

Uterine Fibroids

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- Summary

The uterus is one organ in a complex system that composes the structures common to the internal genitalia of a woman. The uterus is a hollow, pear-shaped organ of reproduction in which the fertilized egg is implanted and the fetus develops. However, the uterus, composed of the cervix, the body, and the fundus, can experience stress beyond its role in pregnancy.

One such uterine anomaly is the formation of fibrous or fully developed connective tissue, resulting in abnormal muscle cells, referred to as a uterine fibroid or myoma. A myoma is a benign neoplasm, affecting some 20-30% of all women by the age of 40 and more than 50% of women overall. Uterine fibroids are much more common among African American women than Caucasian women, although the reason for this is not clearly understood.

A fibroid can form on the interior muscular wall, as well as on the exterior of the uterus. Fibroids are spherical, firm lumps that most often occur in groups. Symptoms of uterine fibroids (and their impact upon general health) include: abnormally heavy menstrual periods, with the likelihood of anemia; shortened menstrual cycles (less than 28 days); metrorrhagia (unexplained uterine bleeding); fatigue; increased vaginal discharge; painful sexual intercourse; and pain or pressure in the bowel or bladder. Yet some women judge their condition to be asymptomatic, with the diagnosis of uterine fibroids being made only after a routine pelvic examination.

HORMONAL INFLUENCE

- Detoxification
- Reduce Excess Estrogen
- Thyroid Gland
- Heavy Metal Contamination

Since fibroids tend to increase during pregnancy and decrease during menopause, presumably due to fluctuating levels of estrogen, uterine fibroids are considered to be estrogen-dependent (Pollow et al. 1978). To further substantiate this finding, in leiomyomas (leio meaning smooth; myomas meaning a common benign fibroid tumor on the uterine muscle), estrogen levels were persistently elevated whereas progesterone showed contradictory levels from test results, some showing low concentrations and others showing elevations (Sadan et al. 1987). Obviously, the recommendation of progesterone is clouded.

As late as 1995, various researchers stated that estrogen did not directly stimulate myoma growth, but that it is actually progesterone and progestins that promote fibroids. Various practitioners have, however, reported excellent results regarding uterine fibroids and progesterone usage. Because progesterone research is confounding, the woman using progesterone should be closely monitored. The consensus is more unified, however, that women with uterine fibroids should attempt to lessen the entry of exogenous estrogen substances into their systems.

Practitioners report that fibroids the size of a 13-week fetus (the size at which Western medicine begins discussing the need for a hysterectomy) have been successfully treated using the reduced-estrogen method. The accompanying heavy uterine bleeding has also been controlled with this conservative treatment.

Various researchers believe that women with fibroids, due to the estrogen load that a contraceptive delivers, should avoid oral contraception. Other practitioners, who believe the only notable association with oral contraception is a significantly increased risk among women who used oral contraceptives at age 13-16 years, question this theory (Marshall et al. 1998). The risk of developing a uterus that is not strong physically appears to increase with an early menarche, parity, or a history of infertility. It seems prudent to select an alternative form of birth control other than oral contraceptives if health of the reproductive system is questioned.

Control of estrogen is difficult in our estrogen-laden environment. Estrogen has become a significant problem because the hormone has ways of entering our food and water supply. Various agricultural chemicals mimic the activity and structural description of estrogen, provoking heightened estrogen receptivity on estrogen receptor sites. Pesticides initially invade our airspace and then later appear as residual by-products in the food chain. Urine, contaminated with high levels of residual estrogen from birth control

pills, can seep back into water supplies through inadequate sewage treatment procedures. Obviously, estrogen replacement therapy at menopause can worsen uterine fibroids due to increased levels of circulating estrogen.

Detoxification of Hormones

Three types of estrogen make up the total estrogen load in a female. These include estradiol, estrone, and estriol. Both estradiol and estrone have been implicated as being carcinogenic under certain circumstances. There is some evidence that estriol is not only noncarcinogenic, but also anticarcinogenic as well.

Mother Nature did not leave the female without a defense in regard to downgrading the carcinogenic status of various female hormones. One adaptation is intricately provided by way of the hard-working liver. In fact, the liver is the most active metabolic processing center in the body. Among the many vital metabolic functions assigned to the liver is detoxification or excretion of hormones such as estrogen. The liver metabolizes estrogen so it can be eliminated from the body by converting it to estrone and eventually to estriol, which has very little ability to stimulate the uterus. If the liver is not effectively metabolizing estradiol, the uterus may become "overestrogenized" and respond with fibroids.

