

SEXUAL HEALTH

A photograph of a man and a woman smiling and embracing each other. The man is shirtless and has his arm around the woman's shoulder. The woman is also smiling and has her hand near her face. They are outdoors, with a blurred background of water and sky.

NEW
RESEARCH
FINDINGS

and THE MEDITERRANEAN DIET

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It should be obvious by now that trading in the chips and donuts for a healthier diet significantly improves our physical and psychological well-being. What might not be so clear is that what we eat—or don't eat—can directly affect our sex lives! While the achievement of good sexual function is based upon many factors, it must be recognized that the particular diet we choose plays a definite role in its attainment.

Sexuality is a very important part of our human existence, both for purposes of procreation as well as pleasure. Healthy sexual function for a man involves a satisfactory libido (sex drive), the ability to obtain and maintain a rigid erection, as well as the ability to ejaculate and experience a climax. For a woman, sexual function involves a healthy libido and the ability to become aroused, lubricate adequately, to have sexual intercourse without pain or discomfort and to achieve an orgasm. Although not a necessity for a healthy life, the loss or diminution of sexual function can result in loss of self-esteem, embarrassment, a sense of isolation and frustration, and even depression. Therefore, for many of us, it is vital that we maintain our *sexual health*.

A few words on the embryology of our sex organs (the science of our anatomical development before we are born): You probably never realized that the male and female genitals are remarkably similar. In the first few weeks of existence as an embryo, the external genitals are the same—a *genital tubercle* (a midline swelling), *urogenital folds* (two vertically- oriented folds of tissue below the genital tubercle), and *labio-scrotal folds* (two vertically-oriented folds outside the urogenital folds). In the *presence* of testosterone (the male sex hormone), the genital tubercle becomes the penile shaft and head; the urogenital folds fuse and become the urethra and part of the penile shaft; and the labio-scrotal folds fuse and become the scrotum. In the female embryo, the *absence* of testosterone causes the genital tubercle to become the clitoris, the urogenital folds to become the inner lips (labia minora), and the labio-scrotal folds to become the outer lips (labia majora). Essentially, then, the penis and the clitoris are the same structure, as are the scrotum and outer labia!

On a functional level, sexuality is a very complex event dependent upon a number of body systems, including the *endocrine system* (which produces sex hormones; *the central and peripheral nervous systems* (which provide nerve control); and the *vascular system* (which conducts blood flow). While all of these systems must function in a normal, coordinated fashion, a healthy sexual response is, at its physical essence, largely about *adequate blood flow* to the genital and pelvic area. Increased blood flow to the genitals from sexual stimulation is what is responsible for the erect penis in the male and the well-lubricated vagina and engorged clitoris in the female. In a male, blood flow to the penis is analogous to air pressure in a tire: if there is *not* enough air, thereby causing the tire to be improperly inflated, the tire works less optimally and may even suffer a flat! Similarly, in a female, blood flow to the vagina is like oil in a car: if the engine is not sufficiently lubricated, it does not function as well as it should and ultimately may "seize" due to complete lack of lubrication! A well-lubricated vagina occurs as a result of augmented blood flow to the vagina. The lubricating fluid is a *transudate*, a liquid derived from the augmented blood flow to the vagina. When a woman has compromised blood flow to the vagina, it can be

manifested by a decrease in engorgement of the clitoris and vaginal tissues and a decrease in transudate lubrication; this can result in painful intercourse, altered vaginal sensation and difficulties in achieving an orgasm.

