

Catherine P. Rollins

# Progesterone & Pregnancy

*A Guide to Using  
Bioidentical  
Progesterone to  
Facilitate Fertility  
and Support  
Pregnancy*



Natural-Progesterone-Advisory-Network.com

# **PROGESTERONE & PREGNANCY**

**A Guide to Using Bioidentical Progesterone  
to Facilitate Fertility and Support Pregnancy**

**Dedicated to my three 'progesterone' grandbabies  
- Marli, Hendrix & Owen -**

**by**

**Catherine P. Rollins**



A Making Plans Production

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## What is pregnancy?

We use the term 'pregnancy' to describe when a woman has a growing fetus inside of her uterus (womb). The process of growth and development within a woman's body of a new person.

A woman can expect her pregnancy to last about 40 weeks or just more than 9 months, from the start of the last menstrual period to childbirth.

Most pregnancies last from 37 to about 42 weeks. Health care professionals calculate the delivery date 40 weeks from the date of conception (the date the sperm and egg fused). According to the National Health Service, UK, only about 1 in every 20 births actually takes place on the due date. A baby who is born before 37 weeks after conception is considered pre-term (premature).



During each menstrual cycle, an oocyte (premature egg) develops in one of a woman's two ovaries. As it enlarges, it produces hormones that signal the uterus to build up its lining and prepare itself for implantation if conception does occur. During ovulation, the oocyte is released from the ovary and enters a narrow tube – called the fallopian or uterine tube – that is connected to the uterus. Conception occurs when a viable sperm meets with a viable oocyte in the middle third of the fallopian tube. At this point, the fertilized egg becomes a zygote and begins to divide right away. The zygote continues through the fallopian tube into the uterus. There it will implant into the thickened lining in the wall of the uterus and at this point pregnancy begins. This occurs between 6 and 12 days after ovulation.

When the zygote implants, it becomes known as an embryo. It also begins secreting a hormone called human chorionic gonadotropin (hCG). This is the hormone that is detected in pregnancy tests (both those that use blood and those that use urine).

## What are the signs and tests that will confirm I am pregnant?

### Home Pregnancy Test Kit

The best way to determine if you are pregnant is by purchasing a home pregnancy test kit. These kits are available over-the-counter and are considered to be highly accurate.

Home pregnancy tests determine pregnancy through the detection of the hormone human chorionic gonadotropin (hCG) in a woman's urine. Research in the 1970s found that high levels of the hCG in the urine were associated with pregnancy. This research led to the development of the home pregnancy test that is commercially available today.

Home tests are usually 97% accurate when all instructions are followed correctly and the results are read on time. Some kits come with two tests so that in case you have made a mistake, you may take the home pregnancy tests again.

Doctors recommend that you wait until you've missed a period to take a home pregnancy test. If you can not wait that long to find out and you know the day you may have conceived, then the earliest you can take a test would be 14 days from possible conception.

### Can progesterone supplementation cause a false pregnancy reading?

Progesterone supplementation *cannot* cause a false positive in home pregnancy tests. These tests only check hCG levels, not progesterone. They are completely different hormones. The only medications that can cause a false positive on a home pregnancy test are those that contain hCG itself.



## Pregnancy Blood (Serum) Test

Your doctor will want to order a pregnancy blood test (or a pregnancy serum test) that measures the exact amount of hCG in the bloodstream. Blood will be drawn from a vein on the forearm or your hand. A *quantitative* blood test measures the exact units of hCG in the blood. That means this test will detect even the most minimal level. There is another type of blood test sometimes called a *qualitative* hCG test. This is a test that simply gives a yes or no answer to whether you are pregnant.

Tests which can detect levels of hCG as low as 20-25 mIU/ml tests are ideal for early detection of pregnancy. That means you can begin testing accurately as early as eight days after conception.

So if you think you may be pregnant, or have a positive home pregnancy test, see your health care provider.

You may have to wait a few weeks until the doctor will see you. Nevertheless, you can still take steps to help ensure a healthy pregnancy even before you see the doctor such as taking a daily prenatal vitamin and avoiding alcohol and foods or medications that can pose a risk to the developing embryo.

## Top 10 Signs of Pregnancy

- A missed period
- A positive home pregnancy test
- Morning sickness
- Food cravings
- Darkening of your areolas (the skin around your nipples)
- Implantation bleeding or cramping
- Frequent urination
- Fatigue
- Tender, swollen breasts
- Altered sense of taste

Unfortunately, none of these symptoms is unique to pregnancy. However, if you experience several of them together, you may want to take a home pregnancy test. If your home pregnancy test is positive, make an appointment with your doctor right away to confirm the test results. The sooner you begin prenatal care, the more likely you are to have a healthy pregnancy.



## Pregnancy and progesterone

### Progesterone's role in pregnancy

Of all female hormones, progesterone is the one most essential for conception and to the survival of the fertilized egg and the fetus throughout gestation.

The levels of progesterone in a woman's body rise and fall dramatically with her monthly cycles. At ovulation, the production of progesterone rapidly rises from 2-3mg per day to an average of 22mg per day, peaking as high as 30mg per day a week or so after ovulation.

After ten or twelve days, if fertilisation does not occur, ovarian production of progesterone falls significantly. It is this sudden decline in progesterone levels (as well as estrogen levels) that triggers a period (menstruation), and another menstrual cycle will begin.

If pregnancy occurs, progesterone production increases and the shedding of the lining of the uterus is prevented, preserving the developing embryo. As pregnancy progresses, progesterone production is taken over by the placenta and its secretion increases gradually to levels of 300-400mg per day during the third trimester.



During pregnancy, rising progesterone levels prevent the premature shedding of the uterine lining (pro-gestation). If progesterone levels drop due to inadequate progesterone production, then a premature delivery could result, or bring about a miscarriage in the early trimesters.

Progesterone also influences the development of the breasts during pregnancy in preparation for producing milk after the birth. It has an impact on ligaments and muscles throughout the body as well, essentially to allow the suppleness and expansion necessary for giving birth. This also accounts for some of the problems which may be experienced during pregnancy - backache, constipation, and low-blood-pressure, for example.

Although the data are not entirely clear, it appears that progesterone may also have an effect on transport time of the ovum in the fallopian tube, and it may make the ovum more susceptible to sperm penetration.

## What does progesterone do?

- Helps to regulate the menstrual cycle
- Prepares the lining of the uterus for implantation
- Keeps the lining of the uterus thick which is necessary for a successful pregnancy
- Produces a rise in temperature after ovulation, which remains until menstruation occurs
- Creates a nutrient rich environment for the baby by increasing glycogen and arterial blood to the lining of the uterus
- Keeps the uterus from having contractions
- Causes the cervix to thicken and create a mucous plug which prevents bacteria from entering the uterus

## Preventing premature delivery & birth defects

According to a [study](#) in New England Journal of Medicine dated June 16, 2003, giving pregnant women the hormone progesterone can reduce their risk of premature delivery by one-third, offering the first clear-cut way to head off this increasingly common and dangerous problem. The progesterone proved so effective that the study was halted early because it would have been unethical to keep giving some women a placebo.

In 2007, [researchers](#) at the 27th Annual Society for Maternal-Fetal Medicine (SMFM) meeting announced that high-dose progesterone treatment helped at-risk pregnant women avoid premature delivery. A preterm birth can have serious consequences to the baby, including cerebral palsy, mental retardation, lung disease, blindness and hearing loss.

A [cohort study](#) published in June 2009 in which the researchers measured the levels of the hormones estriol (E3) and progesterone in the saliva of pregnant women known to be at risk of premature delivery was carried out by Dr Lachelin and colleagues from University College London and Kings College London, funded by Tommy's the Baby Charity and supported by an award from the National Institute for Health Research. It was published in the peer-reviewed, British Journal of Obstetrics and Gynaecology. According to the newspaper, high levels of progesterone help to stop the womb contracting before the full term of 40 weeks, whereas low levels put women at risk of delivering more than six weeks early. The researchers say that the [measurement of saliva progesterone](#) "may be of value in the prediction of early preterm labour" and in "determining which women might benefit from progesterone supplementation".

There has been, over the years, a good deal of commentary that suggests progesterone is, in some way or another, associated with fetal abnormalities when used in pregnancy. This question is examined in detail in the textbook, *The Medical & Surgical Practice of NaProTECHNOLOGY*. This includes the 25-year experience of the [Pope Paul VI Institute](#) and a report of the outcomes of 933 pregnant patients who received progesterone during the course of their pregnancy. This is the largest single study of its kind ever conducted. The incidence of fetal abnormalities was actually lower in that population than it was in the population that did not receive progesterone.

In his paper [Progesterone: Essential to Your Well-Being](#) Raymond F. Peat, PhD write, "The hormone progesterone participates in practically every physiological process, in both men and women. Its tremendous increase during pregnancy serves to stabilize the organisms, both mother and child, during that crucial time. At levels reached just before delivery, progesterone produces anesthesia and

contributes to tissue elasticity. The fetus requires large amounts of glucose, and progesterone makes it possible to be provided in abundance for ideal brain growth, by promoting the mother's ability to use fat for her own energy. It is this efficient use of fat which gives women greater long-range endurance than men. When progesterone is deficient, there tends to be hypoglycemia, often combined with obesity."

The most urgent need for progesterone therapy, says Dr Peat, is preventing a continuing epidemic of brain damage. Recent studies imply that about half the children identified as hyperactive have experienced prenatal stress. Beyond that, many studies have found that the use of natural progesterone increases a child's IQ, typically by around 35 points and produces personalities that are more "independent, individualistic, self-assured, self-sufficient and sensitive" (J.M. Reinish, *The Female Patient*, April, 1978, p.87).

You may be concerned about the safety of using progesterone supplementation in early pregnancy. There is no accurate figure, but well over a million children worldwide have been subjected to such therapy during their mother's pregnancies. There has never been any pattern of birth defects reported in patients so treated. However, there can be no guarantees that there will be no birth defects since 2% of all births are associated with some sort of birth defect (usually mild). But there is no reported increase in the rate of [birth defects](#) with progesterone therapy prescribed in early pregnancy.

Therefore, since natural progesterone has been found to reduce the incidence of birth defects and complications in pregnancy, it would seem reasonable to be sure that your own progesterone has returned to normal before getting pregnant. Then, once you have confirmed you are pregnant, consider adding supplemental progesterone (cream) to top up your own levels until at least mid-way through your pregnancy when during the second and third trimesters of pregnancy the placenta takes over the production of progesterone.

Make sure you select a progesterone cream that is all natural, and is free of harmful chemical additives or artificial preservatives.

## Low progesterone levels linked to ectopic pregnancy

Ectopic means "out of place." In an ectopic pregnancy, a fertilized egg has implanted outside the uterus. The egg settles in the fallopian tubes in more than 95% of ectopic pregnancies. This is why ectopic pregnancies are commonly called "tubal pregnancies." The egg can also implant in the ovary, abdomen, or the cervix, so you may see these referred to as cervical or abdominal pregnancies.

None of these areas has as much space or nurturing tissue as a uterus for a pregnancy to develop. As the fetus grows, it will eventually burst the organ that contains it. This can cause severe bleeding and endanger the mother's life. A classical ectopic pregnancy does not develop into a live birth.

An ectopic pregnancy is usually suggested by the typical triad of a positive pregnancy test, pain, and vaginal spotting.

According to a [study done by Dr. Buckley](#) and colleagues and published in 2000 (*Ann Emerg Med* 2000 Aug;36(2):95-100), they concluded that all patients with an ectopic pregnancy had a progesterone level below 22 ng/ml.

Of the patients with a progesterone level below 22 ng/ml, 10% had an ectopic pregnancy, but none of the patients with progesterone over 22 had an ectopic pregnancy.

Of the patients who did not have an ectopic pregnancy, 73% had a progesterone level below 22 ng/ml.



## What to do after falling pregnant

### Supporting your progesterone levels

If you have been using progesterone in order to get pregnant and you are successful, DO NOT suddenly withdraw progesterone cream. A sudden drop in progesterone levels may trigger a miscarriage.



Regular daily supplementation should be maintained and gradually increased up to 100mg through until 20 weeks gestation. At this stage the placenta is producing adequate levels of progesterone to maintain the pregnancy. The baby's placenta takes over the production of progesterone at the beginning of the second trimester, and this is when a miscarriage is likely to occur if this production is not adequate.

Women with a history of miscarriage or premature delivery choose, for their own peace of mind, to continue using progesterone through to the week prior to expected delivery. The placenta is producing such huge amounts of progesterone that any extra progesterone over and above will not harm mother or baby.

Women with a history of 'high risk' pregnancies are encouraged to continue progesterone supplementation up until delivery. However, should you decide to stop applying progesterone, make sure you wean off your dose ever so gradually.

Refer to sections 'When to apply cream' and 'How much cream to use' on page 10 of this ebook.



## Infertility and estrogen dominance

[Estrogen dominance](#) is a condition that can affect both female fertility as well as male fertility, thereby hindering pregnancy.

Estrogen dominance is a condition in which there is an excessive level of estrogen in the body compared to progesterone levels.

In addition to infertility, high estrogen levels have been linked to a variety of other conditions and illnesses. However, natural estrogen dominance treatments are paving the way for individuals seeking to improve their chances of trying to conceive.

Too much estrogen in a woman's body without the balancing, protective properties of progesterone may be mirrored in the growing incidences of various cancers, PMS, endometriosis, uterine fibroids, infertility weight gain, increased blood clotting, thyroid dysfunction and early menopause.

If a pregnant woman produces too much estrogen, her embryo can be suffocated (hypoxia). [Dr. Lita Lee](#) cautions that during the ninth week of pregnancy, a woman can lose her baby if she is a "high estrogen producer and/or [is] consuming commercial meat, poultry and dairy products containing synthetic estrogen (DES)."

In [Peat's](#) book, Nutrition For Women, he states (page 44), "Even before estrogen was chemically identified, it was known to promote breast cancer; in the 1930's. It was shown to cause tissue aging, fibroid tumors, various cancers, premenstrual syndrome and menstrual abnormalities, and to induce abortion."

The *causes* of estrogen dominance are stress, poor diet, weight, hormone replacement therapy and exposure to environmental sources of estrogen, called [xenoestrogens](#).

Synthetic chemicals can derail the normal expression of sexual characteristics of animals, in some cases masculinising females and feminising males. Some animal studies indicate that exposure to hormonally active chemicals pre-natal or in adulthood increases vulnerability to hormone-responsive cancers, such as malignancies in the breast, prostate, ovary, and uterus.