The implications of good liver function are manifold. Most individuals can benefit from nutritional support applied to improve liver performance. Herbs such as silibinin (milk thistle), dandelion, goldenseal, barberry, and artichoke have moved from folklore to accepted herbal pharmacology as accepted agents for improving liver function. Choline, inositol, and methionine are also often included in a hepatic protocol.

Liver health is not always easy to assess because satisfactory liver results can sometimes be obtained even when the liver is being severely challenged. This can occur through the principle of homeostasis: the body constantly strives for correction in the face of perilous internal mayhem. Because of the toxins constantly bombarding the liver, women with fibroids in particular should consider additional liver support. Once the liver has been assisted, the conversion of the more dangerous estradiol to the less ominous estriol is much easier.

Drug Therapy to Reduce Excess Estrogen

Estrogen is a growth-stimulating hormone. As stated earlier, fibroids typically shrink after menopause because of the reduction in endogenous (self-produced) estrogen that accompanies menopause. Women with uterine fibroids should have their blood estrogen level checked. If blood testing reveals too much estrogen, consider asking your doctor to prescribe a low dose (1 mg every few days) of an aromatase-inhibiting drug such as Arimidex. By having a physician adjust the dose of Arimidex, women may be able to lower excess estrogen, thereby helping to shrink fibroids and possibly reducing breast cancer risk. When Arimidex was compared to tamoxifen in a breast cancer prevention trial, Arimidex was slightly more effective and virtually free of side effects (ATAC Trialists' Group 2002).

The Role of the Thyroid Gland

The health of the thyroid gland should be considered in any debility in the reproductive organs. Hypothyroidism can be the primary causative agent in abnormal Pap smears (Papanicolaou test); menorrhagia (abnormally heavy or long menstrual periods); ovarian cysts; metrorrhagia (bleeding other than that caused by menstruation); infertility; and unsuccessful pregnancies. Fibroid tumors are rare in women with hypothyroidism who have been maintained on adequate thyroid therapy. It is possible to produce fibroids in experimental animals by injections of estrogen, and there is evidence of an excess of estrogens in hypothyroid women.

In hypothyroidism, there is increased activity of the pituitary gland aimed at trying to stimulate the thyroid to produce more hormone secretions, and the increased pituitary activity may spill over to affect the ovaries and increase their estrogen output. Unless the health of the thyroid is considered in assessing any "female" complaint, the individual may be at risk for unnecessary physical suffering and emotional debility to occur. A few grains of thyroid extract can often produce remarkable reversals involving impending disaster in the reproductive tract. The importance of a thyroid evaluation by a competent endocrinologist cannot be overemphasized.

Interestingly, women with endometriosis and antithyroidal antibodies have significantly higher values of polychlorinated biphenyls (PCBs) (Gerhard et al. 1992). PCBs represent a family of more than 200 structurally related chemicals that were once used as industrial coolants in power transformers. Because PCBs were found to cause cancer in laboratory animals, their use has been banned for more than 20 years in the United States. Yet, PCBs still persist in the environment and mimic the action of thyroxine, a hormone produced by the thyroid gland. It is thought that PCBs affect not only the thyroid gland, but also the reproductive system in animals as well.

The luteinizing hormone (LH), responsible for ovulation, and the follicle-stimulating hormone (FSH), responsible for follicle maturation, respond to stimuli from GnRH (gonadotropin-releasing hormone) released from the hypothalamus. When a GnRH analogue (GnRHa) was given as leuprolide acetate, significant tumor reduction was achieved (Golan 1996). In another study, nonmenopausal women (110, with mean age of 42.1 years) with symptomatic uterine leiomyomata (smooth benign fibroid tumors)

were studied to determine the efficacy of leuprolide, administered intramuscularly at a dose of 3.75 mg every 4 weeks for 16 weeks. Initial results revealed that the uterine size decreased to 50% of its original volume in 33 (37.5%) of 88 women who entered the study with a hypertrophic uterus. Eighty fibromas, measured separately, decreased by greater than 50% of the initial size in 47 (52.8%) of the women tested (Serra et al. 1992). Amenorrhea (or absent menstrual periods) and an attendant increase in hemoglobin levels were produced by way of the GnRH inhibitor.

