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His and Hers Sex Drugs

In Search of 'Female Viagra,' Doctors Try Antidepressants, Testosterone, Even Ritalin

By JANE SPENCER

Staff Reporter of THE WALL STREET JOURNAL

After her daughter was born 28 years ago, Lillian Arleque lost interest in sex. Nothing put her in the mood. She could no longer have orgasms. "A switch just shut off," she says.

For more than two decades, doctors shrugged off her complaints and suggested therapy. But Ms. Arleque, who says she was otherwise content with her marriage, life, and career, was convinced her lack of desire had a physical component. Last spring, she began seeing a doctor specializing in sexual medicine who offered a novel suggestion. He began prescribing hormones like testosterone, and tried remedies typically used for men, like Viagra and Levitra.

The drug cocktail has worked. The 57-year-old business consultant says her sex drive has come back, and she and her husband are "making up for lost time."

While the pharmaceutical industry continues to hunt for a female version of Viagra, a growing number of doctors are offering women existing drugs that have been approved for other ailments. The controversial treatments range from libido-boosting hormones like testosterone, to neurotransmitters like Wellbutrin, an antidepressant that some recent studies show may trigger an increase in sexual fantasies.

In more experimental settings, doctors are also prescribing men's sex drugs like Viagra and Levitra, which can increase blood flow to sex organs. Others are trying stimulants like Ritalin to counteract the libido-dulling effects of SSRI antidepressants, like Prozac and Zoloft, which are taken by more women than men.

Most of the drugs being prescribed are not approved by the Food and Drug Administration to treat sexual problems in women. But in a practice known as off-label use, doctors can legally prescribe drugs for any reason if scientific evidence suggests they may be effective. The risk is that long-term effects haven't necessarily been tested.

Some of the new treatment is happening in clinics that specialize in women's sexual health. But many mainstream doctors and gynecologists are prescribing the more-tested remedies like testosterone. Stephen Feldman, owner of the California Pharmacy and Compounding Center in Newport Beach, Calif., says his pharmacy has filled about 3,000 prescriptions for testosterone for women in the past year, a rate that has drastically

increased in recent years. Shari Goldman, a Chicago gynecologist with a general practice, says she considers testosterone therapy for the roughly 10% of her patients who complain of low libido.

Interest in the new remedies is getting a boost in the aftermath of concerns over hormone replacement therapy. For many older women, HRT helped counteract some of the consequences of menopause, such as vaginal dryness. But after widely publicized reports that the most popular form of the therapy may increase breast-cancer risk, many women abandoned the treatment.

Some doctors are pushing topical estrogen treatments and supplements as an alternative, such as Vagifem, Estrace, and Premarin cream, which are applied directly on the genital area. A new product called FemRing, introduced to the U.S. market in July by **Galen PLC**, is a flexible silicone ring that releases estrogen to help increase lubrication. Another product, called EstraTest, combines estrogen with testosterone. But it contains methyltestosterone, which may not have the same impact on libido as other forms of testosterone.

Industry Scramble

Prescription options could expand in the coming years, as pharmaceutical companies scramble to be first to market with a blockbuster sex drug for women. **Procter & Gamble** is conducting tests of a testosterone patch. **Pfizer** is testing a version of Viagra on women. **Vivus Inc.** is testing an arousal cream called Alista that is intended to increase blood flow. Drug companies hope the market could top the \$2 billion market for erectile dysfunction.

But the efforts are spurring a backlash from critics who say the pharmaceutical industry is inventing a medical problem to create a new market. While male sexual dysfunction is often reduced to the mechanical issues of erectile dysfunction, female sexuality is a complex issue that lies at the intersection of psychology and biology. Depression, stress, relationship issues, past sexual traumas and body image all affect desire and arousal in women. Many doctors say that ebbs and flows in women's sexual appetites are entirely natural reaction to circumstances and aging, and should not be classified as "dysfunction."

Many doctors leading the research on female sexual dysfunction receive funding from drug companies. The Female Sexual Medicine Center at the Department of Urology at University of California at Los Angeles receive money from Pfizer and Vivus. The Institute for Sexual Medicine at Boston University School of Medicine, where Ms. Arleque was treated, has received funding from Pfizer, Eli Lilly and Bayer.

Questionable Statistics?

Drug companies often cite statistics suggesting that 43% of women experience some form of sexual dysfunction, ranging from trouble having an orgasm, to low libido, to pain during sex. The statistic, however, comes from a 1999 article in the Journal of the

American Medical Association that has been criticized for relying on old data and overgeneralizing.

But gynecologists say low libido is a common sexual complaint among their patients. While emotional factors like stress and relationship concerns are often the primary cause, dozens of prescription and over-the-counter drugs for a variety of conditions have side effects that may affect sexual function. Birth-control pills, for example, limit women's ability to produce testosterone, a hormone that influences sexual arousal. Many SSRI antidepressants and anti-anxiety medications, including Prozac, Paxil and Zoloft, have been shown to reduce sex drive.