It is argued that if a female embryo's ovarian follicles are compromised through exposure to these chemicals, this damage will not be apparent until after puberty.

Pregnant women should do whatever they can to protect themselves and their unborn child from exposure to xenoestrogens during gestation. Children, too, appear highly susceptible as their immunity system is immature. Women are advised to avoid buying plastic toys for their children, especially if they are at that age where they are prone to put everything into their mouth. Where possible, don't heat baby's plastic bottles in the microwave. Go back to using glass feeding bottles, and sterilise with boiling water rather than toxic chemicals.



Our men-folk are equally at risk. Estrogen gradually rises as men age, while saliva levels of progesterone and testosterone gradually fall. Thus, with aging, estrogen dominance occurs. A clear sign of estrogen dominance in aging men is their tendency to develop breasts. This indicates these men are low in progesterone and testosterone.

For extensive information and references on xenohormones, you are urged to read Dr. Theo Colborn's book, '[Our Stolen Future](#)'. It is a classic on the subject. This book is a must-read for anyone concerned about the survival of the human race, and the terrible price we are paying by pouring toxic chemicals into our environment without thought for the consequences.

## Reducing your estrogen load

There are many *natural treatments* to minimize estrogen dominance. Dietary changes can reduce estrogen levels in the body. Reducing fat consumption and increasing fiber consumption, as well as starting a plant-based diet (featuring soy and cruciferous vegetables like broccoli, cabbage and kale) can lower excessive estrogen levels. Limiting the consumption of caffeine is also beneficial. Similarly, regular exercise can help maintain a healthy weight, reducing the risk of estrogen dominance.

Detoxification is another effective form of estrogen dominance treatment. Minimizing exposure to pesticides, pollutants and plastics reduces estrogen levels. Some ways in which to do this include using organic soaps and toothpastes, natural-based perfumes and avoiding the use of plastics. Properly washing food while preparing meals also helps to eliminate pesticides.

### Here are a few keys to remember about estrogen dominance:

- Fat stores estrogen. The more weight you gain, the more estrogen you will retain.
- Stored fat can convert into estrogen, creating a vicious cycle (estrogen→fat→estrogen→fat).
- Stress produces cortisol which boosts estrogen levels.
- A toxic liver, from excess alcohol or pollution, will not filter estrogen out of our bodies.
- Many of the foods we eat are fed estrogens to make them grow and produce more food. Eating meat and dairy products will increase your estrogen levels.
- Plastic containers, pesticides and cleaning chemicals produce xenoestrogens, chemicals that mimic estrogen in the body.
- Skipping periods, whether by choice through the use of birth control pills or by nature, will prevent the release of progesterone which keeps estrogen levels in balance.

Excretion of estrogen is accomplished by the liver. And the liver breaks estrogens into two main forms: the “good” form is called 2-hydroxyestrogen, and the “bad” form is called 16a-hydroxyestrogen.

Since 16-hydroxy is an unregulated form of estrogen prone to behave like a “super-estrogen”, higher levels create a particularly unhealthy form of estrogen dominance. 16-hydroxy estrogens can result in mutations, abnormal growth (as in cervical dysplasia), and an increased risk of future breast cancer.

Evidence suggests supplementing our diets with extracts of cruciferous vegetables allow for metabolism and clearance of estrogens down safer pathways that will help prevent symptoms and potential damage to DNA of cells. However, to notice any beneficial shifts in estrogen metabolism, you would have to eat at least two pounds per day of raw or lightly cooked cruciferous vegetables to derive the same benefit as specially formulated DIM.

**Diindolylmethane**, better known as [DIM](#), is a phytonutrient akin to the indole-3-carbinol (I3C) found in cruciferous vegetables, and has unique hormonal benefits. DIM naturally supports balanced estrogen levels.

Many of the benefits traditionally ascribed to estrogen (protection from heart disease, healthy skin, bones, and brain) may actually reside with its beneficial metabolites, the 2-hydroxy estrogens. And that taking DIM in an absorbable formulation actually encourages healthy estrogen metabolism.

Many pathology collection centres now offer [2 & 16 Hydroxy Estrogen Metabolites \(Urine\) hormone testing](#) to assist in determining and maintaining a healthy 2/16 ratio.

A low ratio (reduced 2-hydroxy metabolite production), indicates a state of estrogen excess which may be a contributing factor to estrogen-dependant cancers, such as those of the breast, head/neck and the prostate. A high ratio indicates an estrogen deficient state which may indicate an increased risk of osteoporosis.

- Recommended dosage of DIM is 200-300mg once daily.

The removal of excess estrogen can be increased by a natural substance called [Calcium D-Glucarate](#), because it inhibits beta-glucuronidase activity in the body. This means that estrogen bound for excretion stays bound, and the total estrogen load on the body is reduced. In clinical trials, tissues that are sensitive to excess hormones - such as breast, liver, and lung - have been shown to respond favorably to Calcium D-Glucarate. In addition to estrogen and estrogenic compounds, Calcium D-Glucarate helps promote excretion of other hormone metabolites as well as cellular toxins and steroids.

Calcium D-Glucarate is made naturally in small quantities in the body; it is also found in a variety of fruits and vegetables: oranges, broccoli, carrots, spinach, and apples. Taking probiotic supplements can dramatically reduce the number of beta-glucuronidase-producing bacteria in the gut. A diet that reduces red meat to less than 3 ounces a day and emphasizes plenty of vegetables and fruits, whole grains, and fermented foods containing live organisms also promotes a healthy population of friendly bacteria and a significant reduction in E. Coli populations.

Oral administration of large doses of Calcium D-Glucarate have been shown to lower serum estrogen levels in rats by 23 percent. Because many breast cancers are estrogen-dependent, Calcium D-Glucarate's ability to affect estrogen and other hormone levels has led to Phase I clinical trials at several major cancer centers in the United States. Results of these studies are pending.

Published human studies on Calcium D-Glucarate and breast cancer are few but, due to the encouraging results of the animal studies, the National Cancer Institute has initiated a Phase I trial in patients at high risk for breast cancer at Memorial Sloan Kettering Cancer Center. This trial is examining the use of Calcium D-Glucarate as an alternative to tamoxifen's blocking of estrogen receptors. Preliminary results are quite encouraging and due to Calcium D-Glucarate's excellent safety profile, it may be a more effective option than tamoxifen, which has numerous side effects. Other human trials are being conducted at M.D. Anderson Cancer Center in Houston, Texas and AMC Cancer Research Center in Denver, Colorado.

No adverse effects have been observed after prolonged feeding to rats or mice at concentrations of 70, 140, or even 350 mmol/kg. Preliminary results of clinical trials in humans have shown Calcium D-Glucarate is without adverse effects.

Calcium D-Glucarate is widely available in health food stores and over the internet.

- Daily intake of 400 to 600 mg of Calcium D-Glucarate split between two doses, morning & night. A single low dose can last for hours. Higher amounts (1,000 to 2,000 mg per day) are typically recommended for individuals with existing cancer. Until human trials have been completed the optimal dosage remains elusive.

A detailed list of **estrogen dominance symptoms** can be found on our website:

<http://www.natural-progesterone-advisory-network.com/symptoms-of-estrogen-dominance-2/>



## Balancing estrogen with progesterone

Estrogen is the hormone that stimulates cell proliferation, or the growing phase. In other words, estrogen causes cells to divide and multiply. Progesterone, on the other hand, is the hormone that stops growth and stimulates ripening. It induces cell maturation and programmed cell death (called [apoptosis](#)).

In short, progesterone is our body's natural anti-estrogen.

Programmed cell death is a normal cellular event in many tissues that maintains a balance between newer replacement cells and aged or worn cells. In contrast, cancer cells seek to be immortal and often dodge apoptosis by mutating or deregulating the genes that participate in programmed cell death.



Although cells in different parts of the body may look and work differently, most repair and reproduce themselves in the same way. Normally, this division of cells takes place in an orderly and controlled manner. If, for some reason, the process gets out of control, the cells will continue to divide, developing into a lump which is called a tumour. Tumours can be either benign or malignant. Doctors can tell whether a tumour is benign or malignant by examining a small sample of cells under a microscope. This is called a biopsy.

We now know that *progesterone deficiency* is linked to an increased risk of cancer. Uterine cancer, for example, is known to be caused by unopposed estrogen. Women who have an intact uterus and take estrogen replacement therapy must also be given some form of progesterone to oppose estrogen and reduce this risk. This is generally given in the form of synthetic progestin which, incidentally, is not the same molecular structure as bioidentical progesterone, but is designed to block estrogen effects.

[One study](#) explored the mechanism by which progesterone inhibits breast cancer cell proliferation (growth). In progesterone receptor positive T47-D breast cancer cells, the mechanism of apoptosis appeared to be through the regulation of the genes p53 and bcl-2 by progesterone. These genes control the apoptotic process. It was demonstrated that at progesterone levels that approximate the third trimester of pregnancy, there was a strong antiproliferative effect in at least 2 breast cancer cell lines.

Whilst not a cure for cancer, progesterone can dramatically decrease cell multiplication rates, providing women with a degree of protection against estrogen-driven cancers. Optimal progesterone levels can, therefore, confer protection against some forms of cancer.



## Restoring hormonal function and increasing fertility

### Vitex - a timeless herbal remedy for women

Dietary modifications that include nutritional & herbal supplements known to improve our body's natural production of hormones would be an ideal starting point to correcting hormone imbalance and enhancing fertility.

Vitex used in combination with other herbs, dietary changes, and nutritional supplements ought to be a young woman's first line of defence against infertility, PCOS, PMS, irregular periods, acne, etc. And only when this approach fails to render results should you seriously consider progesterone supplementation.

Vitex Agnus Castus, also called Chaste Tree or simply Vitex, is a timeless herbal remedy for women of any age. Vitex is the small pepper-like fruits of a Mediterranean shrub, and can be used as a powder, powdered extract, tea, or especially as a tincture, for many ailments resulting from hormonal imbalances.

Hippocrates – the father of medicine – first mentioned Vitex in 450bc. Since then, traditional herbalists have recommended the herb for ailments including fevers and headaches, to dispel wind and to promote urination. Most commonly, vitex was used in the treatment of 'female problems' and the herb's popularity as a remedy of this kind has continued to grow with time.

Vitex is one of the most important herbs for regulating female hormones. The benefits of Vitex stem from its actions upon the pituitary gland - specifically on the production of a hormone called luteinizing hormone (LH).

By increasing progesterogenic activity, Vitex can help to balance progesterone and estrogen production by the ovaries throughout the menstrual cycle. This herb helps to regulate irregular periods, tending to shorten a long cycle and lengthen a short one.

Working closely with a competent naturopath, herbs such as Vitex can often bring a woman's hormones back into balance, in some cases increasing her fertility, relieving insufficiency of the corpus luteum (luteal phase defect) without the need to supplement progesterone.



Vitex has been found to help normalize ovulation, improve a short luteal phase and reduce Polycystic Ovary Syndrome (PCOS), all known fertility inhibitors.

Every woman is unique and so is her physiology. So the amount and form of Vitex you need won't be the same as for someone else. Seek guidance from a licensed naturopathic physician, who would have extensive knowledge of herbs and botanical medicines. Vitex is very safe and can be taken daily for up to 18 continuous months, unless pregnancy occurs. It is usually taken in the morning as a single daily dose.

**This herb is not recommended if you are pregnant or nursing.**

Whole herb Vitex extracts and capsules are the most widely used and the most studied.

And, it is not to be taken with other hormonal medications such as oral contraceptives, synthetic HRT, or estrogen. If you are using progesterone cream, you might need to adjust your dose as the action of vitex takes effect.

It is important to note that vitex is not a fast acting medication and needs to be taken consistently for some time. The average length of treatment is six months.

Different forms and concentrations make general dosage recommendations.

<http://www.natural-progesterone-advisory-network.com/is-there-any-adverse-effects-to-using-vitex-or-chaste-berry-instead-of-progesterone-cream/>

## Maca - balances hormones in both women & men

The maca root has been well known for its healing properties for thousands of years. Scientific research has only uncovered the special action of this root in the last fifteen years.



Maca is a vegetable root or tuber, related to the potato family. For centuries, the maca root has grown wild in the Peruvian Andes just below the glacial icecap, between 3800 (12500 feet) and 4400 meters (14450 feet) above the sea level. The only area where this particular species of maca is found is a region of extreme weather conditions such as freezing, high winds, and intensive sunlight.

No other food plant exists in the world which will grow at so high an altitude and survive.

The rich soil located at these high plateaus of Peru where it is very cold and oxygen poor may account for the high levels of trace minerals found in maca root. Some Peruvian Indians of today still grow it in the same traditional way without pesticides or chemicals.

The soil in which maca is grown contains huge amounts of minerals which makes the maca plant high in nutritional values, essential amino acids and important fatty acids. Colour-wise it looks like a potato, but is shaped like a big radish. Maca has a sweet taste. In Peru, maca is consumed in different ways: raw, baked or dried. Peruvians make cookies, tarts, chips and beverages with maca. In Europe and North America, we mainly know maca in its dried form, capsulated or gelatinized. The maca root can be dried and powdered, after which it can be stored for several years without much deterioration.

Scientist Gustavo Gonzales, who led what the doctors say is the world's first study into maca's effect on humans sexual function and pregnancy, told a news conference: the three month trial involving 12 volunteer men pointed to an 180-200 percent lift in sperm count and semen production and a great increase in libido and sexual performance

Peruvian medical doctors say that maca root works in a fundamentally different way than hormone replacement therapy (HRT), promoting optimal functioning of the hypothalamus and the pituitary, thereby improving the functioning of all the endocrine glands.

They isolated four alkaloids from the maca root and carried out animal studies with male and female rats given either powdered maca root or the alkaloids. Females receiving either root powder or alkaloids

showed multiple egg follicle maturation, while in males, significantly higher sperm production and motility rates were noted than in control groups.

They established that it was the alkaloids in the maca root - not its plant hormones - that produced fertility effects on the ovaries and testes of the rats. "These effects are measurable within 72 hours of dosing the animals," they said. They deduced that the alkaloids were acting on the hypothalamus - pituitary axis, which explains why both male and female rats were affected in a gender-appropriate manner. This also explains why the effects in humans are not limited to ovaries and testes, but also act on the adrenals, giving a feeling of greater energy and vitality, and on the pancreas and thyroid as well.

