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Side Effects of Hormone Replacement Therapy with Estrogen, Progesterone, DHEA and Testosterone

Expected Benefits of Hormone Replacement Therapy

- Expected benefits include control of symptoms associated with declining hormone levels.
- Possible benefits of this therapy may help prevent, reduce or control physical diseases and dysfunction associated with declining hormone levels, through hormonal replacement.

Risks and Side Effects of Hormone Replacement Therapy

General

- The general risks of therapy by injection may include, but are not limited to, bruising, soreness or pain, and possible infection for hormones administered by injection.
- There are risks (both known and unknown) to any medical procedure, treatment and therapy, and that it is not possible to guarantee or give assurance of a successful result.
- If any of these side effects occur, hormone levels need to be taken since symptoms overlap with those of other hormones. Your dose may need to be adjusted. Most side effects will reverse when hormone levels are adjusted.

Estrogen

Risks associated with oral estrogen replacement include, but are not limited to: heart attacks, blood clot formation, gallstones, increased risk of uterine cancer (if progesterone is not administered with estrogen at the same time) and fibroid tumors. The Women's Health Initiative study demonstrated increased risk when estrogen replacement is initiated 10 or more years after menopause. Clotting is more likely to occur with the oral form. There is minimal risk of clots that lead to heart attack or stroke with estrogen applied to the skin

Estrogen replacement is not recommended in women with a history of the following conditions: breast or uterine cancer, phlebitis and blood clots, gall bladder disease, and liver disease (oral form) and should be monitored and used with caution if uterine fibroma due to risk of bleeding.

Side effects of excess estrogen may include, but are not limited to:

- Agitation/irritability
- Anxiety/Nervousness
- Palpitations
- Weight gain
- Water retention
- Headaches/migraine
- Swollen or tender breasts
- Bloating



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- Spotting or breakthrough bleeding
- Mood swings
- Sleep disturbance/poor sleep
- Joint aches or pains

Progesterone

Progesterone is a prescription hormone that can be given orally or by transdermal cream. Risks of progesterone replacement include, but are not limited to: Progestins are not the same as natural progesterone. Progestins may cancel the protective effect of estrogen, and promote constriction of the coronary arteries to a significant degree. Bioidentical progesterone, on the other hand, may protect the endometrium (uterine lining), preserve the beneficial effects of estrogen on the cardiovascular system and exert no negative effects on the blood vessels that supply your heart. Progestins may cause birth defects, damage to nerve cells, blood clots, and breast cancer.

Side effects of excess progesterone replacement may include, but are not limited to:

- Nipple or breast tenderness
- Drowsiness
- Foggy thinking
- Fatigue/low energy
- Fluid retention
- Slight dizziness
- Weight gain
- Anxiety
- Difficulty sleeping
- Depression
- Acne, rashes
- Hot flashes
- Night Sweats
- Appetite increase

Testosterone

Testosterone is a prescription hormone, given by injection, transdermal cream or patch. Risks of testosterone replacement include, but are not limited to: possible stimulation of benign and malignant prostate tumor. Testosterone replacement is contraindicated in patients with known prostate cancer.

Side effects of testosterone replacement may include, but are not limited to:

- An increase in the red blood cells, determined by periodic measuring of your blood. It is not a common occurrence and generally poses no health risk; it can be corrected by donating blood or with a therapeutic phlebotomy.
- Male pattern baldness
- Gynecomastia (breast enlargement) can prevent this with monitoring for conversion to estrogen and adding chrysin to testosterone along with weight loss and supplements
- Diminished sperm production and a reduction in the size of the testicles
- May reduce insulin requirements in insulin-dependent diabetics.
- Older male patients may be at a slightly increased risk for the development of prostate



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enlargement when replacing testosterone.

- The concurrent use of testosterone with corticosteroids may enhance edema (fluid retention) formation. Edema may be a complication with testosterone replacement in patients with pre-existing heart, kidney or liver disease. It is not known whether testosterone replacement therapy will increase the risk for prostate cancer. To date, no studies have shown an increased risk

The most common immediate side effects (occurring in approximately no more than 6% of users) include, but are not limited to:

- Acne
- Application site reaction
- Headache, hypertension (high blood pressure)
- Abnormal liver function tests
- Non-cancerous prostate disorder
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- Greasy hair and skin
- Strong body odor
- Hair loss
- Aggressiveness

Dehydroepiandrosterone - DHEA

DHEA is classified as a dietary supplement, given by mouth or by transdermal cream.

Risks of DHEA replacement include, but are not limited to: worsening of certain cancers and should be avoided in men with existing prostate cancer and in women with breast cancer. DHEA replacement is not generally recommended in adults under age 35.

Side effects of DHEA replacement are generally dose related and may include, but are not limited to:

- Acne or oily skin
- Hair growth on the face, arms or legs,
- Acne in women
- Prostate enlargement in men
- Male pattern hair loss
- Decreased HDL cholesterol
- Fatigue
- Mood changes
- Weight gain
- Insomnia.