Generally speaking, diminished blood flow, most commonly on the basis of an accumulation of fatty plaque deposits within the walls of blood vessels, is often associated with the aging process. As we age, physiological and lifestyle factors combine to increase this plaque build-up, causing a significant narrowing of many of the body's blood vessels. The resultant diminution in blood flow to our organs negatively affects the functioning of *all* of our systems, since every cell in our body is dependent upon the vascular system for delivery of vital oxygen and nutrients and removal of metabolic waste products. *Pelvic atherosclerosis*, the accumulation of fatty deposits within the walls of the blood vessels that bring blood to the penis and vagina, will diminish blood flow to the genitals and incite sexual dysfunction. Ironically, too, any loss of sexual function can lead to further progression of the problem: unfortunately, deficiency in genital blood flow, which may initiate sexual *dysfunction*, produces a state of poor oxygen levels (*hypoxia*), in the genital tissues. This, in turn, induces tissue scarring (*fibrosis*), which further compounds sexual dysfunction. So, interestingly enough, "use it or lose it" becomes a very relevant statement when it comes to sex and our continued activity!

Civilization Syndrome, a cluster of health issues that have arisen as a direct result of our sedentary lifestyles and poor dietary choices, gives rise to a variety of health issues that may result in sexual dysfunction. *Civilization Syndrome* can lead to obesity, high blood pressure, high cholesterol, etc., and can cause such health problems as diabetes, heart attack, stroke, cancer and premature death. In terms of sexual dysfunction, *obesity* (external fat) is associated with internal obesity and the fatty matter that is largely responsible for pelvic atherosclerosis. Such fatty plaque clogs up the pudendal artery that functions to bring blood to the genitals. Additionally, obesity can have a deleterious effect on our sex hormone balance, further contributing to sexual dysfunction. *High blood pressure* causes the heart to have to work harder to get the blood flowing through the increased resistance of the plaque-ridden, narrowed arteries. *Blood pressure-lowering medications* will treat this, but as a result of such medically-induced decreased blood pressure, there will now be less blood flow through the pudendal arteries. Thus, blood pressure medications, although very helpful in preventing the negative consequences of hypertension—heart attacks, strokes, etc.—will contribute to sexual dysfunction. *High cholesterol* causes fatty plaque build-up in our arteries, compromising blood flow and contributing to sexual dysfunction. *Tobacco* constricts blood vessels and impairs blood flow through our arteries, including the pudendal artery. Really, smoking is not very sexy at all! *Stress* causes a surge of adrenaline release from the adrenal glands. The effect of adrenaline is to constrict blood vessels, thereby decreasing blood flow and satisfactory sexual function. In fact, men with *priapism* (a prolonged and painful erection), are often treated with penile injections of an adrenaline-like chemical to *reduce* the erection.

Sexual dysfunction may be a sign of cardiovascular disease. In other words, the quality of erections in a man and the quality of sexual response in a female can serve as a barometer

of cardiovascular health. Essentially, sexual dysfunction may be considered the equivalent of a *genital stress test* and possibly be indicative of a cardiovascular problem that warrants an evaluation for arterial disease elsewhere in the body (heart, brain, aorta, peripheral blood vessels). The presence of sexual dysfunction may be considered as much of a predictor of cardiovascular disease as is a *strong family history of cardiac problems, tobacco smoking, or elevated cholesterol*. The British cardiologist Graham Jackson has expanded the initials E.D. (Erectile Dysfunction) to mean: *Endothelial Dysfunction* (endothelial cells being the type of cells that line the insides of arteries); *Early Detection* (of cardiovascular disease); and *Early Death* (if missed!). The bottom line: heart healthy is sexual healthy (and vice versa)!

Diabetes has become a very serious culprit in causing sexual dysfunction. The diabetic situation in our nation has become outrageous—20 million people currently have diabetes and an estimated 54 million are pre-diabetic, many of whom are unaware of their pre-diabetic state! Diabetics often experience blood vessel and nerve damage as well as poor blood sugar control—all of which puts them at high risk for sexual problems. It is no wonder, then, that diabetes is one of the leading causes of sexual dysfunction in the United States.