According to doctors in Peru and the US, maca may be of benefit for:

- It balances the hormones in both men and women
- Improves PMS
- Supports menopausal health
- Enhances libido in both men and women
- Increases energy
- Improves male potency
- Increases fertility
- Stimulates the metabolism
- Regulates hormonal secretion
- Improves memory
- Combats amenia
- Fights depression ... and much more

Maca gives the body the chance to readjust, regulate and heal, affecting us at a cellular level. Because it is a natural product not designed to stimulate, it works harmoniously with the body's own self regulating system and can take time to have a beneficial effect.

Dr Jorge Aguila Calderon, Dean of the Faculty of Human Medicine at the National University of Federico Villareal in Lima has helped patients overcome male impotence, male sterility and female sterility by employing maca therapy.

Maca is a food supplement that works as an adaptogen. Maca helps to restore the balance in the human body. An adaptogen improves the adaptability of the body, taking into account the specific needs of a body according to the age or sex of the person taking maca.

Only the real organic maca that grows at more than 3000 metres in the Peruvian Andes has all the positive effects that are described in scientific research.

Many people wonder if this natural medication for pregnancy can really provide the benefits of restoring hormonal functions and increasing fertility. What this product does is simple: maca *nourishes* hormonal glands making them work and function better.

Seek guidance from a licensed naturopathic physician who would have extensive knowledge of herbs and botanical medicines.

<http://www.natural-progesterone-advisory-network.com/can-maca-root-be-taken-with-progesterone/>

## Tribulus - improves reproductive function

Tribulus Terrestris commonly known as "Puncture Vine" or Caltrop fruit is a herb that has been used for centuries in Europe for hormone insufficiency in men and women. It has been used in the treatment of liver, kidney and urinary tract disease, and all types of skin disorders by Chinese herbalists.

Tribulus is the closest and strongest natural herbal alternative to synthetic anabolic hormones. This non-hormonal dietary supplement has been used by athletic, sporting and weightlifting teams around the world in the past ten years with apparent great effectiveness.

When scientists begun studying the remarkable curative power of Tribulus, they discovered that it significantly improves the body's production of several hormones: Testosterone; Luteinizing Hormone (LH); Follicle Stimulating Hormone (FSH); and Estradiol.

Clinical studies on Tribulus, conducted at the Chemical Pharmaceutical Institute in Sofia, Bulgaria, showed improved reproductive functions, including improved sperm production and testosterone levels in men.

Tribulus has been found to stimulate the production of the hormones Testosterone, Progesterone and Estrogen only to the normal levels of healthy men and women.

Among women, Tribulus increased the concentration of hormones including estradiol, with testosterone being very slightly influenced, thereby improving reproductive function, libido and ovulation.

Clinically documented benefits include:

- Growth hormone regulation via HPA axis
- Intensification of protein synthesis (anabolic)
- Male and female infertility
- Menopause
- Andropause
- Impotence
- Erectile dysfunction
- Libido enhancing

The liver is not often considered to play a role in hormone balance but its role is critical in the correct functioning of the endocrine system. The liver has an important role in the production of hormones, and when stressed by our modern lifestyle, hormone production is one function that deteriorates. Tribulus, in stimulating the liver, assists in the breakdown of fats into essential fatty acids and fat soluble vitamins. Essential fatty acids are the building blocks of hormones, and fat soluble vitamins are used by the body in the manufacture of hormone-like compounds. It is through this action that Tribulus has such great benefit for the endocrine (or hormonal) system of both men and women.

Tribulus is a non-hormonal dietary supplement because the herb does not contain any of the three major hormonal compounds: estrogen, progesterone or testosterone. It does have a phyto-hormone action, improving the hormone status, without having a direct hormonal influence.

Clinical studies on Tribulus demonstrated increased concentrations of estradiol in women there by improving ovulation, reproductive function, and libido. Studies show that while hormone levels are increased, they are never over stimulated (because the Tribulus does not contain any hormonal compounds). This feature of Tribulus makes it especially valuable because it promotes balance in the body. In this way Tribulus is unlike anabolic steroids which firstly stimulate, then over-stimulate, hormones.

The great benefit of assisting a return to balance for women with PMS or menopausal symptoms is that these symptoms are indicative of imbalance in the system. When the hormonal system is nourished to balance, symptoms of imbalance disappear. For men clinical studies demonstrate improved testosterone levels, increased sperm production and improved reproductive functions. In men, as with women, the hormonal system is nourished to a point of balance, and is not over stimulated.

No adverse effects to the central nervous or cardiovascular systems were noted in any of the clinical studies; no toxicity and no deviations in blood occurred. No known negative effects presently exist when Tribulus is used as a dietary supplement.

While there is no definitive guide on how much Tribulus terrestris should be taken, there are different guidelines suggested by experts in the medical field. Most suggest 250-750mg per day taken evenly throughout the day.

This peripatetic weed grows in many different countries but results in different phytochemical profiles, i.e. different chemotypes. The Bulgarian grown chemotype has been extensively researched and found to be superior. Bulgarian Tribulus Terrestris is the only Tribulus Terrestris that is standardised to contain Protodioscin.

Two recent studies have highlighted that most Tribulus products on the market are quite different from the Bulgarian extract. The first study, conducted in the US, found that the level of protodioscin varied substantially with the plant part (leaf, stem or fruit) and origin (Bulgaria, India or China) of the Tribulus. Only leaf from Bulgaria was high in protodioscin. Analysis of products selected from the US market found deficiencies of protodioscin in the majority.



## Progesterone creams – are they linked to cancer?

### Doctors continued to be confused

Some ill informed medical professionals wrongly assert that natural progesterone creams are a “cancer risk” based on *evidence* pertaining to artificial progesterone analogues - referred to as progestins or progestogens - typically found in the Contraceptive Pill and Hormone Replacement Therapy (HRT).

Hormones fit onto their receptors just like a “lock and key”, so any slight alteration of their chemical structure creates a “monster hormone”. Drug companies however *intentionally* create these synthetically altered hormones that are NOT found in the human body or anywhere else in nature for the sole purpose of exclusive ownership (patent). Pharmaceutical companies can patent synthetic HRT but, because the molecular structure of bioidentical hormones is exactly the same as what is produced in the body, bioidentical hormones can not be patented.

A lot of money is spent to manipulate physicians - through sponsoring speakers, organizing symposia, and even conducting studies published as scholarly articles in prestigious journals. All these efforts are designed to give the impression that “evidence-based medicine” means the use of patented exogenous compounds.

Because the sale of non-bioidentical estrogen and progesterone makes so much money for drug companies, might we suspect that those companies find their profits very threatened by the use of safer or bioidentical hormones?

As has frequently been the case when natural products threaten pharmaceutical sales, there appears to be a major public relations misinformation campaign. Historically, unfortunately, when there is big money to be made, there has been no problem getting big-name doctors to tout the health benefits of infant formula over breast milk and even of smoking!

[Dr. Randolph](#), celebrated physician champion of natural medicine and women’s health, writes, “Big pharmaceutical companies would not market, or fund research studies investigating, bioidentical hormones. Why should they? There is no way for them to make a buck on products that can’t be patented.”

He goes on to state, “Bioidentical progesterone is not only safe to use, it can help decrease a woman’s risk for developing cancer. I currently lecture to physicians around the country sharing clinical studies and medical data that validates the fact that bioidentical progesterone has many cancer-protective benefits. The bio-chemistry of why this is so is actually quite simple: progesterone neutralizes the cancer-promoting properties associated with too much estrogen in the body. While estrogen promotes cell proliferation, or cell growth, progesterone decreases cell growth. Too much cell growth is a precursor for cancer. In my gynecology practice, I have prescribed bioidentical progesterone for over a decade and I have never had a patient on my bioidentical hormone regimen develop cancer. I even have patients who are breast cancer survivors who I prescribe bioidentical progesterone because my experience, and the research shows, that the progesterone can play a key role in preventing a recurrence of the original cancer.”

Why has it taken conventional medicine so long to catch up to the obvious? Drug company money and politics, what else? [Virginia Hopkins](#), co-author and ghost writer of more than 30 books on alternative health and nutrition, takes us to the heart of the matter, “Conventional medicine, which trumpets that it is evidence-based, allowed millions of women to be given HRT without evidence that it was safe or effective. The practice of medicine in America has been hijacked by the big drug companies, who control everything from medical education, to continuing education credits, to which studies are published in our largest medical journals. Let’s get real here: drug companies are in business to make money, not to heal people. It’s the job of medicine to heal, and to the extent that American medicine allows itself to be controlled by drug companies it is not about healing, and is needlessly harming millions



of people every year.”

The difference between progesterone and a progestin is NOT their source - whether they come from soy or yam or are developed in a test tube. The distinction lies in their basic molecular arrangement. If the chemical structure of the product identically matches that of a woman’s naturally occurring hormone, it is considered to be natural. Simply, a natural hormone is intended to mimic the human female hormone. The natural form of progesterone has several benefits. The bioidentical version helps to balance estrogen as well as other sex hormones; it utilizes more efficiently and leaves the body quickly, as do our own hormones.

Women need to educate their doctors about bioidentical hormones:

- Bioidentical progesterone does not cause the side effects listed for progestins like medroxyprogesterone acetate (Provera).
- Bioidentical progesterone is routinely used in fertility clinics during assisted reproductive technology (ART) cycles and into early pregnancy; hundreds of thousands of women around the globe have undergone IVF treatment *without* risk to mother or child.
- Bioidentical progesterone has a significant safety margin because the body see as ‘natural’ that which has the same molecular configuration.
- Comprehensive research IS available - print out a copy of the *Medical References* included at the end of this publication, and hand these to your doctor next time your visit.

## Outcomes from the Women's Health Initiative

The Women’s Health Initiative (WHI) was initiated by the [National Institutes of Health](#) (NIH) in 1991. The objective of this women's health research initiative was to conduct medical research into some of the major health problems of older women. In particular, randomized controlled trials were designed and funded that address cardiovascular disease, cancer, and osteoporosis.

The WHI consisted of a set of clinical trials and an observational study, which together involved 161,808 generally healthy postmenopausal women. One of the clinical trials examined the health effects of estrogen plus progestin therapy (EPT). The study was stopped early in 2002 because of an increased cancer risk found in those taking EPT.

The WHI revealed that women taking combined estrogen and progestin hormone therapy were at increased risk of breast cancer and stroke. The WHI released a report showing a significant increase in the risk of breast cancer, coronary heart disease, thrombosis and stroke among women using hormone replacement therapy (HRT). This US report, along with subsequent prescribing advice from drug regulatory authorities, lead to a rapid and substantial drop in the use of HRT worldwide.

Coincidentally, a rapid fall in the use of HRT was seen as largely responsible for a reduction in invasive breast cancer among Australian women aged 50 years or older, according to a research paper published in the Medical Journal of Australia. HRT prescriptions dropped by 40 per cent between 2001 and 2003. After 2001, incidence rates of breast cancer in this age group fell, corresponding to the drop in use of HRT. By contrast, there was no change in breast cancer incidence among women younger than 50 who rarely use HRT.

Unfortunately, progesterone has been implicated in the development of breast cancer because of the results of large trials in which an increase in the incidence of breast cancer was seen when synthetic progestins were used in combination with estrogens for postmenopausal hormone therapy. These studies, such as the WHI, DID NOT use bioidentical progesterone.

Since the study’s release, millions of women have switched to the safe and more effective bioidentical hormones, currently prescribed by thousands of physicians, available as FDA approved products at local drug stores and compounding pharmacies.

Many do not think women were served, nor science, as the way in which the WHI data was “interpreted” did not include other key findings that refute their interpretations, nor make a crucial distinction between the hormones that were studied and those that were not. In the interpretation of WHI date, they chose to generalize the study to all hormones. We know now this is NOT THE TRUTH, and that

bioidentical estrogens and progesterone have some quite different effects from the non-bioidentical hormones used in the WHI study.

## Asking the hard questions

In his published article, '[The Safety of Bio-Identical Hormones](#)' Dr Jeffrey Dach writes, "Let's ask the question do bioidentical hormones cause breast cancer? The [French Cohort study looked](#) at this question and the answer is: they found no increased breast cancer in the group using bioidentical hormones. Do bioidentical hormones cause death? The answer to this question is the opposite. All studies done with bioidentical hormones showed improved longevity and less mortality.

"Long before the output of the WHI validated the health risks associated with synthetic hormone replacement I was concerned," says Dr. Randolph. "I drew on my background as a compounding pharmacist to research safe and effective alternatives. For more than a decade, I have prescribed bioidentical hormone therapies (BHRT) for literally tens of thousands of patients. Not only do my patients report that they 'feel like themselves again', they also remain side effect free. My clinical experience validates the medical research substantiating the safety and efficacy of BHRT."

Experts agree our cumulative exposure to estrogen during our lifetime is the single most important risk factor for breast cancer. Medical professionals working in the bioidentical HRT arena concur progesterone is carcino-protective and helps counteract the carcinogenic effects of estrogen.

The Johns Hopkins University conducted a [20 year study](#), published in 1983 in the American Journal of Epidemiology (*Cowan et al*) showing that women who had good progesterone levels had less than a fifth of the amount of breast cancer, and less than a tenth of all the cancers that occurred in women who were low in progesterone. These outcomes suggest that having a normal level of progesterone protected women from nine-tenths of all cancers that might otherwise have occurred.

[Dr. David Zava](#), Ph.D., hormone expert and co-Author, '[What Your Doctor May Not Tell You About Breast Cancer](#)' writes, "Most oncologists and general practitioners that work with bioidentical progesterone find that primary breast cancer, and breast cancer recurrences are less frequent in women using topical progesterone, but it does happen. My experience, in reviewing pathology reports from women who have developed breast cancer while using topical progesterone, is that they usually have tumors that do not contain progesterone receptors, or the receptors are very low."

Medical writer [Ralph W. Moss](#), PhD has this to say about the rapid fall in the use of HRT, "I believe the medical profession has much soul-searching to do. The most effective measure taken in decades to reduce breast cancer incidence will have turned out not to be a new wonder drug, but the informed refusal of thousands of women like my wife, who rightly turned their backs on a medication that was pushed on them by doctors whose prescribing decisions relied more heavily on drug company promotional materials than on science."

