposite leg of the injection site and inject as directed.

What are the advantages of injection therapies?

Injection therapies will produce an erection quickly without the need for sexual stimulation. Some men who have used injection therapies also reported a stronger erection through this method versus others they have tried (NIH 1993).

What are the disadvantages of injection therapies?

Some possible side effects include, scarring of the penis, priapism (prolonged erection), and pain at the sight of the injection. A prescription is required for this ED treatment. Although seemingly obvious, this procedure requires the willingness to use and inject oneself with a needle which may deter many men from using this intervention.

Oral Medications

What are the oral medications for treating ED?

Three common brand name oral medications are Viagra, Levitra, and Cialis. All of these come in pill form. The active agent in each of these medications is a phosphodiesterase type 5 (PDE-5) inhibitor.

How do oral medications cause an erection?

These drugs work by increasing the effectiveness of nitric oxide, a chemical that relaxes the muscles in the penis to allow an increase in blood flow. The increase in blood flow will generate an erection in response to sexual stimulation, but not on its own.

How are oral medications taken properly to produce an erection?

Since oral ED medications are prescribed by a qualified medical professional it is important that the user follow the instructions provided by the medical professional and pharmacist. The user is encouraged to read the directions carefully before taking the medication. Further, it is recommended that the user educate himself extensively on the possible side effects of the drug. Viagra and Levitra are typically taken as needed prior to sexual activity and may take up to an hour combined with sexual stimulation to produce an erection. Cialis has been approved for regular and daily use, so that the user may produce an erection at any time with the assistance of sexual stimuli.

What are the advantages of oral medications?

Oral medications have been found to help with most erectile dysfunction (Granzig 2002). This means that regardless of whether the cause of the ED is physical, psychological, or related to the use of other medications, these oral medications work most of the time. There is no medical equipment involved. Ease of use with taking a pill makes it fast and convenient to produce the desired result with little effort.

What are the disadvantages of oral medications?

Some common side effects headaches, runny nose, and diarrhea. In some cases, priapism (a rare condition that causes a persistent, and often painful, penile erection) may occur. These medicines are not indicated for everyone. Men who suffer from uncontrollable hypertension, diabetes, low blood pressure (hypotension), history of stroke, or severe heart disease are not good candidates for this medicine.

Maintaining Erectile Health

Lifestyle choices are believed to contribute significantly to the incidence of erectile dysfunction today. Reducing risk factors may help prevent ED completely for those unaffected, and increase successful outcomes for those living with ED. Some recommendations include: quit smoking, reduce or eliminate alcohol consumption, exercise regularly, eat a healthy balanced diet, reduce stress, maintain a healthy weight, limit sugar consumption, and get regular medical check ups. Making any or all of these changes can lead to not only a healthy life, but to a healthy and strong erection!

Community Resources for Information and Support Regarding Erectile Dysfunction

Organizations

American Board of Sexology

3203 Lawton Road Suite 170

Orlando, FL 32803

www.AmericanBoardofSexology.com

American Academy of Clinical Sexologists

American Board of Sexology

P.O. Box 1166

Winter Park, Fl. 32790

www.esextherapy.com

American Academy of Family Physicians (AAFP)

11400 Tomahawk Creek Parkway

Leawood, KS. 66211-2672

Phone: 913-906-6000

E-mail: fp@aafp.org

www.aafp.org

American Association for Marriage and Family Therapy (AAMFT)

112 South Alfred Street

Alexandria, VA 22314

Phone: (703) 838-9808

www.aamft.org

American Association of Clinical Endocrinologists (ACE)

1000 Riverside Ave., Suite 205

Jacksonville, Fl. 32204

Phone: 904-353-7878

www.ace.com

Community Resources for Information and Support Regarding Erectile Dysfunction

American Diabetes Association (ADA)

National Office

1701 North Beauregard Street

Alexandria, Va. 22311

Phone: 1-800-DIABETES

www.diabetes.org

American Urological Association

1000 Corporate Boulevard

Linthicum, MD 21090

Toll Free U.S. only: 1-866-RING AUA (1-866-746-4282)

Phone: 410-689-3700

Fax: 410-689-3800

www.auanet.org

National Institute of Diabetes and Digestive and Kidney Diseases

Office of Communications and Public Liaison

NIH, Building 31, room 9A04

Center Drive, MSC 2560

Bethesda, Md. 20892-2560

www.niddk.nih.gov

The American Association of Sex Educators, Counselors, and Therapists (AASECT)

P.O. Box 5488

Richmond, Va. 23220-0488

<http://www.aasect.org>

The Endocrine Society

4350 East West Highway; Suite 500

Bethesda, Md. 20814-4426

Phone: 301-941-0200

www.endo-society.org

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