

PROGESTERONE

Progesterone is the most confusing and complex of the female reproductive hormones.

Here are some facts about progesterone.

1. Progesterone is produced and released by the ovary with every menstrual cycle starting about 1 to 2 days after ovulation. It then lasts in the body about 12 days. When progesterone disappears, this is the signal to the body to begin menstruation.
2. If pregnancy occurs, then the progesterone that was produced after ovulation does not disappear. It continues to be released and this is one of the early signs of pregnancy. The progesterone level quickly increases contributing to early pregnancy symptoms such as bloating and nausea.
3. After menopause, the ovaries no longer produce eggs or hormones. This means there is no more ovulation, no more estrogen, and no more progesterone produced.
4. If a postmenopausal starts hormone therapy, we normally use a combination of estrogen and progesterone (or derivatives). The estrogen provides relief of the typical symptoms of menopause, such as hot flashes, night sweats, sleep disturbances, vaginal dryness and others. The progesterone is used to prevent uterine cancer, which is a risk when using estrogen for post-menopausal women. If the woman does not have a uterus, she does not need additional progesterone treatment.
5. Prevention of uterine cancer with progesterone is referred to as “endometrial protection”. A certain amount of progesterone is required to produce safe endometrial protection. Progesterone skin cream (see below) does NOT provide endometrial protection.
6. Bioidentical progesterone means using the identical natural progesterone molecule. Normally progesterone cannot be swallowed because it is digested by stomach enzymes. However, a prescription drug called Prometrium has a form of progesterone (called micronized) that protects it from being digested. This is the only FDA-approved form of progesterone that can be swallowed. Micronized progesterone is also available generically, and also from compounding pharmacies.
7. Bioidentical progesterone can result in some hormone side effects similar to PMS such as bloating, water retention, temporary weight gain, breast tenderness. These side effects are normally mild and improve over time. Progesterone can also cause some drowsiness, so we normally advise taking it at bedtime. This might be thought of as a good side effect because many menopausal women don't sleep well, and going on progesterone as part of their hormone therapy can help their sleep.

8. Progesterone skin cream can be purchased without a prescription. The reason for this is that there are almost no blood levels of progesterone detectable in patients who use topical progesterone skin cream. Therefore, this hormone is considered safe to apply to the skin. It is not regulated by the FDA as opposed to testosterone and estrogen, which are regulated by the FDA and only available by prescription.
9. Progesterone can also be administered vaginally and there are FDA-approved prescription vaginal progesterone products which are used either during pregnancy or during IVF (in-vitro fertilization) treatments. These prescription products contain natural bioidentical progesterone. They can be used after menopause, but normally those patients prefer oral progesterone rather than vaginal.
10. Compounded pharmacies can create oral progesterone lozenges, sometimes called troches (“tro-keys”). The idea is to suck on them and then progesterone will enter the bloodstream. Reportedly they work but they have a bitter taste and can take up to 30 minutes to dissolve fully. Even with added flavor, people find them to be unpleasant.
11. Progesterone in oil has been available for many years but this is an intramuscular (IM) injection and quite uncomfortable. IVF programs might use this because it achieves high blood levels.
12. There are many different synthetic progesterone-like hormones called progestins. For example, all birth control pills contain a form of estrogen and a form of progesterone (a progestin) and neither are bio-identical.
13. Progestins are also used for postmenopausal endometrial protection. One of the most commonly used medications for this is called medroxyprogesterone acetate. The trade name is Provera (sometimes MPA). Typically, 2.5 mg Provera daily can be used to offset 1 mg per day of oral estradiol therapy or 0.05 mg of transdermal estradiol. There are some oral hormone medications that contain a combination of estrogen and progesterone, but nearly all of these contain a progestin, not bioidentical progesterone (exception – see Bijuva).
14. Comment: Many people think that certain hormones are natural because they are extracted from wild Mexican yams. The true history is that in the 1930s, wild Mexican yams were found to produce a large amount of a particular steroid hormone. This hormone can be chemically converted (supposedly 20 separate chemical steps!) into bioidentical estrogen, bioidentical progesterone or bioidentical testosterone. All three of those hormones are structurally similar to each other. They started out “natural” but were chemically altered.

Therefore, there is no such thing as natural hormones that come from yams because they all must go through that chemical conversion process. Bioidentical hormones are still a valid concept because this means that the hormone being administered is identical to the hormone that occurs in the body. But there is nothing natural about hormone products that come from wild Mexican yams.

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