For further reading on this subject, please refer to the Medical References at the end of this publication, and also follow the links below:

<http://www.natural-progesterone-advisory-network.com/cancer-scare-tactics-wheres-the-evidence/>  
<http://www.natural-progesterone-advisory-network.com/natural-progesterone-cancer-in-a-cream/>  
<http://www.natural-progesterone-advisory-network.com/state-of-california-proposition-65/>  
<http://www.natural-progesterone-advisory-network.com/category/progesterone-fundamentals/hormone-replacement-therapy/>



## How to use progesterone to facilitate fertility & support pregnancy

### When to apply cream



### Step 1 - Turn off ovulation:

- Apply progesterone cream twice a day, morning & night, from **Day 7 to Day 26**.
- Stop cream a few days before your period is due.

We know that a surge of progesterone in the body, prior to ovulation, can 'trick' the biofeedback mechanism between the hypothalamus, the pituitary gland, and the ovaries that ovulation has already occurred, thus inhibiting ovulation. This pseudo-pregnancy state allows your ovaries to 'rest', and can enhance fertility.

Continue with this approach for 3-4 months.

Progress to Step 2.

### Step 2 - Support ovulation:

- Apply progesterone cream twice a day, morning & night, from **Day 14 to Day 26**.
- Stop cream **ONLY** after you have confirmed you are not pregnant.

After resting your ovaries for a number of months, it's time to facilitate ovulation. Your aim is to 'top up' your body's progesterone levels taking care **NOT** to interfere with your body's biofeedback mechanism. You'd time your application of cream to coincide with ovulation which typically occurs mid-way through your cycle, around 2 weeks before your period is due (using [saliva fertility detector](#)).

Progress to Step 3 (once pregnancy has been confirmed by your doctor).

### Step 3 - Support pregnancy:

- Apply progesterone cream twice a day, morning & night, **EVERYDAY**.
- DO NOT break from cream.

In the early stages of your pregnancy, you need to be vigilant about when and how much cream you apply. Some women find it helpful to construct a chart and proceed to tick off each cream application. Some women use cleaning their teeth as a reminder when to apply cream. Whatever works for you is how you should proceed. As long as you apply cream morning & night, you needn't worry about the exact time.

Just be mindful that any sudden drop in progesterone (i.e. you miss a day) could potentially trigger a 'miscarriage'. And this is because the half-life of progesterone in the body is measured in hours, usually 8-12 hour coverage.

Continue applying cream until you are mid-way through your pregnancy. At this point, placenta secretion of progesterone has increased considerably and you can *safely* withdraw from cream ... if you wish. This is true for women who have, in the past, experienced luteal phase deficiency (result of inadequate production of progesterone by the ovaries - ovaries continue to make progesterone during the first 8-10 weeks of pregnancy). At 18 weeks gestation your body via the placenta would be producing adequate progesterone of its own, plus what ever progesterone you apply to your skin.

Alternatively, you can stay on cream until the end of your pregnancy. It's a personal choice. Some women stay on cream and don't come off until their baby is born. Some women find the whole regime of applying cream daily and the cost factor reasons for withdrawing cream around the 5<sup>th</sup> month. Good outcomes have resulted in either option.

Note: Women with a history of 'high risk' pregnancies are encouraged to continue progesterone supplementation up until delivery. The same is true if you begin to experience difficulties at *any* stage during your pregnancy (i.e. preeclampsia). Get back on the cream and don't come off.

### Step 4 - Withdrawing from cream:

- Apply progesterone cream twice a day - but gradually REDUCE your dose.

Weaning yourself off cream should take you a full 2-4 weeks, steadily reducing your dose until you have withdrawn cream altogether.

## How much cream to use

### Step 1 - Turn off ovulation:

- Daily dosage would be 60mg up to 100mg per day.
- Commencing with a dose of approximately 60mg per day, you would gradually increase to a dose of up to 100mg towards the end of your cycle.
- Split dose - apply half in the morning and half at night.

### Step 2 - Support ovulation:

- Daily dosage would be 20mg up to 40mg per day.
- Commencing with a dose of approximately 20mg per day, you would gradually increase to a dose of up to 40mg towards the end of your cycle.
- Split dose - apply half in the morning and half at night.

### Step 3 - Support pregnancy:

- Daily dosage would be from 60mg up to 100mg per day.
- A sustained dose that stays within a range of 60mg - 100mg per day.
- Split dose - apply half in the morning and half at night.

Note: During the third trimester of pregnancy, the placenta produces about 300 mg of progesterone daily, so we know that a one-time overdose of the cream is virtually impossible.

## How to apply cream

Transdermal (through the skin) method ✓

For optimal results, transdermal application (via the skin) is the recommended delivery method.

As a rule, you would split your dose, applying ½ cream dosage in the morning and the other ½ at night. You would apply cream to the skin for 8-12 hour sustained delivery.

Applying progesterone cream twice daily ensures optimal levels are maintained.

Sublingual (under the tongue) method

Important: DO NOT USE progesterone *cream* under the tongue because of toxic ingredients

Sublingual drops, which are in a base of vitamin E oil, may be more effective, because they are absorbed rapidly and cause a quick spike in progesterone levels.

The progesterone must be in a vegetable oil or vitamin E base.

If you suck on a lozenge or put drops under your tongue (sublingual), you'll get a steep, sudden rise in progesterone levels, followed by a steep drop. Be aware, the rapid rise and fall in progesterone can leave you without progesterone for a good part of the day unless you dose every few hours.

#### Intra-vaginal application method

**Important:** Make sure your cream is indicated for VAGINAL USE.

Assess your sensitivity and response to intra-vaginal progesterone application. Adjust dosage accordingly.

Be aware that the vaginal route can have an almost immediate impact on your body through direct absorption (spike), so go easy on how much you apply. We suggest women experiment with this approach using cream before actually relying on it during your pregnancy.



## Iodine deficiency during pregnancy has serious ramifications

Every cell in the body contains and utilizes iodine. Essential for life, iodine has many effects on the body: hormone production, nerve and muscle function, metabolism, tissue growth and repair, and cell respiration.

It has been estimated that approximately one third of the world's population is iodine deficient, and studies in the United States have suggested that the number may be even higher, with some estimates as high as 95%. Iodine deficiencies can occur not only because of inadequate intake, but also due to the damaging toxins we are exposed to every day. Given the various functions of iodine in the body, it is easy to see how even a slight deficiency can cause widespread problems.

For the past three to four decades iodine deficiency has not been of significant concern in Australia (except in Tasmania); it was considered largely a problem of developing countries. That was what we thought until [Gunton and colleagues](#) give us a wake-up call with their article in the Medical Journal of Australia.

### New official iodine advice for pregnancy

Women planning to start a family are now advised to take daily supplement of the mineral iodine, to address a growing community-wide deficiency which has serious ramifications.

In February 2010 the National Health and Medical Research Council (NHMRC) issued its [updated advice](#), and it drew strong support from world-renowned endocrinologist and expert in the field, Professor Creswell Eastman.

"Iodine deficiency has re-emerged in Australia in the last 10 years and it is now a significant public health problem," Prof Eastman, who is Professor of Medicine at the University of Sydney, told AAP. We know that 50 per cent of Australian women are iodine deficient so they are putting their pregnancy and foetus at great risk."

The consequences of iodine deficiency during pregnancy are severe. In utero iodine deficiency has been associated with a host of ailments in children including attention deficit/hyperactivity disorder (ADHD), depression, cretinism, dwarfism and mental retardation. Iodine deficiency has also been associated with poor height and bone maturation of children. Furthermore, there is a decreased neonatal survival rate in iodine deficient areas. In fact, neonatal mortality has been shown to decline over 50% when iodine deficiency is rectified.

Women should therefore take iodine supplements from the point of planning pregnancy through the full duration of pregnancy and breastfeeding. If pregnancy is not planned, women should start taking an iodine supplement as soon as possible after finding out that they are pregnant.



## Preventable intellectual impairment

Iodine deficiency during pregnancy is the commonest worldwide cause of preventable intellectual impairment. In areas where iodine deficiency is severe, IQ scores in children are decreased by ten to 15 points, psychomotor deficits are more common, hearing may be impaired, and there is a markedly increased prevalence of attention deficit hyperactivity disorder (ADHD). In general, these adverse effects on the central nervous system are irreversible and are compounded by continuing iodine deficiency during infancy.

The World Health Organisation (WHO) recognises iodine deficiency as one of the major public health problems in the world and gives it high priority for elimination in affected countries. No country can afford to stand by and ignore the harmful consequences of iodine deficiency on the developing brains of future generations.

The WHO committee does not recommend an intake above 500 µg per day as there are no demonstrable benefits to mother and child above 250 µg per day and there is little data on safety at intakes of more than 1000 µg per day.

## Severe iodine deficiency

Severe iodine deficiency in a mother's diet during pregnancy increases the risk of miscarriage and stillbirth. If the baby survives to term, it is likely to suffer irreversible mental retardation. This is known as cretinism and is a major cause of preventable intellectual impairment in low iodine areas. Mildly iodine-deficient children have learning disabilities and poor motivation. The developing fetus, newborn and young children are most susceptible to the effects of an iodine-deficient diet, and treatment before conception or in early pregnancy is essential to prevent irreversible damage.

Breast milk contains more iodine than formula milk and premature babies who are formula-fed may be at risk of deficiency.

## How do we ingest iodine?

Iodine, unlike vitamin and minerals, is not present in adequate amounts in most foods. Specific plants absorb iodine when it is present in the soil. Iodine is found in many ocean foods, such as fish (cod, sea bass, haddock, and perch) and sea vegetables (seaweed).

Iodine can also be found in many other food products either by adding iodine to animal feed or by adding iodine to the food source. Iodine has also been added to salt products (i.e., iodized salt).

Sea vegetation concentrates iodine from the ocean water. Some species contain relatively high levels (kelp, Kombu). In Japan seaweed, a concentrated source of iodine has a legendary history for protecting women's health. The iodine in sea vegetation is all iodide, so it may not work as well as molecular iodine for some organs in the body.

Kelp is a natural source of iodine. Different kinds of kelp have been eaten for nutritional value for over a thousand years. The Chinese used kelp and other types of seaweed as medicine as far back as 3,000 B.C. The Greeks used kelp to feed their cattle around the first century B.C. Kelp has been a staple food of Icelanders for centuries, and ancient Hawaiian nobles grew gardens of edible seaweed. Kelp was also used in Europe and Great Britain as fertilizer to nourish soil and assist plant growth. The largest consumer of kelp, however, has been Japan. The Japanese have incorporated kelp and seaweed into their diets for 1,500 years.

Pregnant women or women intending to become pregnant within the next six months should take care to avoid seafood that may contain large amounts of mercury. Mercury can be passed through the placenta and may affect the brain development of your baby. For this reason, you need to ensure your kelp supplement does not contain contaminants absorbed from the sea.

It is vital, therefore, to ensure that women of childbearing age ingest sufficient amounts of iodine. How much iodine is this? No one truly knows. Proper testing and [monitoring of iodine levels](#) can help answer the question.

## Supplementation guidelines

The recommended daily intake (RDI) of iodine is 100 µg daily for the general population and **150-200 µg daily** for women who are pregnant or breastfeeding (iodine demand increases during pregnancy because of increased renal clearance and fetal iodine transfer). However the WHO recommends women who are pregnant or breastfeeding take a daily oral iodine supplement so that the total **daily intake is 250µg**.

Because different tissues in our body concentrate different forms of iodine, using a supplement that contains both iodide and iodine is preferable to using a supplement that contains only one form.

The breasts concentrate [iodine](#) as does the prostate gland.

The thyroid gland and the skin primarily concentrate [iodide](#).

Other tissues including the kidneys, spleen, liver, blood, salivary glands, and intestines can concentrate [either form](#).

The body needs adequate amounts of iodine to properly utilize **thyroid hormone**. Those individuals already on thyroid medication may need to lower their dose of thyroid medication upon starting iodine therapy.

Iodine is produced by subjection of a 2 % tincture of iodine to a high electro magnetic field for a given time in order to produce the nascent iodine state. This atomic state and large electromagnetic charge is held by the atom until diluted in water and consumed. Once diluted and inside the body this atom is readily absorbed and utilized by the body.

### KELP

Many different retailers offer kelp in various forms. Once you get the thumbs up from your doctor, you can choose the form that will work best for you to get the kelp benefits you're looking for. Excessive consumption of kelp can provide the body with too much iodine and interfere with thyroid function. You should use it only as directed.

### NASCENT IODINE

Nascedyne is packaged in 1 oz glass, dark amber bottles. This is usually a 4-6 week supply. Each drop provides 200 mcg of nascent iodine which the RDA for an adult. Nascent iodine is in a base of organic grain alcohol. The atomic iodine is perhaps the least toxic and least irritating of all the iodine formulas available.

**Dosage:** Each drop provides 200 mcg (0.2 mg) of nascent iodine = RDI for an adult.

**Where to purchase:** [USA](#) / [Australia](#) / [New Zealand](#)

## Iodine Loading Test

The [iodine loading test](#) was designed to measure the body's saturation with iodine. In the iodine loading test a person takes 50 mg of iodine as Iodoral. A 24-hour urinary sample is taken to see how much is retained by the body.

An iodine/iodide loading test provides useful information on the iodine status of the body. If there is severe iodine deficiency, the body would be expected to hold on to more of the ingested iodine. When there is iodine sufficiency present, 90% of the ingested iodine (50mg) will be excreted.

The three basic steps of the test are as follows:

Collection of an initial urine sample before the ingestion of iodine in order to establish a baseline level.

The ingestion of iodine/iodide tablets (generally 50mg)

Collection of subsequent urine voids for the next 24 hours. The iodine in both samples is then measured and a percentage reflecting the “spill” of iodine is calculated.

**Caution:** While iodine toxicity is rare, excessive intake may interfere with normal thyroid functions. If you have a thyroid disorder (especially an overactive thyroid) then check with your doctor before taking iodine or sea kelp supplements or products.



## Vitamin D deficiency during pregnancy endangers mother & unborn child

Vitamin D is one of the oldest hormones, having been produced by life forms for over 750 million years. Phytoplankton, zooplankton, and most plants and animals that are exposed to sunlight have the capacity to make vitamin D. In humans, vitamin D is critically important for the development, growth, and maintenance of a healthy body, from birth until death.

Humans evolved in a sunlight-filled environment near the equator, and still have countless biological processes exquisitely calibrated to the rich vitamin D levels we would have if we were still basking under the hot sun year-round. But by migrating to higher latitudes, where strong sunlight is not present during the fall and winter, most humans upset their vitamin D metabolism, creating susceptibilities to chronic ailments that research is now linking to insufficiencies.