So, where does this leave us? It leaves us with what should by now be obvious: a healthy lifestyle is of paramount importance towards the endpoint of achieving an optimal quality and quantity of life. Intelligent lifestyle choices, including proper eating habits, maintaining a healthy weight, engaging in exercise, adequate sleep, alcohol in moderation, avoiding tobacco and stress reduction are the initial approach to treating many of the diseases caused by poor health decisions. Sexual dysfunction is often in the category of a medical problem that is brought on by unwise lifestyle choices. It should come as no surprise that the initial approach to managing it is to improve lifestyle choices. By simply improving one's daily habits, Civilization Syndrome can be ameliorated or even prevented, and the various medical problems that often follow, including sexual dysfunction, can be mitigated.

In terms of maintaining good vascular and cardiac health—and thus healthy sexual function—eating properly is incredibly important—obviously in conjunction with other smart lifestyle choices. Fueling up with the best and most wholesome foods available will help prevent the build-up of harmful plaque deposits within blood vessels that can lead to compromised blood flow as well as help to maintain ideal body weight. Poor dietary decisions with a meal plan replete with fatty, calorie-laden, nutritionally-empty selections (e.g., fast food or processed or refined anything), puts one on the fast track to clogged pudendal arteries that can make your sexual function as small as your belly is big!

So, what to eat? A classic healthy-food lifestyle choice is the increasingly popular Mediterranean diet. This diet, the traditional cooking style of the countries bordering the Mediterranean Sea (including Spain, France, Greece, Cyprus, Turkey, Southern Italy, and nearby regions), has been popular for literally hundreds of years. The Mediterranean cuisine is very appealing to the senses and includes products that are largely plant-based, such as fresh fruits and vegetables, whole grains, nuts, seeds and legumes. Legumes—including peas, beans and lentils—are a wonderful source of non-animal protein. Fish and poultry are

also mainstays of the Mediterranean diet, with limited use of red meats and dairy products. The benefits of fish in the diet can be fully exploited by eating a good variety of them. Olive oil is by far the principal fat present in this diet, replacing butter and margarine. The Mediterranean diet focuses on wholesome, natural products that are *high* in the healthy *good* fats (monounsaturated and polyunsaturated) and *low* in the unhealthy *bad* fats (saturated and trans fats). Unsaturated fats are present in such foods as olive, canola and safflower oils, avocados, nuts, fish and legumes. The Mediterranean style of eating also provides excellent sources of fiber, which is so beneficial to digestive health. Additionally, moderate consumption of red wine is part of the diet—a glass or two daily is not only permitted, but actually encouraged. Red wine is a rich source of flavonoid phenols—a type of *anti-oxidant* that protects against heart disease.

Speaking of *anti-oxidants*, herein lies one of the answers as to why the Mediterranean diet is so good for our hearts and for our sexual health. The Mediterranean diet is extremely high in *anti-oxidants*—vitamins, minerals and enzymes that act as “scavengers” in our bodies, searching out *reactive oxygen species* in order to neutralize them and minimize their potential damage to our systems. These reactive oxygen species (also known as *free radicals*), are the by-products of our metabolism and also occur from what is called “oxidative damage” from exposure to hazardous environmental toxins. The *oxidative stress theory* hypothesizes that, over the course of many years, oxidative damage occurs by the accumulation of the chemicals that engender diseases, aging and, ultimately, death. Going back to our car analogy—while oxygen may be good to breathe, it is also responsible for causing certain materials to rust. Hence, the body of an older car begins to show its age when larger and larger areas of rust appear. Similarly, the Statue of Liberty, originally a beautiful, shiny copper color, long ago turned green as a result of the destructive oxidative process. Such oxidative damage can be just as dramatic in the human body and thus it becomes important to counter this effect via anti-oxidants. The most common anti-oxidants are vitamins A, B-6, B-12, C, E, folic acid, lycopene and selenium. Many plants contain anti-oxidants—they are concentrated in beans, fruits, vegetables, grain products and green tea. Brightly-colored fruits and vegetables are good clues as to the presence of high levels of anti-oxidants—berries, cantaloupe, cherries, grapes, mango, papaya, apricots, plums, pomegranates, tomatoes, pink grapefruit, watermelon, carrots, broccoli, spinach, kale, squash, etc.—are all loaded with anti-oxidants (as well as high in fiber content).