Common surgical procedures, conditions and diseases may also have an impact. Hysterectomies, nerve damage during childbirth, and illnesses that affect blood flow, like high cholesterol, may also affect sexual function. (Some doctors say prescribing Lipitor can improve sexual performance in both men and women.)

Herbal Remedies

As interest in the medical side of female sexuality grows, an expanding array of herbal remedies with names like "Exotica" and "Steel Libido" are also hitting drugstore shelves and showing up in spam advertising. Many of them are minimally effective and loaded with irritants like orange oil and menthol. But a few herbal remedies have shown promising results in clinical trials. Some doctors say Zestra, a homeopathic mixture of botanical oils can create a tingling sensation and increase blood flow to genitals. They're also suggesting ArginMax, an amino acid supplement that may increase blood flow to the genitals.

For many women, declining sex drive is an inevitable consequence of aging. From an evolutionary perspective, libido is associated with procreation, and doesn't serve much purpose after menopause. Levels of testosterone, one of the hormones that regulates libido in women as well as men, drop by about half in females between the age of 20 to 40. The decline in libido may be compounded by menopausal side effects, such as thinning of the vaginal tissue and a decrease in lubrication, which can make intercourse painful.

But many women in their 50s and beyond aren't ready to give up on sex. "Viagra has done a remarkable job of increasing awareness and expectations in advancing years," says Shari Goldman, a Chicago gynecologist.

Testosterone, one of the most commonly prescribed remedies, is technically approved by the FDA only for use in men. Testosterone supplements have a booster effect that can effectively trigger a state similar to the onset of puberty: It can spur an increase in sexual appetite, along with other changes including facial-hair growth, acne and a deepening of the voice.

For women such side effects can be extremely unpleasant. Most of the prescription products now available, such as AndroGel and Testim, come in high doses developed for

men who have about 10 times as much testosterone as women. Doctors treating women have to prescribe these highly concentrated products in less frequent doses -- or go to special compounding pharmacies that will mix lower-dose products for women.

Guessing Game

Determining the right dose is a guessing game, since the hormone seems to affect women differently. "This is cookbook medicine," says Jennifer Berman of the Female Sexual Medicine Center at UCLA. Doctors should keep careful tabs on their patients blood level -- and many women report no difference at all in their sex drive after taking it.

Doctors are also testing drugs that work on the brain, like bupropion, the key ingredient in some antidepressants like Wellbutrin. One recent study, conducted in part by Anita Clayton of the Department of Psychiatric Medicine at the University of Virginia, suggested it may be effective in women who complain of low sex drive, who are not otherwise depressed. Currently, however, doctors generally prescribe Wellbutrin only to patients to counteract the sexual side effects of other antidepressants.

Despite the critics, some argue that women should be relieved that the physical side of women's sexual complaints are finally being addressed. Women have been told "to go home and have a glass of wine, lose a few pounds or get some therapy," says Laura Berman, a sex therapist and director of the Berman Center, a Chicago organization devoted to women's sexual health. "But the medical community is finally coming on board."

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Options for Women

Doctors are increasingly suggesting prescription drugs and herbal remedies to treat women's sexual problems.

PRESCRIPTION DRUGS: Testosterone (AndroGel, Testim and products mixed for women at specialty pharmacies)

APPLICATION: Known as the "hormone of desire," it's prescribed for women who complain of low sex drive. Not approved by the FDA for use by women.

COMMENT: Has many unpleasant side effects including hair growth, muscle mass increase and deepening of the voice.

PRESCRIPTION DRUGS: Wellbutrin (Bupropion)

APPLICATION: An anti-depressant without the libido dulling effects. It may also boost sexual thoughts in women who are not depressed.

COMMENT: The drug is currently being prescribed to replace or counteract other antidepressants.

PRESCRIPTION DRUGS: Viagra/Levitra

APPLICATION: Both drugs increase blood flow to the genital areas, which some doctors say could improve "engorgement" in women. Approved by the FDA only for men.

COMMENT: Initial studies of Levitra in women have been "disappointing" according to its maker.

PRESCRIPTION DRUGS: FemRing/Topical Estrogen

APPLICATION: A silicon ring that is inserted into the vagina and releases estrogen. Used to treat menopausal symptoms, including vaginal dryness.

COMMENT: Topical estrogen products, including Etrace and Vagifem, have similar effects.

NON-PRESCRIPTION REMEDIES: Zestra

APPLICATION: A lotion containing ingredients like borage seed oil, evening primrose oil, and coleus extract that creates a tingling sensation. Claims to increase blood flow and "nerve velocity."

COMMENT: The treatment has been through a small clinical trial and some doctors say the results stand up to scrutiny.

Write to Jane Spencer at jane.spencer@wsj.com⁴

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