Scientists speculate that when low vitamin D status weakens epithelial cells, the barrier function is compromised, exposing tissues to attack from disease-causing agents - in diabetes, for example, by weakening islet cells; in multiple sclerosis, by weakening glial cells in the nervous system; and in tuberculosis, by reducing the ability of the lung lining to repulse bacteria.

Some medical researchers have even begun to suspect a link between vitamin D insufficiency and schizophrenia, which occurs 10 per cent more often among those born in winter and early spring, when vitamin D from sunshine is less available.

Researchers in Australia are testing this hypothesis by studying the brains of rats born to pregnant mothers deprived of vitamin D - with alarming results. The vitamin-D-deprived rodent brains had more cell proliferation, enlarged ventricles and less of a protein necessary for nerve growth.

In the last 3 years, an increasing amount of [research](#) suggests that some of the damage done by Vitamin D deficiency is done in-utero, while the fetus is developing. Much of that damage may be permanent, that is, it can not be fully reversed by taking Vitamin D after birth.

This research indicates Vitamin D deficiency during pregnancy endangers the mother's life and health, and is the origin for a host of future perils for the child, especially for the child's brain and immune system. Some of the damage done by maternal Vitamin D deficiency may not show up for 30 years.

### Effects of Vitamin D deficiency on the mother:

- Caesarean section
- Preeclampsia
- Gestational Diabetes
- Bacterial Vaginitis



## Effects of Vitamin D deficiency on the child:

- Asthma
- Autism
- Birth Weight
- Brain Tumors
- Cavities
- Craniotables
- Diabetes
- Epilepsy
- Heart Failure
- Mental Retardation
- Newborn Lower Respiratory Tract Infection
- Schizophrenia
- Seizures
- Weak bones

Scientific evidence currently exists that some of these illnesses may be caused by vitamin D deficiency. Furthermore evidence exists that some of these illnesses may be helped by vitamin D repletion. The current evidence varies with each illness. For example, strong evidence exists that vitamin D reduces osteoporotic fractures, but only two small studies exist to show vitamin D helps depression.

Given the growing evidence that adequate maternal vitamin D status is essential during pregnancy, not only for maternal well-being but also for fetal development, health care professionals who provide obstetric care should consider assessing maternal vitamin D status by [measuring the 25-OH-D concentrations of pregnant women](#). On an individual basis, a mother should be supplemented with adequate amounts of vitamin D3 to ensure that her 25-OH-D levels are in a sufficient range (>32 ng/mL or >50 nmol/L).

Prenatal vitamins appeared to have *little effect* on 25(OH)D levels as you might expect since prenatal vitamins only contain 400 IU of Vitamin D. The knowledge that prenatal vitamins containing 400 IU of vitamin D3 have little effect on circulating maternal 25-OH-D concentrations, especially during the winter months, should be imparted to all health care professionals.

## Latest Research

### Study Shows 4,000 IU a Day of Vitamin D May Reduce Preterm Birth and Other Risks

[New research](#) suggests women who take high doses of vitamin D during pregnancy have a greatly reduced risk of complications, including gestational diabetes, preterm birth and infection.

"Any doctor who hasn't followed the literature may be wary of telling their patients to take 4,000 IU/day of vitamin D," says neonatologist and study co-researcher Carol L. Wagner, MD, of the Medical University of South Carolina. "But there is no evidence that vitamin D supplementation is toxic, even at levels above 10,000 IU."

Compared to women who took 400 IU of vitamin D daily, those who took 4,000 IU were half as likely to develop gestational diabetes, pregnancy-related high blood pressure, or preeclampsia, Wagner says. They were also less likely to give birth prematurely.

Avoid Cod Liver Oil as a Vitamin D supplement

<http://www.vitamincouncil.org/newsletter/2008-december.shtml>

## Lactation

Due to widespread vitamin D deficiency, most human breast milk is deficient in vitamin D. Studies show high-dose vitamin D (4,000 IU/day) is effective and safe in increasing 25(OH)D levels in breastfeeding

mothers to optimal levels, without evidence of toxicity or any vitamin D-related adverse events to mother or infant.

The [Vitamin D Council](#) recommends that breastfeeding infants under one year of age take 1,000 IU/day unless the mother takes 5,000 IU/day, in which case the infants will get all they need from breast milk.

Formula fed infants need an extra 600 IU/day.

Drops are an easy way to keep your infant vitamin D sufficient.

## Supplementation guidelines

Take an average of 5,000 IU a day, year-round, if you have some sun exposure. If you have little, or no, sun exposure you will need to take at least 5,000 IU per day. How much more depends on your latitude of residence, skin pigmentation, and body weight. Generally speaking, the further you live away from the equator, the darker your skin, and/or the more you weigh, then the more you will have to take to maintain healthy blood levels.

Vitamin D is safe when used in physiological doses (those used by Nature). Physiological doses are doses of at least 5,000 IU per day, from all sources (sun, diet, and supplements).

**Dosage:** Healthy children need about 1,000 IU per 25 pounds of body weight and their 25(OH)D levels should be >50 ng/mL year-round.

Pregnant women need a minimum of 5,000 IU per day and even that dose will not achieve 25(OH)D levels of >50 ng/mL in all women.

<b>Where to purchase:</b>	<a href="#">USA</a> / <a href="#">Australia</a> / <a href="#">New Zealand</a>	Drops	(400 IU / 2,000 IU)
	<a href="#">USA</a> / <a href="#">Australia</a> / <a href="#">New Zealand</a>	Tab/Gelcaps	(1,000 IU / 2,000 IU)
	<a href="#">USA</a> / <a href="#">Australia</a> / <a href="#">New Zealand</a>	Tab	(5,000 IU)

## Measuring your levels of Vitamin D

Measuring your 25-OH-D concentrations is now very easy with introduction of a Blood Spot [in-home test kit](#).

A few drops of blood from a quick and nearly painless nick of the finger are placed on a filter paper to dry. This can be performed easily either at a health practitioner's office or the convenience of home. The dried blood spot sample is then sent to the lab for analysis. There is no more wasted time and resources going to a lab for a painful blood draw.

In-home test kits are shipped internationally (kits + postage = US \$90). Estimated delivery time 5-10 working days.

## Toxicity

To drink 8 glasses of water a day is not harmful. However, if you were to drink 40 glasses of water a day you'd damage your body. 40 glasses of water divided by 8 glasses gives you a *therapeutic index* of  $\frac{5}{40/8}$ . Healthy humans utilize about 4,000 units of vitamin D a day (from all sources). However, 40,000 units a day, over several years, will hurt them. 40,000 units of Vitamin D divided by 4,000 gives vitamin D a therapeutic index of  $\frac{10}{40,000/4,000}$ . That's twice as safe as water.

What's being suggested here is that vitamin D, when used in the doses nature uses, is quite safe.

## Resources

- Full Article: [Pregnancy & Gestational Vitamin D Deficiency](#)
- Public Service Announcement: [Pregnancy and Vitamin D](#)
- Vitamin D Research: [Vitamin D Council](#)

(There is an old Italian saying "Where the sun does not go, the doctor does.")

## Guide to Safe Drinking Water

- Bottled Water - Drink filtered TAP water instead
- Tap Water - Learn what's in it
- Filtered Tap Water - Drink it, cook with it
- Filters - Change them
- On the Go - Carry water in safe containers
- While Pregnant - Stay hydrated with safe water
- Infants - Use Safe water for formula
- Breathe Easy - Use a whole house water filter



Learn how to reduce your chemical exposures while pregnant. Download Environmental Working Group's *Guide to Safe Drinking Water*: [http://www.ewg.org/files/EWG\\_safedrinkingwater.pdf](http://www.ewg.org/files/EWG_safedrinkingwater.pdf)

## Omega 3 requirements

Omega 3 is an essential fatty acid, which means it cannot be manufactured by our own body and therefore must be obtained through our diet alone.

Omega-3 fatty acids are required nutrients for prenatal development.

While a baby will derive his or her nutrition from the mother's body, a pregnant woman should consume enough Omega-3 fatty acids to satisfy both her and her baby's requirements. The most critical Omega-3 fatty acid is DHA (Docosahexaenoic acid). Found throughout the body, it is a key structural fat and is integral in the development of the retina, the brain, and the heart. In fact, approximately 97% of all omega-3 fatty acids found in the brain is DHA as well as 93% of the omega-3 fatty acids in the eyes is DHA.

DHA is a long-chain polyunsaturated fatty acid that is a major structural component in the gray matter of the brain and the retina of the eye. It is an omega-3 fatty acid which occurs naturally in breast milk and is essential for normal brain and eye development. It is therefore important throughout pregnancy and lactation for the health of mother and her fetus/infant.

Developing infants cannot efficiently produce their own DHA and must obtain this vital nutrient through the placenta during pregnancy and from breast milk after birth. DHA is important prenatally and postnatally for proper neurological, visual and nervous system development.

In preterm infants, DHA levels have been shown to correlate positively with newborn head circumference, weight and length.

While DHA specifically is a primary structural fat in the brain and eyes, EPA is not. In fact, DHA accounts for up to 97% of all omega-3 fatty acids in the brain and up to 93% of all omega-3 fatty acids in the retina. It is the only omega-3 fatty acid that is directly correlated with infant brain and eye development.

Physicians suggest that women who are pregnant or who intend to become pregnant should avoid swordfish, shark, mackerel, and tilefish, and should limit their intake of white albacore tuna to less than 6oz per week due to the potential for contaminants (mercury, PCBs, etc., which move up the food chain



and concentrate in the large predatory fish).

## Supplementation guidelines

A number of studies, which have been affirmed by studies reviewed in a workshop by the National Institute of Health and the International Society for the Study of Fatty Acids (NIH/ISSFAL), have shown that the optimal intake of DHA during pregnancy or breastfeeding is 300mg per day.

Ideally, you would want to eat a range of fresh fish as part of a balanced diet. However, if you're not a big fish eater, then consider taking a quality supplement. There are two types of fish oil supplement - those made from the *liver* of the fish and those made from the *body* of the fish. Supplements made from the liver of the fish, such as cod liver oil, contain the retinol form of vitamin A and need to be avoided altogether.

According to Dr Barbara Levine, associate professor of nutrition in medicine at Weill Medical College of Cornell University, "the purest source of DHA is not the fish itself, but rather what fish consume: the ocean's vegetarian plant algae. Taking DHA supplements produced from marine algae is therefore a safe way for pregnant women to boost their fatty acid stores."

DHA supplements derived from *algae* are now available. They provide a safer option for pregnant and breastfeeding mothers who want the benefits of DHA for their babies without having to worry about methylmercury toxicity or high EPA content.

Martek Biosciences from the US is the only company in the world that has managed to produce DHA (*life'sDHA*) from patented strains of algae grown in large-scale fermentation tanks located away from the sea using filtered water - under tightly controlled GMP manufacturing conditions.

<http://www.lifesdha.com/Finding-lifesDHA-/Partner-Products.aspx>  
<http://www.lifesdha.com/dha-calculator.aspx>



## Do you need a pre-natal multivitamin?

A healthy, balanced diet during pregnancy and breastfeeding is vital for both mother and baby. Pregnant and breastfeeding mothers should consume prenatal supplements with higher amounts of **calcium**, **iron**, and **folic acid** to support the increased demands of this crucial developmental stage of her baby.

Prenatal vitamins make up for any nutritional deficiencies in the mother's diet.

The right prenatal vitamin will significantly improve your health while you are pregnant as well as ensure the proper development of your baby.

Generally, a prenatal supplement will contain vitamins, minerals and other important ingredients proven in clinical studies to provide nutritional **support** for **mother and baby** during pregnancy and breastfeeding.

Given that not all over-the-counter prenatal vitamins contain the ingredient amounts they claimed, be cautious and only purchase prenatal vitamins from trusted companies.



## Other health tips to consider

- If possible, eliminate sugar and refined carbohydrates from your diet (white rice, white bread, pasta, cookies, chips, ice-cream).



- Replace fizzy sugar drinks with at least 8 glasses of filtered water a day, avoiding storage in plastic containers.
- Drink 8-10 glasses of filtered water per day to prevent toxic build up, flush out body wastes and toxins, and maintain fluid balance preventing dehydration.
- Obesity can contribute significantly to hormone imbalance. Therefore, if you're overweight you'll want to exercise. Start walking 10,000 steps (using a pedometer) of a morning or evening.
- Avoid trans-fatty acids (hydrogenated oils).
- Get plenty of fiber in your diet (fruit, vegetables).
- Include a little protein with every meal or snack (cheese, nuts, seeds, tofu, meat, fish, eggs).
- Eat fats in moderation, but don't avoid them (they help slow digestion).
- Recognise the importance of [stress](#) management in maintaining hormone balance. That long term stress and constant output of cortisol causes nasty consequences to the body.
- Nicotine, alcohol, and drugs are generally toxic to the body, and you need to be diligent to eliminate exposure where you can.
- Replenishing your probiotic bacteria on a daily basis is essential because many different things including antibiotics, stress, pollution, chemicals, dental work, prescribed medication, contraceptive pills, and old age (to name just a few) destroy them.
- [Green Superfoods](#) surpass synthetic multi-vitamin formulas because they contain compounds that cannot be recreated in a laboratory. They are rich in functional nutrients and phytonutrients that are in a natural form and easily absorbed by the body.



## What to do if you don't get results?

Keep a journal that tells the date, time, where you are in your menstrual cycle, was there evidence of ovulation, foods eaten in the last 24 hours, emotional stressors, exercise undertaken, amount of sleep, drugs taken, etc.

### Estrogen dominance 'wake-up'

Introduce progesterone back into the body (following an extended period of progesterone deficiency) and there is potential for estrogen receptor sites to 'wake up' (be stimulated), enhancing the action of estrogen. This is a good indication progesterone is actually working - although it can, in the early stages, exacerbate estrogen dominance symptoms. Symptoms might include breast tenderness and swelling, fluid retention or slight vaginal bleeding, dizziness, nausea, fatigue, headaches and light headedness, etc.

Rest assured, with dosage adjustment, potentially debilitating symptoms tend to settle within 1-2 menstrual cycles.

These side effects may occur in cases of long-term progesterone use at high doses when not indicated, where breaks from cream have not been adhered to, or, perhaps when inferior creams have been used.

### The stress factor



There are many aspects that can cause hormone imbalance. Chronic stress, for example, leads to chronic levels of cortisol in the bloodstream, which creates a need for more hormones (e.g., thyroid, insulin, progesterone, testosterone) in order to do the same job.