A Mediterranean diet is also high in *omega-3 fatty acids*, a type of polyunsaturated fat present in oily fish, including salmon, herring and sardines. Nuts, particularly walnuts, have significant levels of omega-3 fatty acids. Research has demonstrated that these “good” fats have numerous salutary effects, including lowering triglyceride levels (the amount of fat globules in the bloodstream), slightly reducing blood pressure and decreasing the growth rate of fatty plaque deposits in the walls of our arteries (atherosclerosis); this, in turn, helps lower the risk of cardiovascular disease, stroke and other medical problems. Mediterranean cooking almost exclusively uses *olive oil*, a rich source of monounsaturated fat, which can lower total cholesterol and LDL (the “bad” cholesterol), while increasing HDL (the “good” cholesterol). The Mediterranean region’s inclusion of a moderate amount of red wine (an anti-oxidant), in the diet provides a cardiovascular health benefit by increasing HDL

cholesterol and preventing blood clotting, similar to the cardio-protective effect offered by aspirin.

Clearly, a healthy diet is an important component of a healthy lifestyle, the maintenance of which can help prevent the onset of many disease processes. There are, of course, many healthy dietary options, of which the Mediterranean diet is just one. What makes this particular diet so appealing is not only its wide latitude in food choices but also its medically-established benefit to our overall well-being—including our sexuality. A recent study reported in the [*International Journal of Impotence Research*](#) (Esposito, Ciobola, Giugliano et al), concluded that a Mediterranean diet improved sexual function in those with *Metabolic Syndrome*, a cluster of symptoms including high blood pressure, elevated insulin levels, excess body fat around the waist and abnormal cholesterol

and triglyceride levels. In this study, thirty-five patients with sexual dysfunction were put on a Mediterranean diet; after two years, blood test markers of endothelial function and inflammation significantly improved in the group on the Mediterranean diet versus in the comparison group that was not. The “diet” group had a significant decrease in glucose, insulin, LDL cholesterol triglycerides and blood pressure, with a significant increase in HDL cholesterol. Fourteen in the Mediterranean diet group had glucose intolerance and 6 had diabetes at the start of the study, but by two years later, these numbers were reduced to 8 and 3, respectively.

Making intelligent nutritional choices is a key component of achieving physical fitness, which can ultimately lead to sexual fitness. Thus, the incorporation of a healthy and nutritious diet, such as the Mediterranean diet, is a cornerstone for maintaining good health in general, and vascular health, including sexual health, in particular. The Mediterranean diet—my primary diet and one that I have incorporated quite naturally into my lifestyle since it consists of the kinds of foods that I enjoy—is colorful, appealing to the senses, fresh, wholesome and healthy! Maintaining a Mediterranean dietary pattern has been correlated with lower incidences of cardiovascular disease, cancer, diabetes and sexual dysfunction. Plus, it is very easy to follow! It contains “good stuff”: tasty, filling and healthy, with a great variety of food and preparation choices—plenty of delicious fruits and vegetables; a variety of fish prepared in numerous healthy styles (not fried or laden with heavy sauces); good fats, including nuts and olive oil; limited intake of red meat; and accompanied, if you choose, by a lovely glass of red wine. It’s really very simple...and satisfying! Of course, along with this diet, one needs to incorporate such beneficial activities as exercise, adequate sleep, avoidance of harmful and malignant habits, including smoking, excessive alcohol and substance abuse, and stress reduction. The true bottom line then: if you want a “sexier” lifestyle, first start with a “sexier” style of eating! The Mediterranean diet is just that and one that I wholeheartedly recommend. The Mediterranean diet should be part of an overall lifestyle plan that will help you feel better, look better and optimize your sexual, emotional and psychological well-being.