Because of the cost and side effects (hot flashes being the major complaint followed by isolated incidences of hypertension and headache), the on-going use of GnRH inhibitors is often considered prohibitive. But important correlations may be taken from GnRHa research that relates to the thyroid gland. What leuprolide is accomplishing by way of inhibition of LH and FSH, hypothyroidism may be undoing, by stimulating these very same hormones into greater activity.

In a condition of hypothyroidism, the thyrotropin-releasing factor, elaborated in the hypothalamus, is continually being secreted to arouse greater thyroid activity from the anterior pituitary. Capable as the body is, its competency may not allow for thyroid hormone stimulation without stimulation of LH and FSH as well. The thyrotropin-releasing factor may arouse other areas in the anterior pituitary in its effort to goad the production of increased thyroid hormone release.

GnRH is capable of inciting additional production from both LH and FSH which in sequence stimulate the uterus. A reduction in GnRH can actually diminish fibroid size and symptoms. It is highly likely that the thyrotropin-releasing factor can elicit a similar stimulatory effect on LH and FSH. It can be likened to whipping a horse into greater performance but expecting only one leg to respond. The anterior pituitary secretes the growth hormone, thyrotropin, adrenocorticotrophic hormone, melanocyte-stimulating hormone, follicle-stimulating hormone, luteinizing hormone, prolactin, and endorphins. This cascade likely best describes why hypothyroidism is the purveyor of so many reproductive tract anomalies and why it must be considered in any treatment protocol.

Obtaining satisfactory laboratory results regarding thyroid performance is sometimes difficult. This unfortunate situation has led alternative practitioners to resort to temperature analysis to demonstrate thyroid function. This is a noninvasive, reliable test that can highlight the need for thyroid support. Sometimes a glass-bulb thermometer is used under the arm. At other times, physicians monitor the readings via the traditional sublingual method. Consistent readings below 97.6 are suggestive of an underactive thyroid gland.

The Role of Heavy Metal Contamination

Women with hormonal disorders often present with high levels of mercury and cadmium excretion (Gerhard et al. 1992). Cadmium excretion was pronounced for the following groups of women: those with technical professions, those with thyroid dysfunctions, and those with habitual abortions and uterine fibroids. Evaluation of heavy metal and pesticide contamination should be included in a woman's test panel if she has hormonal irregularities or specific fertility disorders. The effects of these pollutants could affect the thyroid gland, with the consequence being a disordered uterus. They could also stimulate the uterus by mimicking the activity of estrogen.

Chelation with ethylenediaminetetraacetic acid (EDTA) is sometimes used to extract toxic mineral accumulations from the body. Most toxic minerals are divalent, that is, they carry two positive charges ready to link up with two negative ions. Divalent minerals include divalent mercury, aluminum, and cadmium, along with some essential minerals such as calcium, magnesium, zinc, copper, and manganese, as well as other trace minerals. EDTA, in the presence of divalent minerals, binds or attracts these hazardous minerals by drawing the positive charge into itself. An EDTA/mineral complex is then formed and remains in solution and is capable of passing through the blood vessels to the kidney and out of the body. EDTA is best described as a pharmacologically neutral "escort" molecule that transports divalent ions out of the body. The beneficial minerals are then either replaced by way of nutritional supplementation or through direct administration of the minerals in an intravenous solution. (See the protocol on Heavy Metal Toxicity for additional information about chelation.)

Kelp, in a general nutritive tonic, can also extract cadmium by preventing its absorption in the gastrointestinal (GI) tract. When consumed daily, seaweed has advantages beyond ridding the body of heavy metal stores. It is regarded by some as a powerful ally in regard to healing and lessening the severity of fibroids. Mercury can also be mobilized and transported from the body by way of vitamin C, cysteine, glutathione, and selenium. Concern about heavy metal and pesticide contamination has been expressed in more than 68 reports, with the consensus being that women who experience hormonal irregularities or specific fertility disorders should be examined for heavy metal poisoning. (See the protocol on Heavy Metal Toxicity for additional information about potential sources of heavy metal contamination.)

DIETARY SUGGESTIONS

■ Supplementation Suggestions

If organic fruits and vegetables are available and affordable to the consumer, their consideration is likely indicated. Health

practitioners recommend a diet centered on whole foods, with fresh fruits and vegetables, nuts, seeds, and whole grains being emphasized. Lignins, found in all whole grains, are antiestrogenic. Lignins are present in decreasing order in flaxseed, rye, buckwheat, millet, oats, barley, corn, rice, and wheat.