Stress increases production of the hormone cortisol which BLOCKS (or competes for) progesterone receptors. That means progesterone won't work. Additional progesterone is required to overcome this blockage, and stress management is important.

Therefore, normal physiological doses of progesterone can maintain hormonal health beautifully until the body has to call on its reserves to perform other roles in the body (handle stress or create cortisol to fight infections), in which case your dose needs to *be increased* for a short period of time to accommodate the body's need for higher levels of progesterone.

Notwithstanding conditions currently under the watchful eye of a qualified healthcare professional, we pose the question, "What has been going on in your life?" And usually women can recall, perhaps one to two months prior, an incidence of unmanaged stress, a shock, an infection, illness, the introduction of some other form of medication, or a lifestyle change such as a new job or new environment, travelling, changing climate.

The solution is often as simple as doubling the dose for that month and then reducing gradually back to the physiological dose. It does not take long to quickly get progesterone reserves up if the body is normally in balance.

If there are stress factors that are ongoing, it may pay to slightly increase dosage (by 1-2%) over that period of time as a buffer. And to also look at improved nutritional and vitamin supplementation that will support the body, perhaps a super multi vitamin B complex and a multi vitamin complex, and other calmatve herbs. Perhaps more sleep or a holiday. Charting can actually help you identify where the triggers are and what your body is actually telling you. Is the physical born of the metaphysical? Certainly a missed period, sore boobs, or whatever are all early warning signs we need to heed.

## Get individualized support

Any intolerance or ineffectiveness of progesterone supplementation needs to be addressed. Examples would be dysfunctional liver, hypothyroidism or thyroid hormone resistance, exhausted adrenals, presence of other diseases and certain medications.

Where possible, work in consultation with a trusted medical practitioner who understands bioidentical hormone replacement therapy treatment protocols, and can help you achieve optimal results.

## Saliva ovulation fertility detector

When a woman is about to ovulate, her saliva begins to form a distinct crystal, fern-like pattern due to an increase in hormone levels. This "ferning" pattern begins to appear around 3 days prior to ovulation, allowing you to predict peak fertility.

Whether you are trying to conceive, avoid conception, or just determine each month when or whether you are ovulating, an ovulation microscope is an important and useful tool for fertility awareness.

No more expensive, messy urine ovulation tests and no more guesswork - *even for women with irregular cycles*. Saliva fertility detectors are 100% safe, natural, and accurate aid to conception. They are 98% accurate in aiding the prediction of fertile periods.

<http://www.natural-progesterone-advisory-network.com/fertility-saliva-ovulation-tester/>





## Charting your fertility

Fertility awareness can greatly improve your ability to achieve pregnancy. Studies have shown that a majority of couples can conceive 4-6 times faster simply by charting female fertility. By identifying ovulation based upon recorded symptoms, you can understand your fertility.

The Hormonal Forecaster is the most powerful and versatile **free fertility software** currently on the market. Women have been using it successfully for nearly a decade and it has earned numerous awards to prove it.

The Hormonal Forecaster can derive fertility from one or more of several possible symptoms. These include simple cycle dates, daily body temperature, mucus observations, saliva patterns, and/or cervical state. It can be used as a basic fertility calendar or as a full fertility **charting package** to meet your evolving needs.

Hormonal Forecaster software compliments proven techniques of **natural family planning** with patent pending technology to calculate ovulation and fertility.

Fertility calculations are based upon techniques such as the symptothermal (sympto-thermal) method, the billings ovulation method, and more. You can record various desired symptoms such as menstruation, basal body temperature, cervical mucus observations, cervix position, and other custom indicators using a convenient calendar interface. This software calculator will use this data to generate ovulation charts and predict ovulation. You can interpret your ovulation charts yourself or have the program do it for you with its fertility meter. The software aims to interpret fertility in an educational context so that users can also learn how ovulation charts are interpreted. At the same time, the Hormonal Forecaster can be completely autonomous so that users not interested in the details need not get involved.

In addition to fertility, the Hormonal Forecaster also allows you to track personal moods, behaviours, or actions. You can generate statistics and chart up to twenty events such as what days you're prone to have headaches, be full of energy, experience menstrual cramps, or anything else you are interested in tracking. A personal six day forecast warns you of highly probable events while other graphs allow you to see how certain events are related to the days of the week, your menstrual cycle, and/or the lunar cycle. It can track everything from fatigue to sleeplessness to sexual desire. Many users find the statistical features to encourage them to stay up to date on their ovulation charting by making it more fun to use.

The best thing about the Hormonal Forecaster is how much power it gives you. Whether you are using its natural family planning fertility features as an ovulation calculator or its statistical features to track behaviours, virtually all program components are customizable to meet your specific needs. The Hormonal Forecaster has been widely used all over the world since the year 2000 and has been continually improved to more intimately meet women's fertility needs.

The Hormonal Forecaster is a family of software programs that specializes in fertility management and analysis. It was originally introduced in 2000 as a desktop program and has since grown to include simplified versions that target several different **platforms**.

You can download it and get started right now!

[MyFertilityCharts.com](http://MyFertilityCharts.com) has a **free basic plan** that provides you all the tools you need to practice natural family planning methods. They also offer a premium version that costs \$5 per month and it gives you many extra features over the basic plan.



*"I've been using the program for over a year and still make regular use of it. It helped me conceive my daughter and is a wonderful tool I'd highly recommend." -- Chloe (Australia)*

*"The program is easy to use and I actually enjoy using it, which means that I keep up with my day-to-day tracking... and this is key to figuring out when you're going to ovulate!" -- Ginger (North Carolina, USA)*



## Using progesterone in conjunction with other medical treatments

### Will progesterone interfere with my blood pressure meds?

Progesterone can be used with your antihypertensive drugs but must be done with strict supervision of your doctor and regular check ups and regular blood pressure testing. Again, progesterone helps to eliminate the fluid retention aspect of the body because it is actually negating the estrogenic effects of sodium retention. Too much estrogen will cause fluid to be retained in the body. With the adjunct of progesterone, it reduces the amount of estrogen and the effects of retention, thereby often reducing the blood pressure in the body (progesterone also exerts an anti-spasmodic influence of blood vessels).

We emphasize that blood pressure changes may be due to physiological effects or other reasons and not to self medicate because they have high blood pressure. Reports have indicated that the reduction of antihypertensive drugs have been necessary over a period of time under the doctor's supervision purely because their blood pressure has been restored to normal.

Addition to hypertension: There is a potential interaction with progesterone and the group of medications known as beta blockers. This interaction may cause an increase in the resistance to blood flow in the hands and feet. The result may be an increase in the side effects of the beta blocker, especially the cold hands and feet. We stress that there have NOT been reports of this effect as yet, but the potential is there.

### Can you take progesterone while on anti-depressant drugs?

Yes you can. We again emphasize that anyone on any form of medication and using progesterone should be under the supervision of their doctor. Many women have found after seven months on progesterone they feel the inclination to start weaning off their antidepressants over a period of a few months, under the supervision of their doctor, and have had excellent results in maintaining a state of anti-depression.

They also have found that once coming off their anti-depressant drugs, often their libido and sex drive have also improved because a good many antidepressants have also suppressed libido and/or an ability to be sexually aroused.

Some anti-depressants may impair the functioning of the limbic brain including the hypothalamus which may affect the menstrual cycle.

### Can you take progesterone while on thyroid medication?

If you have been diagnosed with a thyroid problem, and you are on thyroid medication, and now want to incorporate natural progesterone into your regime, there's no reason why you can't providing you do so under the strict supervision of your treating physician.



Progesterone may cause a potentiation of thyroxine's effects leading to hyperthyroidism. Normal T3 and T4 levels with elevated TSH suggest impaired thyroid hormone activity rather than insufficiency. Periodical TSH testing should be adopted on initiation or progesterone treatment in these patients.

Please do not stop your thyroid medication because you have read that progesterone helps thyroid function. Your thyroid dosage, however, may require regular adjustment as progesterone exerts an influence upon the thyroid gland. Correcting estrogen dominance may not correct your thyroid function.

The thyroid gland function can be improved with trace minerals such as selenium, iodine, zinc and manganese.

If you are unsure whether your thyroid is functioning optimally that can be characterised by an inability to lose weight, puffy and swollen body appearance, lethargy, muscle weakness, dry skin, hair loss and constipation, we suggest BEFORE resorting to progesterone to fix these problems you might be well advised to ask your doctor to order the appropriate tests. This includes blood profile to measure the levels of both thyroid hormones T4 and T3, and also TSH (Thyroid Stimulating Hormone). A shortage of T4 would be administered in the form of thyroxine tablets. In the USA, thyroid replacement therapy is available in cream form by way of natural thyroid hormone replacement using bio-identical hormones.



## Will progesterone supplementation raise other hormones in the body?

Progesterone does NOT cause an increase in the levels of other steroid hormones.

The body does use endogenous (made in the body) progesterone to create other hormones, but this does not occur with exogenous progesterone made outside the body is applied as a cream. This is probably because progesterone cream is carried directly through the fat layer in your skin and into the bloodstream, while the conversion of progesterone made in the body into other hormones takes place directly in the ovaries and adrenal glands.

This has been extensively tested by Dr David Zava of ZRT Labs using saliva hormone level tests.

However, the use of progesterone replacement therapy in someone who is deficient will keep estrogen receptors working efficiently, and it will improve thyroid function.



## Testing your hormone levels at home

### Hormones in blood

Blood Spot is the future of blood testing and is a convenient form of health and wellness testing. The development and application of blood spot testing allows monitoring of hormone levels, cardiometabolic markers and Vitamin D.

The convenient collection of blood from a tiny nick of the finger, allows for flexibility of testing at the right time of day, month or following hormone therapy.

Blood Spot testing provides results on par with those from serum tests but without the cost and inconvenience of conventional blood draws, making it beneficial for both patient and practitioner.

Collection of the blood spots is a relatively simple and nearly painless procedure that can be done at home or by the health care practitioner. A simple nick of the finger followed by placing blood drops on a filter card is all that is needed.



The kit contains easy step-by-step instructions, skin cleansing wipes, two lancets, a filter paper on which the blood drops are collected, and a band-aid. The dry blood spot sample requires no special handling and is returned, together with a requisition form completed by the patient indicating any current hormone therapy and symptoms, to the laboratory for analysis in a pre-paid return package. Blood spot samples are collected in the morning before eating or drinking.

Hormones and other analytes stable in dried blood spot at room temperature for weeks, allowing for greater latitude in collection and shipping.

All test kits include results!

#### Published articles & links:

<http://www.zrtlab.com/about-zrt/publications.html>

<http://www.virginiahopkinstestkits.com/hormonebloodspot.html>

## Hormones in saliva

Saliva testing is a convenient, inexpensive, and above all, accurate means of testing steroid hormones. Scientific studies have shown a strong correlation between steroid hormone levels in saliva and the amount of hormone in the blood that is active or “bioavailable.” It is this fraction of total hormone that is free to enter the target tissues in the brain, uterus, skin, and breasts.

Saliva testing can be done anywhere anytime. Testing that relies on blood drawn in the doctor’s office makes it harder to obtain samples at specific times (such as in the early morning) or multiple times during the day. In addition, hormones in saliva are exceptionally stable and can be stored at room temperature for up to a week without affecting the accuracy of the result. This offers maximum flexibility in sample collection and shipment.

All test kits include results!

#### The theory and science behind saliva hormone testing

For detailed information on the science behind saliva hormone testing, Drs. Gillson and Zava have written a paper on [Salivary Hormone Analysis](#). This fully referenced paper details the theory and science behind saliva hormone testing.

## Hormone self-test kits

- ZRT Laboratory, 8605 SW Creekside Place Beaverton, OR 97008 USA, Phone: 503-466-2445, Toll Free: 1-866-600-1636, [www.zrtlab.com](http://www.zrtlab.com), e-mail [info@zrtlab.com](mailto:info@zrtlab.com).
- Healthscope Pathology, 1868 Dandenong Rd, Clayton Victoria 3168 Australia, 1300 554 480, [www.healthscopepathology.com.au](http://www.healthscopepathology.com.au).
- Genova Diagnostic Laboratory, 63 Zillicoa St., Asheville, NC, USA, 28801, (800) 522-4762 or (828)253-0621, [www.gdx.net](http://www.gdx.net).
- Hopkins Test Kits, P.O. Box 84900, Phoenix, AZ, 85071, phone (800) 522-4762 or (602) 252-4477, fax (602) 943-2363, <http://www.virginiahopkinstestkits.com>.
- Aeron Lifecycles, 1933 Davis Street, Suite 310, San Leandro, CA, USA, 94577, (800) 631-7900, [www.aeron.com](http://www.aeron.com).
- Diagnos-Techs, Inc., Clinical & Research Laboratory, 6620 South 192nd Pl., J-104, Kent, WA, USA, 98032, (800) 878-3787, [www.diagnostechs.com](http://www.diagnostechs.com).
- National Biotech Laboratory, 13758 Lake City Way, N.E. Seattle, WA, USA, 98125, (800) 846-6285.

- Rocky Mountain Analytical, Unit A , 253147 Bearspaw Road, NW Calgary, Alberta, Canada T3L 2P5, Phone: (403) 241-4513, Fax: (403) 241-4516, [www.rmalab.com](http://www.rmalab.com).
- Natural Health Direct, PO Box 8177, Maroochydore DC, Queensland 4558, Australia, (07) 5450 8277, <http://naturalhealthdirect.com.au>.

#### **NOTE: New York State Residents**

New York State health law prohibits the testing of specimens collected in or mailed from New York, and prohibits the transmission of data from any laboratory to NY physicians or residents. Therefore, direct receipt of lab results for NY residents is not possible.

New York State Public Health Law Title 1 Article 5 states that laboratories need to be approved, licensed and examined by the State.

Unfortunately, unless the sample is collected out of state and mailed, testing facilities are unable to run the test. Dr David Zava and team of ZRT Laboratory are looking into the licensing requirements for New York but it may be some time before they are able to do business in New York.

#### **NOTE: California State Residents**

California State health law requires that the testing of any specimen collected or mailed from California be accompanied by a written order from a health care professional licensed in California to order laboratory tests. This includes the following disciplines: M.D.; D.C.; LAc; R.D.; D.O.; N.P.; and Pharmacists (R.PH).

As of September 2002 (Senate Bill 577), such lab tests may be ordered by complementary/alternative health care practitioners "not providing services that require medical training." California consumers not working with a licensed health care professional should contact a compounding pharmacist in their area or contact our Network for further information and, if need be, investigation.



