

Only recently has the medical community accepted the use of negative pressure, or vacuum, devices for treating impotence, even though they have been available for many years. The operation of all tension-band vacuum devices marketed today is similar enough to describe them generally.

First, the aperture at the base of the vacuum chamber is fitted to the penis by introducing the proper (that is, snug but not constricting), adapter sleeve insert or by choosing the properly sized vacuum chamber (the **Vacuum Erection Device**). Kits come with a selection of insert or sleeve sizes. A correct fit lessens the chance of pulling scrotal tissue into the device when suction is applied. The patient then selects a tension band of proper fit from a variety supplied with the kit and places it around the base of the cylinder.

**Water-soluble lubricant** is applied to the open end of the cylinder and the entire penis. The chamber is placed over the flaccid penis to make an airtight seal (illustration A). The pump is activated, creating negative pressure within the system. This pulls blood into the penis to augment an existing erection or produce an erection-like state (B).

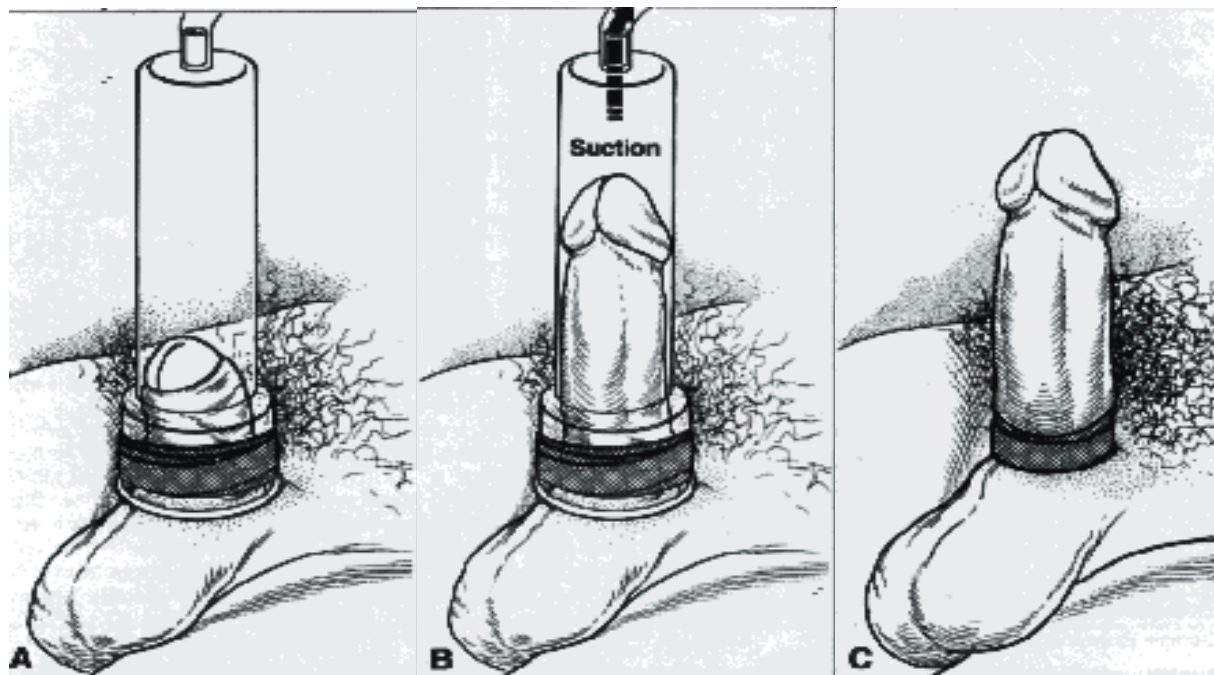
After adequate tumescence (erection) is achieved, the tension band is guided off the chamber and onto the base of the penis. This entraps blood in the penis. The vacuum is released and the chamber is removed (C). The erection-like state is maintained as long as the tension band is kept in place. It is recommended that this be no longer than 30 minutes, which is long enough for intercourse in most situations. The band can be removed for a few minutes and the procedure repeated if the patient wants longer-lasting tumescence.

When a patient has complete impotence, however, the tension band systems provide an erection only from the band to the end of the penis. This means that the penis pivots at its base—a predicament that can prevent some users from negotiating penetration into the vagina. Most men are, however, able to have sexual intercourse successfully without firmness of the penis within the body. The tension band also prevents normal antegrade ejaculation. This can cause sudden, painful swelling of the urethra, but reports of painful ejaculation have been rare.

Vacuum devices are contraindicated in only a few situations. They should be used with caution in a patient who is taking anticoagulants or has a blood dyscrasia, although many men taking anticoagulants use them successfully. Dexterity—in both hands—is needed for a man to use most of the devices. If he has dexterity in only one hand, an understanding and cooperative sexual partner can help him use the device, or he can use devices that only need a single hand to use, such as a battery powered device. Some couples may find that applying the device pre-coitally permits foreplay that enhances both partners' total sexual experience.

#### Expected results

A survey of more than 1,500 users of the ErecAid by its distributor sheds light on how effective and well-accepted vacuum devices are. The average user was 65 years old; most had used the device for less than a year. Before using it, 74% reported no erection or a poor-quality one that made vaginal penetration impossible. Afterwards, 92% reported an adequate erection or erection-like state and satisfactory intercourse; 78% had intercourse at least once every 2 weeks and 75% were able to have satisfactory intercourse occasionally without using the device. The



latter effect can be the result of lessened anxiety, after using a vacuum system, over previous failure to achieve erection. This in turn allows a return of natural erectile function (in partial impotence) adequate to sustain satisfactory sexual intercourse.

For those men whom are able to achieve, but not hold, an erection, the tension bands alone may be just enough to hold the blood within the penis to allow successful penetration and intercourse.

The study also found that, on average, men needed about 1 week, or four practice sessions, to learn to use the system successfully. Seasoned users needed an average of 2.5 minutes to achieve an erection-like state suitable for intercourse. Most respondents reported that their self image improved after using the device and that they had a solid relationship with their sex partner as a result of using the system.

Significant complications (such as urethral stricture, spongy tissue fibrosis, penile skin necrosis, and penile gangrene) have not been encountered with vacuum devices when they are properly used. Penile pain and ecchymosis (bruising) may occur at first—particularly with a device that uses a tension band—but these usually respond to a dose of patience and persistence. Patients should aware that although vacuum devices may appear cumbersome at first and take time to master, determined users have less and less difficulty manipulating them, pain and bruising occur less often, and the time it takes them to achieve erection or an erection-like state will decrease.

After you have used the vacuum device for a short while, make an appointment to be seen in the office. Questions can be answered at that time. If in using these devices, severe pain occurs, stop using it until the problem is resolved. The two major manufacturers have product representatives available for help if you experience difficulty in using the vacuum device. Don't be discouraged if in the beginning, these present some problems.

Call the office (689-9234, 1-800-876-5111 in Kansas) to arrange for an appointment.

**In an emergency, if no answer, call-262-6262**

**Sanford Fitzig, M.D.**  
**Steven Lawton, M.D.**  
**W. David McDonough, M.D.**  
Wichita Clinic  
3311 E. Murdock  
Wichita, Kansas 67208