Fiber-rich diets can assist in extracting excessive estrogen stores from the body. The positive effects of a high-fiber diet compared to a low-fiber diet (28 grams daily compared to 12 grams) were illustrated when fecal weight and fecal excretion of estrogens in the vegetarian's diet were contrasted to that of nonvegetarian (eating both animal and vegetable substances) (Goldin et al. 1982). Foods thought best to be avoided, either because of their low-fiber content or their history of promoting fibroid growth, include dairy products, red meat, fried fatty foods, sugar, salt, caffeine, and alcohol.

Much debate has focused on whether soy products should be included in the diet of women presenting with estrogen excess. Genistein and daidzein are both regarded as isoflavones appearing in soy and having estrogen activity. Researchers, representing the "pro" and "con" of the estrogen debate, present their views with conviction. In countries in which soy is a main part of the diet, there are claims that reproductive tract disease is less frequent than it is in regions or cultures in which soy is not included in the diet. The premise is that the weaker estrogen constituents of soy bind to the estrogen receptor, making less available to the binding site for the stronger, more ominous estrogen. Conversely, it appears that menarche (the onset of the menses or the menstrual period) may actually be hastened in the precocious child who uses soy products. Because of the dichotomies regarding soy usage, it is considered wise to avoid large amounts of genistein in conditions that are estrogen-receptor positive.

A more slender frame may benefit women with fibroids, as well. Judicious under-eating may be beneficial to the uterus, providing less quantities of estrogen by way of lessening the over-consumption of hormone-rich foodstuffs.

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Uterine Fibroids

Supplementation Suggestions

Nutritional supplementation for uterine fibroids should include antiestrogenic substances such as flavonoids which have 1/400-1/50,000 the estrogenic effect that synthetic estrogen has. Flavonoids contribute very little to the total body supply of estrogen. Various herbs (saw palmetto, historically used for benign prostatic hyperplasia), lady's mantle, chaste tree berries, and yarrow flowers have been cited for their antiestrogenic values. Other supplements recommended for uterine fibroids include immune-enhancing nutrients such as coenzyme Q10, vitamin C, zinc, arginine/lysine combination, maitake mushrooms, and vitamin A. The antioxidant activity of beta-carotene, vitamin C, vitamin E, and selenium is also recommended.

As a possible addition to a nutritional protocol, a woman with fibroids should consider pancreatic enzymes. Pancreatic enzymes have many uses, but when they are used to reduce unusual cell, tissue, or muscle mass (such as in cancer and fibroids), pancreatic enzymes should be consumed between meals. Although not universally accepted, the logic behind using pancreatic enzymes is that the enzymes will digest fibrous/smooth muscle tissue and dissolve fibroids. When taken with food, pancreatic enzymes assist in digestion and do not resolve tissue.

SURGICAL INTERVENTION

Some women prefer an abdominal/pelvic surgical intervention (a myomectomy) that removes the fibroids and the muscle tissue, but spares the uterus. However, 15-30% of women who have a myomectomy eventually require further surgery because fibroids can recur. A myomectomy requires a search for a very competent surgeon because greater skill is required in the procedure. Even if a woman is not concerned about protecting her fertility, a myomectomy should still be considered as an alternative to a hysterectomy. A hysterectomy appears to be too great a sacrifice for a condition that is considered to be benign 99.9% of the time. Yet, 30% of hysterectomies performed are to remove fibroids.

It is thought that much of an individual's sexual response is psychic in origin. Therefore, if a woman considers that her internal feminization is a part of her sexual mystique, then the absence of her uterus could prove to be her undoing: 25% of women who have a hysterectomy report increased difficulty becoming sexually aroused and then having a disappointing orgasm, if it occurs. The uterus contracts on the impulses of the orgasm, making the sensation deeper and more satisfying. The uterus also responds pleasurable to breast stimulation. Without a uterus, no such response occurs. When the uterus is removed because of fibroids, the ovaries are usually left intact. This lessens the degradation.

Research indicates that a retained sexual nature retards aging. Some women recount the removal of their uterus as entering the operating room young and emerging old. Chronic dysthymia (despondency) is frequently observed. Many women are also disappointed in their lack of bladder control after surgery. Others are plagued by intestinal adhesions which are not considered to be rare following abdominal surgery and can actually be life-threatening. Alternatives to radical surgery should first be carefully explored before any decision to operate is made.