## **Know Your Progesterone Cream**

### **Quality guidelines**

Creams manufactured and/or sold in the British Commonwealth will contain micronized progesterone that meets BP (British Pharmacopoeia) standards. Creams manufactured and/or sold in the United States will contain micronized progesterone that meets USP (United States Pharmacopoeia) standards. If it doesn't have either on the packaging, well, you might want to question the quality of the cream you're purchasing.

The USP is a non-governmental, standards-setting organization that advances public health by ensuring the quality and consistency of medicines, promoting the safe and proper use of medications, and verifying ingredients in dietary supplements. The British Pharmacopoeia Laboratory's principal role is in the procurement, establishment, maintenance and sale of British Pharmacopoeia Chemical Reference Substances (BPCRS). World Pharmacopoeias include United States Pharmacopoeia, British Pharmacopoeia, European Pharmacopoeia, Japanese Pharmacopoeia, and International Pharmacopoeia.

Micronization is a process where the progesterone is milled to a particular size. The degree of micronization is dependant upon the process used to mill the progesterone. The smaller the particle size the easier it will be for the progesterone to pass between the intercellular spaces of the skin's stratum corneum - the skin's physical lipid barrier to prevent substances/chemicals entering the body. In general, the absolute maximum particle size should be no greater than 20 microns.

Do check correct cream base for maximum absorbability. Creams containing mineral oils (paraffin) will NOT deliver progesterone to the body because the progesterone is more soluble in the mineral oil and will not permeate the skin. Creams should contain NO animal products or by-products, nor any petrochemical based ingredients.

A 2004 research study suggested that exposure to parabens may have negative health effects. And while the results of the study are not conclusive, paraben-free formulations are readily available.

## Wild Yam 'Extract' creams

Wild Yam Extract creams containing *diosgenin* can potentially have an *estrogenic* effect upon the body. For this reason, progesterone creams containing plant derived estrogens like diosgenin are not recommended in those women with a history of breast or uterine cancer, obesity, diabetes, or a history of clotting or vascular disorders. Certain herbs stimulate estrogen receptor positive breast cancer cells to grow, and/or compete against any natural progesterone taken and should therefore be avoided.

We know that [Wild Yam creams](#) have an estrogenic effect on the body, but there is no scientific proof that, when cream is applied to the skin (or ingested in tablet or powder form), diosgenin can be converted by the body into progesterone.

Kerry Bone, an experienced Australian researcher and industrial chemist, and practising herbalist writes in *Modern Phytotherapist* Vol.3, No.2 1997 that “any progesterogenic activity of plants due to their content of progesterone can be discounted as insignificant ... that when women were administered Wild Yam cream or tablets, saliva analysis found that their progesterone levels were no different from untreated women.” He goes on to conclude “plants (such as Vitex) exhibit significant progesterogenic activity only by stimulating luteal phase progesterone in the premenopausal women. Despite the rhetoric and the controversy, there is no solid evidence for any other kind of progesterogenic activity from plants.”

Caution: Progesterone creams containing herbs should be avoided by women who are trying to get pregnant, who are pregnant, or who are nursing.

## Getting your dose right

Make sure you know how much bioidentical progesterone (USP/BP) is contained in your jar or tube of cream. And how much is delivered per application. Are you getting the correct dosage into your body? Make sure your container of cream contains at least 450-500 mg of progesterone per ounce (28 grams).

1 gram = ¼ tsp - size of large pea or pencil eraser.

The percentage of progesterone contained in your cream determines how much is administered each application:

- 1.6% = 16mg per 1 gram application
- 2% = 20mg per 1 gram application
- 3.2% = 32mg per 1 gram application
- 4% = 40mg per 1 gram application
- 6% = 60mg per 1 gram application
- 8% = 80mg per 1 gram application
- 10% = 100mg per 1 gram application

It's best to work in grams or ounces for accuracy of dosing. A "teaspoon dose" can vary from kitchen to kitchen. Most cream distributors provide their own measuring dispenser, eliminating the guesswork on your part

Too much progesterone is not healthy. Neither is too little. Be aware, very low progesterone creams may make estrogen even more active, and make estrogen dominance symptoms worse.



## Delivery method – cream, oil or pill?

Natural progesterone supplementation is available as skin cream, skin oil, sublingual (under the tongue) drops, and capsules. To simulate the normal progesterone level seen in a woman's body, skin cream provides the most reliable and stable delivery of biologically available progesterone.

Medications like bioidentical progesterone delivered transdermally (absorbed through the skin) circumvent the digestive system, avoid liver metabolism and subsequently can be administered in substantially lower doses.

Hormones taken orally (swallowed) enter the bloodstream from the small intestine, and go directly to the liver. Because the liver is not accustomed to receiving large amounts of hormones, it begins to break them down, leaving only a small percentage (5%) of the ingested hormone available to cells. It is estimated that about 80 percent of what is measured as progesterone by conventional blood tests is really inactive metabolites of progesterone (which may cause side effects rather than benefits).

Sublingual troches / lozenges (under the tongue) tend to make your levels rise rapidly and then drop rapidly. And there's the question of how much of the hormone will you end up swallowing in saliva (gustimate is 50%)? This method requires applications through-out the day, which can be inconvenient.

Intra-vaginal application of (approved) progesterone cream gets into the bloodstream quicker, and has been known to raise progesterone levels very rapidly.

Don't give up on progesterone supplementation simply because you are experiencing a 'reaction' to your cream (itching, rash). We recommended you swap brands, perhaps opting for a cream that is free from additional hormones, herbs and alcohols.

Tightly close your jar or tube of cream after opening - oxygen breaks down progesterone. For best results, always store in a cool, dry, dark place (50-70° F; 10-21° C). Shelf life is typically 2 years.



## Do you need help finding cream?

Buying a premium, quality controlled natural progesterone cream that you can trust can be hit or miss. That's why our Network has done the homework for you. We only recommend brands that are the leaders in providing the cleanest and safest natural progesterone cream on the market today.

If you live in Australia, the UK, Canada, or New Zealand, you cannot purchase progesterone cream over the counter (OTC) in a health food store like you can in the United States. In these countries, progesterone is considered a 'medicine' ... but not necessary a controlled substance.

Australia's Therapeutic Goods Administration (TGA) does permit the importation of progesterone cream in small quantities. You may bring in 3 month supply in any one importation without approval required by the TGA provided (1) the goods are for personal use or immediate family, (2) you do not supply (sell or give) the medicine to any other person, and (3) providing it is not on the TGA's '[List of Controlled Substances](#)'. Since progesterone is NOT on this List, it is quite legal to place an order for cream through an overseas manufacturer and have it delivered to your doorstep.

For your safety, and the safety of your baby make sure you source a progesterone cream that is completely organic and artificial preservative free, and is independent laboratory certified for the quality of USP progesterone content.

Of course, you can buy locally compounded progesterone creams via your pharmacist. However, you will first need to locate a GP in your area who understands bioidentical hormone treatment protocols and can write a script. In some circumstances this can prove very difficult ... and costly. Ordering cream in from overseas can be cost effective.

### Listing of recommended creams





## Putting progesterone back into your body

On commencing progesterone supplementation, the first 10-14 days can be likened to a roller coaster ride. You might experience severe estrogen dominance 'wake up' (heightened estrogen receptor sensitivity that exacerbates estrogen dominance symptoms) or a total euphoric state. Some women, however, may experience a delayed response over a number of months. There are many factors determining why these extremes occur.

During the initial 8 weeks, high doses are well tolerated until you reach optimal levels. Initial high doses, while not recommended long-term, do help override estrogen dominance 'wake up'. When you begin supplementing progesterone for the first time, your body will uptake much of the progesterone and store it in fat cells. Allow for this lipophilic activity before progesterone becomes fully effective in the body.

Expect your body to adjust to progesterone therapy over 3 menstrual cycles. If you fail to notice any benefits after 3 months, perhaps some other health irregularity is at play that requires further investigation. On the other hand, if you fail to respond to the progesterone cream, we suggest you try another brand before giving up. The problem may be a sub-standard cream.

As a rule, when applied on retiring of an evening, progesterone can assist you to sleep more soundly. This is why you are urged to apply a larger dose of cream at night. There are, however, women who report bouts of wakefulness at night-time after applying progesterone cream. This isn't uncommon. If you believe this is the case for you, then apply cream first thing in the morning after showering. Apply your second daily dose late afternoon.

Understand, through the use of charts/journal, typical short & long term physiological changes that occur during on-going progesterone therapy. The aim is to learn to recognize progesterone supplementation characteristics versus problems that require further investigation by your GP.

**Use in Pregnancy:** Progesterone is the hormone essential for promotion and maintenance of pregnancy. Ovarian output of progesterone in the non-pregnant state is 25-30mg daily during the luteal phase. The placental output during the third trimester of pregnancy is 340-400mg per day. Where as artificial progestins contained in The Pill and conventional HRT are contraindicated in pregnancy, bioidentical progesterone exhibits no adverse effects on the foetus.

**Use while Breast Feeding:** Progesterone supplementation appears to provide women suffering pronounced moods swings, perhaps bordering on depression, with a 'happy' and safe solution for mum and her baby and, at low doses, does not appear to interfere with milk production.

**Contraception:** Caution should be exercised if supplementing progesterone while you are also taking the contraceptive pill or cortisone.



## Correct application of cream

The standard dose that mimics physiologic tissue levels is between 15-30mg progesterone per day.

A 'one size fits all' cookie-cutter approach to progesterone supplementation is just not realistic. You need to individualize dosage and application methods according to your unique menstrual cycle, medical and family history, lifestyle considerations, diet, metabolism, etc.

Once your progesterone stores have been replenished, one application per day can potentially be sufficient (but it's not recommended you take the risk while pregnant).

Some women prefer to split their dose into morning and evening applications to maintain 24hr coverage (progesterone levels fall 8-12 hours after application).



Apply cream straight after a hot shower or bath, or when your body is warm.

Cream utilises fatty and cellular tissue as 'reservoirs' for storing progesterone, providing a more sustained level of progesterone exposure. This 'storage' was validated by Chang et al in their 1995 study utilising transdermal progesterone on women with breast cancer. Following those first few months when we regain a 'steady-state', progesterone diffuses out of the fat cells as needed. Unless women carry little or no body fat, over a period of time, they'll build up stores of progesterone such that a two-week break from cream is unlikely to cause any discomfort or trigger a resurgence of estrogen dominance symptoms.

In some cases, particularly when in the throws of pronounced estrogen dominance, you might want to bypass this lipophilic activity. When you need to get progesterone into your system very quickly, apply cream to parts of your body where you can see veins close to the surface. For example, cream can be applied directly to the breasts, temples, inner arms, behind your knees, hands, feet, face and neck, and vagina (if approved). Avoid grossly/extremely fatty areas (if you have any!) like the tummy, hips & thighs. This will guarantee an immediate delivery of progesterone into the bloodstream.

You will need to rotate application sites around the body for optimal effect.

Do not use cream if it is gritty or smells rancid.

Aim to work to physiological doses (15-30 mg per day) or achievable doses where you are symptom free. Never create an excess. Determining your optimal dose may take some trial and error.

Query cream if you're not getting effective results. And if you should change your cream, try taking a month's break before switching. Ask yourself, "*Am I using my cream correctly?*"



## Cyclic use

Progesterone is a cyclical hormone and the body really needs to see a change in the concentration to affect a proper physiological response. If your levels of progesterone are constantly above the concentrations that it recognizes as "off" or low, this is not possible.

Always follow cyclic usage to avoid menstrual irregularity & problems, and down-regulation of receptors which will render progesterone less effective.

Allow 6-8 weeks on progesterone therapy to reach saturation levels, adjusting dosage according to symptom relief. A break from cream may or may not be necessary during this time depending on symptoms and individual response. Of course, given each woman's physiological uniqueness, there'll be exceptions.

After the first 8 weeks, periodic breaks from cream MUST follow.

What is a normal cycle for YOU? Figure out when Day 1 of your next period is due, then count backwards 2 weeks. That's when you should start using progesterone. If you no longer get a monthly period, then the break from cream would be the functional equivalent of your menstrual period as you remember it. If you're not at all familiar with what your own body did, then go with the "cookie cutter" approach. Apply progesterone for 2 weeks straight, and break for 2 weeks (28 days). This will mirror a cycle of sorts.

Always take a break from progesterone cream on your true menstrual cycle. Ignore breakthrough spotting that may occur in between your normal period. This will assist synchronisation of your body's natural cycle. However, ALWAYS follow-up breakthrough bleeding problems with your GP.

Men do NOT need to cycle progesterone like premenopausal women, and can safely apply cream daily without breaks. The dose of progesterone for men is 10 to 12 mg per day. Dose can be taken once a day.

Keep your progesterone cream in a location where you will be reminded to use it, such as on your bedside table or bathroom counter.

If you miss a day, don't fret. Just continue applying cream according to your cycle, taking time off each month to rest receptor sites.





## Discovering your optimal level

Progesterone dosages higher than the optimal level for your body will result in reduced benefits (down-regulation of receptors). In excess, progesterone can cause lethargy or sleepiness, which is often reported when women use oral progesterone. Enormous doses can cause an aesthetic or drunken effect.

The healthy ratio of progesterone (P) to estradiol (E2) is at least 200:1, and can go up to 1,000:1 in women using transdermal progesterone.

In healthy women without breast cancer, we find that the saliva progesterone level is routinely 200 to 300 times greater than the saliva estradiol level. In women found to have breast cancer, the saliva P/E2 ratio is considerably less than 200 to 1.

The ratio of progesterone/estradiol is only a guidepost to see where you fit relative to expected ranges in women who often have symptomatic relief from the progesterone.

We suggest you monitor how your body metabolizes progesterone cream through regular salivary/blood spot hormone profiles. You would adjust your dosage of progesterone (use more or use less) according to your estradiol levels measured by saliva testing coupled with symptom relief.

Safety margin: Short term high progesterone levels are reported to cause no particular side effects other than a decrease in potential progesterone benefits. This loss of effect due to excessive dosing is not uncommon. Progesterone cream has the potential to accumulate and contribute to disruptions in the adrenal hormones such as DHEA, cortisol, and testosterone. Sustained elevated levels of progesterone are not healthy. Physiological doses help you avoid this. What you need to do here is restore normal progesterone to estrogen ratio with the aid of saliva/blood spot hormone testing. We suggest you mirror Mother Nature's template. Optimal balance = minimal risk.