SUMMARY

Women experiencing uterine fibroids should consider the following recommendations, acting on those which are most appropriate for each individual.

1. The health of the thyroid gland should be evaluated first. All other attempts at correcting reproductive tract anomalies pale in importance without first consulting an endocrinologist capable of treating the primary causative factor, often an improperly functioning thyroid, inciting an unsound uterus.
2. Women should actively attempt to restrict their exposure to exogenous estrogens by way of increasing consumption of fiber and foods having anti-estrogenic activity. Saw palmetto (160 mg), lady's mantle (2-4 mg of the tincture 3 times daily), chaste tree berries (1-2 mg 3 times daily), and yarrow flowers (2-4 mg 3 times daily) are considered antiestrogenic substances.
Caution: Herbs, although tolerated by most individuals, should be approached with caution on the part of the user in case unusual symptoms manifest. A clean supply of drinking water is imperative.
3. Enhanced detoxification of hormone excesses, a big task for the liver, is essential to uterine health. Every effort should be made to assist the liver in this endeavor by using supplements/herbs known to support liver function such as:
4. Silibinin Plus (260 mg silibinin), 1 capsule, twice daily.
5. Dandelion tincture, 5-10 mL 3 times daily, or dandelion root, 200-500 mg capsules twice daily.
6. Artichoke Leaf Extract, one 300-mg capsule daily.
7. Goldenseal, 400 mg
Caution: Do not use goldenseal on a daily basis for extended periods of time.)

8. Choline, inositol, and methionine (complexed in a formulation to yield 1000 mg of choline and inositol daily). These nutrients may also be purchased separately as Choline Cooler, 1 tablespoon, 1-3 times daily; inositol, two 500-mg capsules daily; methionine powder, 500 mg daily.
9. SAME, 400-800 mg twice daily
10. Screening for heavy metal contamination is advisable, with the woman taking appropriate action to rid poisons from her system.
11. Consider chelation therapy, kelp (1000 mg daily), glutathione, and cysteine (100 mg of vitamin C and 50 mg of vitamin B6 assist in glutathione/cysteine absorption).
12. Silibinin, vitamin C, and selenium are valuable in increasing glutathione levels. Se-Methylselenocysteine (selenium) can be taken at a dosage of 200 mcg daily. Vitamin C may be increased to 4000-10,000 mg daily.
13. Supplements considered specific for uterine health are:
14. Coenzyme Q10, 30-100 mg, in an oil base daily.
15. Zinc, 30-80 mg daily.
16. Arginine/lysine, 500 mg of each daily, with vitamin C and vitamin B6 to assist absorption.
17. Maitake mushroom, 150 mg twice daily.
18. Vitamin A (in liquid drops) with emphasis on an antioxidant complex containing beta carotene, vitamin C, vitamin E, and selenium. Up to 20,000 IU daily is recommended.
19. Pancreatic enzymes (thought to decrease the mass size of abhorrent fibrous/smooth muscle tissue) should be a consideration for the patient/practitioner. Use 10X, full strength, undiluted, and uncut pancreatic enzymes between meals, beginning with one and working toward three doses. MegaZyme by Enzymatic Therapy provides 10X strength.
Note: *Pregnant woman should not use pancreatic enzymes.*
20. Myomectomy, a surgical procedure that removes the fibroids but leaves the uterus intact, is an option. A hysterectomy should only be considered for a uterine fibroid after much thought and conversation with a physician and others who might be impacted by the surgery, such as the woman's sexual partner.
21. If blood testing reveals that estrogen levels are too high, consider taking an aromatase-inhibiting drug such as Arimidex at a dose of 1 mg several times a week. Arimidex is a prescription drug with virtually no side effects other than suppressing too much estrogen if the dose is higher than need be. If symptoms of estrogen deficiency manifest (e.g., hot flashes or any other symptom), consult your physician about reducing the dose of Arimidex.

FOR MORE INFORMATION

Contact the Office on Women's Health, U.S. Public Health Service, (202) 690-7650.

PRODUCT AVAILABILITY

Saw palmetto, SAME, CoQ10, Artichoke Leaf Extract, Silibinin Plus, goldenseal, zinc, glutathione, Choline Cooler, L-cysteine, L-arginine, L-lysine, liquid vitamin A drops, vitamins C, E, B6, Se-Methylselenocysteine, Gamma E Tocopherol/Tocotrienols, and MegaZyme (10X enzymes) can be ordered by calling (800) 544-4440 or by ordering online.



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