Pregnancy: Pregnant women need high levels of progesterone during their pregnancy to protect their unborn baby. Any fluctuation in progesterone levels could potentially trigger a miscarriage. Overdoing during pregnancy is highly unlikely however dosage should be monitored at all times.

Overdosing: In cases of *progesterone dominance*, you need to take appropriate steps to wash progesterone from the body. If your progesterone levels exceed the normal reference range, then STOP using cream and begin monthly monitoring of your progesterone & estrogen levels.

Estrogen: Progesterone won't work without a little bit of estrogen to prime receptor sites. Evidence to-date suggests the estrogen *estriol (E3)* is safe to use transdermally to treat vaginal dryness/atrophy, and that it may even be protective against breast cancer.



## Self-medicating

Rudel and Kincl (International Encyclopedia of Pharmacology and Therapeutics: The toxicity of progesterone, 405-409), in their review of the international literature, noted that "*Nowhere ... is the oral toxicity of progesterone reported.*" Though we don't recommend women take progesterone orally (transdermal delivery circumvents the digestive system, avoids first pass loss liver metabolism) it's worth noting here that research has shown progesterone is safer than all over-the-counter pain medications currently available, and there has never been a single case of anyone being admitted to hospital due to a poisoning from this human-identical hormone.

Natural progesterone is referred to as 'natural' because it represents the same human-identical molecule naturally occurring in the body. It can, therefore, be introduced with relative safety and minimal, apparently benign side effects because the body recognizes it.

'Side effects' may include breast tenderness and swelling, fluid retention or slight vaginal bleeding that corresponds with estrogen dominance 'wake up'. Dizziness, nausea, fatigue, headaches and light headedness have been reported occasionally and usually disappear with adjustment of dose.



These effects, though not altogether pleasant, are in fact a good indication that hormonal changes are taking place, and the body is absorbing the progesterone. Generally, side effects last only a few days before they pass. If this isn't the case for you, try reducing your dose.

If using less progesterone does not provide symptomatic relief, you might need to increase your dose. Low doses of progesterone are sometimes less likely to be effective in women who have estrogen levels that are fluctuating erratically from high to low (common as women approach menopause, i.e. peri-menopause).

Feedback provided to our Network suggests overdosing (progesterone dominance) can occur when women apply cream a little too liberally without monitoring progesterone uptake. They fail to reduce their dose to the least amount of progesterone they can manage while achieving sustained symptom relief. When a woman's bio-available progesterone levels exceed the corresponding reference range captured on her saliva assay, she simply needs to go off cream until she's back within a healthy progesterone to estrogen ratio.

In most cases, at least where reliable information is available to them, women use progesterone cream sensibly and effectively. And although the jury is still out, the growing body of evidence suggests women run a very small risk of actually endangering themselves self-medicating with progesterone. However, for those women who struggle to come to terms with the whole concept of hormone balancing using bioidentical hormones, we strongly recommend they work closely with a collaborative GP who understands and is competent prescribing bioidentical HRT treatment protocol.

If a woman is using estrogen replacement therapy it's recommended, when adding progesterone, she reduce her estrogen dose by approximately one-half. This, of course, should not be attempted without first consulting with your treating physician.

Dr. Helene Leonetti's study effectively proved that progesterone cream protects the uterine lining (the endometrium) as well as synthetic progestins do. Her study comparing PremPro with Premarin and progesterone cream was published in a major peer-reviewed medical journal (JAMA 2002; 287:216-220. Anasti JN, Leonetti HB, Wilson KJ. Topical progesterone cream has antiproliferative effect on estrogen-stimulated endometrium. Obstet Gynecol 2001; 97 (Suppl 4): S10).

Women with an intact uterus who are using estradiol supplementation in conjunction with progesterone cream must have an ultrasound to examine endometrial thickness or an endometrial biopsy done at 12 monthly intervals.



## Getting a prescription from your doctor

Unless you are fortunate to have a doctor who believes 'artificial' drugs are not always the best or only option, or you specifically request it, you are unlikely to ever be offered bioidentical progesterone replacement therapy.

It's a fact, albeit a sad one, that the vast majority of doctors are 'drug fixated' and adhere rigidly to their profession's traditional prescribing habits. Our doctors have not been brought up to speed on human-identical HRT and, therefore, haven't the faintest idea what we're talking about when we come to see them requesting a safer alternative to artificial-to-the-body HRT (given its consistent bad press in recent times).

Doctors are encouraged to prescribe potentially harmful HRT drugs that have been clinically proven to be carcinogenic, but see absolutely no reason why they ought to remain open-minded (at least!) to emerging studies validating the safety and efficacy of human-identical hormones like progesterone which may actually prevent cancer!

Some GPs don't know what they don't know!

Vote with your feet! [Find a doctor](#) who'll support your choice. Most [compounding pharmacists](#) maintain a list of doctors in the local area who are progesterone savvy. Alternatively, contact a [Hormone Testing facility](#) near you. They generally maintain a database of medical professionals using their services and



are happy to refer.

If you care to, why not print off a copy of the Medical References listed at the back of this publication to share with your physician.



## Be active in your choices

Most importantly, understand your choices. Know the difference between Bioidentical Hormone Replacement Therapy (BHRT) as opposed to conventional 'artificial' Hormone Replacement Therapy (HRT). Give consideration to BHRT over artificial HRT to regulate hormone imbalance.

Learn how to maximize your body's ability to uptake progesterone cream effectively. We endorse a holistic approach, ever mindful that hormone imbalance is multi-factorial. Do not under-estimate the value of good nutrition, herbal formulations, stress management, exercise, and vitamin and mineral supplements in adjunct to natural progesterone.

Learn what diagnostic tests are invaluable in the monitoring of hormone balance and assessing effectiveness of treatment. We suggest employing saliva assay profiles AND blood spot hormone testing to more accurately capture changes in your hormone levels.

Any intolerance or ineffectiveness of progesterone supplementation needs to be addressed. Examples would be dysfunctional liver, hypothyroidism or thyroid hormone resistance, exhausted adrenals, presence of other diseases and certain medications. Check out all possibilities with your doctor.

Develop strategies & techniques for reducing and keeping on top of estrogen dominance.

Learn how to eat correctly to maximize metabolism and hormonal constitution.

Incorporate diet and formula high in plant sterols to induce estrogenic benefits and maximize progesterone performance in the body without increasing estrogen dominance.

Empower yourself through [information](#). Become more responsible for your hormonal health ... so that when you next visit your healthcare professional you can make an 'informed' choice.



## Our formula for hormone harmony

- Use saliva & blood spot hormone testing for a complete and individualized hormone profile
- Supplement hormones only when you have confirmed you are truly deficient in them
- Use only human-identical hormone replacement therapy rather than synthetic hormones
- Apply hormone replacement transdermally (through the skin)
- Supplement hormones according to your unique reproductive cycle
- Use only in dosages that provide normal physiologic tissue levels
- Take cyclic breaks (from cream) to rest receptor sites, and sustain balance
- If symptoms of hormone imbalance persist, consult your physician. Your individualized prescription of human-identical hormone therapies may need to be adjusted
- Use a premium herbal formula that encourages the ovaries and other glands to produce the needed hormones
- Reduce your exposure to toxins (foods & environment)
- Chart cycle regularly to monitor fluctuations and to detect patterns / triggers
- Regularly 'spring clean' your liver to enhance immunity, hormone health and metabolism
- Maintain gastrointestinal integrity and efficient bowel elimination
- Identify & control stress levels
- Maintain a healthy weight-to-height ratio
- Avoid refined sugars and processed foods
- Increase essential fatty acid intake and monounsaturated fats
- Include premium nutritional supplements, particularly if you're over 40
- Drink at least 2 litres filtered water a day



- Avoid fizzy drinks and caffeine where possible
- Get into the habit of exercising regularly and moderately
- Learn how to relax through recreation and/or meditation
- Acknowledge changes in your life and address them
- Have annual check-ups and appropriate tests
- Regularly check that hormones are in balance with your stage of life
- Trust yourself - your intuition & your instincts
- Recognize that good information leads to good choices



## Clinical studies

Visit our website and view the currently available **science** behind the use of bioidentical hormones as a treatment and health option for women.

For example, new research to evaluate the effectiveness of intravenous progesterone on acute traumatic-brain-injured patients was kicked off in early 2010.

Researchers concluded in an earlier clinical trial that giving progesterone to trauma victims shortly following **brain injury** appears to be safe and may reduce the risk of death and long-term disability. Their three-year study, called ProTECT (Progesterone for Traumatic brain injury--Experimental Clinical Treatment) enrolled 100 participants. It was designed to evaluate whether progesterone can be administered intravenously in a safe and reliable way.

Although it is widely considered a "sex steroid," progesterone is also a protection hormone. It is naturally present in small but measurable amounts in the brains of males and females. Human brain tissue is loaded with progesterone receptors. Laboratory studies suggest **that progesterone is critical for the normal development of neurons in the brain** and exerts protective effects on damaged brain tissue.

Donald G. Stein, PhD, Asa G. Candler Professor of Emergency Medicine at Emory School of Medicine and director of Emory's Department of Emergency Medicine Brain Research Laboratory, pioneered discoveries regarding the effect of progesterone following traumatic brain injury - first discovering the **neuro-protective properties of progesterone** in the laboratory more than 25 years ago.

*"The results that we are now seeing, and hope to continue validating, are an incredible and gratifying reward for more than 25 years of concentrated research," says Stein. "My work first started when I began to notice evidence that women tended to respond to treatment and recover better than men after suffering from brain injury and stroke. Many people do not realize that it's not just a female hormone; both men and women produce progesterone directly in the brain, as well as other tissue. Ultimately, we learned that progesterone basically does in brain injuries what it also does during fetal development - protect cells and tissue. To now witness the translation of this laboratory research into a treatment that may have life-saving benefits is breathtaking."*

David Wright, MD, assistant professor of emergency medicine at Emory School of Medicine is the national study's lead investigator.

*"We found evidence that progesterone is not only safe for use in patients suffering from traumatic brain injuries - showing no evidence of side effects or serious harmful events. We also found a 50 percent reduction in mortality in those patients treated with progesterone," says Wright. "Furthermore, we found signs that progesterone improved functional outcomes and reduced disability in patients with moderate brain injury. But this was a small, pilot study. By expanding our test sites to 17 major trauma centers across 15 states and enrolling more than 1,000 patients, we hope to confirm these preliminary findings and determine if progesterone benefits victims of acute traumatic brain injury."*

<http://natural-progesterone-advisory-network.com/wp/category/progesterone-resources/medical-research-studies/>





# Progesterone and postnatal depression

Most women will be familiar with the term 'baby blues' (also called postnatal blues) - a common experience following childbirth in which new mothers experience bouts of tearfulness and unexplained mild and transitory moodiness (sometimes sadness) that tends to pass in a matter of days without treatment, other than support.

Postnatal *depression* must be distinguished from postnatal blues.

Onset of postnatal depression can vary for every woman in terms of when it appears, how severe it can get, and its duration.

During the first six months after delivery the prevalence of major depression is estimated at 12-13%. The precise time frame for defining postnatal depression has varied across studies, typically from one month to one year after childbirth.

Postnatal depression affects almost one in six women giving birth in Australia.

Like depression which occurs at any other time, postnatal depression doesn't have one definite cause - but it's likely to result from a combination of factors. A mixture of physical, biological and hormonal factors seem to put women at risk of experiencing depression following the birth of a baby.

One of the contributing factors implicated in some cases of postnatal depression is the sudden drop of naturally occurring progesterone in the days immediately after delivery. A woman in the last trimester of her pregnancy is producing up to 400 mg progesterone via the baby's placenta. After the baby is born and the placenta is expelled, the progesterone factory is literally turned off. This dramatic drop in progesterone is necessary to stimulate the hormone *prolactin* to bring on lactation. The only source of progesterone at that time is via the adrenal glands. It is possible, adrenal exhaustion plays a role in a woman's inability to provide even a small amount of progesterone in the days following childbirth.

[Research by Brian Harris](#) and colleagues in Wales found that among 120 women, those with the highest prenatal and lowest postnatal progesterone levels also scored highest on measures of postpartum depression scores.

Progesterone supplementation is proving to be a breakthrough in defeating some forms of post-natal depression. In fact, renowned American obstetrician Christiane Northrup recommends that any woman who may be prone to postnatal depression should use progesterone cream the minute the baby is born.

For *mild to moderate depression*, progesterone cream at physiological doses for approximately 4 months uninterrupted has proven quite adequate. You would start with a daily dose of 15-30mg progesterone, and gauge whether depression is lifting. Only increase dosage if you feel you are not responding. Give yourself 1-2 weeks to feel the benefits.

Unlike women who've had to wait 6-8 weeks to reach saturation level in the body to feel the benefits of progesterone, new mothers don't need to go through this process because their body, being familiar with this hormone during their pregnancy, will respond very quickly.

*Moderate to severe depression* may require higher doses (>250 mg per day). Once you start to feel better you'd wean back gradually. Just remember, whatever dose works for you, stick with it. Experimentation with dosage can happen later on once you're feeling better. The late [Dr Katharina Dalton](#) was well known for her pioneer work and research in the treatment of severe post-natal depression (and PMS) using high levels of bioidentical progesterone (100 mg-300 mg daily). Long term, aim to reduce your dose to the smallest amount needed to remain symptom-free.

Depending on whether you want to prevent ovulation or support it, refer to page 14 for more instructions on 'When to Apply Cream'.

Six weeks post delivery can be when a new mum starts to recognize she's not getting back to her old self. At this point she can safely incorporate progesterone cream to 'top up' her levels, and help synchronize her hormones.

Women comment that after introducing progesterone cream they've been able to relax, cope better, and enjoy the experience of motherhood. This is often in stark contrast to previous episodes of postnatal depression that were associated with isolation, shame, and failure.



The treatment of post-natal depression should always be monitored by a specialist you trust.



## Progesterone and lactation

If you are breast-feeding, progesterone at high doses may interfere with your milk production.

Low progesterone levels *stimulate* milk production in the breast. High progesterone levels will have the opposite effect.

We know that progesterone inhibits lactation during pregnancy. And, at birth, the abrupt *drop* in progesterone levels signals the body to raise prolactin levels, which stimulates milk production in the breasts.

The key here is to keep your progesterone levels LOW. Therefore, supplemental progesterone should be within the 15-30 mg range per day.



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