

The Natural Progesterone Information Service

Founding Medical Advisor: John R Lee MD

NPIS Natural Progesterone Handbook



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Natural progesterone

The use of natural progesterone creams was pioneered by Dr John Lee, a Californian family doctor. Over a period of 20 years Dr Lee observed the effect of progesterone creams on patients who used them and proposed a new syndrome, which he named "oestrogen dominance", in which women suffer a variety of symptoms as a result of the toxic load of oestrogen-like chemicals now present in our environment and other factors. Dr Lee also proposed that progesterone is more important than oestrogen in preventing osteoporosis and menopausal symptoms. None of these theories have yet been proven as Dr Lee was unable to fund double-blind, placebo-controlled or comparative studies himself. Double-blind, placebo-controlled trials with progesterone creams are now under way in the UK and America.

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A Celebration of the life of John Lee MD

This address was given at a Service of Thanksgiving for
John Lee at St Clement Danes Church, London.
31st January 2004

Back in 1994, I was on the telephone to someone in America, working on a portfolio of health products, when I happened to ask "what is all this fuss about progesterone in America?" "You don't know? Let me fax you something over right now."

*The fax sprang into action and a long, long fax started to roll out all over the desk. It was the beginning of John Lee's very first book *Natural Progesterone*, which he had published himself. I remember grabbing the reels of paper and leaping into the car as my partner Brian and I went off to lunch. "Oh this is amazing" I remember saying as I scanned the material, and I read him John's story about the druids the mistletoe and progesterone, which I'm sure you all recognise.*

I wasted no time in tracking down the man who'd written this amazing book. "Come over to England" I begged. "We'll arrange a seminar for you, and you can put these amazing ideas of yours to the British."

He came, and gave his first UK seminar - by no means his last. The day before, we spent at home with him in Sussex. "What would you like to do today?" I remember asking at breakfast that day. "Aren't we close to the battle of Hastings?" he said. We drove him to the battlefield.

As soon as we stepped onto the site, he took over, "you see Harold came this way from the North. And William came up that way from the coast. William was at a disadvantage, as you can see, because his men had to fight uphill. But Harold made a big mistake. Do you know what it was?" We shook our heads, taken aback that an American, a Californian even, would know way more about something that took place here nearly a 1000 years ago than we did.

"Breakfast!" he said, "That was his big mistake. Harold marched his men through the night to reach William, but he failed to rest them or breakfast them before he sent them into battle! Imagine how different British history might have been!"

That told me a lot about John Lee. He was a man with an insatiable interest in life, and when he got into a particular subject he got right down to the core of it. He had obviously researched the Battle of Hastings before he arrived.

This same thoroughness was applied to everything John did. One of the seminal moments in his career was a lecture he attended, given by biochemist Ray Peat, at the Ortho-molecular Medical Society in San Francisco, on oestrogen and progesterone. Fascinated, John collared Peat for over an hour after the lecture, and took from him a list of more than 80 scientific references on the subject.

Hardly anyone, except researchers, actually follows up scientific references. John, a family doctor (what we call a GP) did. He got hold of every single paper Peat had listed and read them. But each of those papers had at least 50 more references. John got hold of those and read them as well.

After months of scrutinising those papers John Lee took the step that was to change his life (and ours) so dramatically. He began prescribing a progesterone cream to his female patients with osteoporosis. In doing so, he stepped completely outside current medical practice. Yet he had investigated his subject so well beforehand that the results he obtained exceeded even his expectations.

John remained a family doctor in private practice for many years after that, and by all accounts he was an exceptionally kind and conscientious one, driving out to see patients who needed him, when his contemporaries would have insisted on their patients coming to them.

He never became a researcher, never conducted a formal clinical trial. Instead he observed each of his patients in detail, tested their hormone levels, tested their bone density, and above all he took the time to talk to them. This was the old way of doing medicine, the way that doctors had used to discover great medical truths for generations (alas no more).

It was his greatest strength. A researcher would have taken a small slice, a single item of what John was observing and spent years testing whether or not it was true. John stood back, as it were, and watched the whole spectrum of his patients' reactions – and finally he saw not one symptom but a whole syndrome – he called it oestrogen dominance.

It is given to very few doctors to identify a syndrome in human health. John achieved that and dedicated the rest of his life to telling the medical profession and women throughout the world what he had discovered.

That first book that had rolled through my fax machine, and which John had published out of his own pocket, was followed by all the books that I'm sure you now know.

He had retired from his practice by then, and teamed up with science writer Virginia Hopkins. They were taken on by no less a publisher than Warner who published:

What Your Doctor May Not Tell You About Menopause

What Your Doctor May Not Tell You About Pre-menopause

What Your Doctor May Not Tell You About Breast Cancer

They have been read by millions of women, doctors and researchers.

The effect has been enormous. It is impossible to calculate how many lives he has probably saved, how many women have been spared from breast cancer.

The number of women who lead more comfortable and productive lives through the years of menopause and beyond are surely many more.

Medical researchers have taken up the cause on both sides of the Atlantic, and the clinical trials that need to follow John's great work are well under way. They will continue for many years until the practices that John first tested all those years ago in San Francisco have become standard medicine around the world.

In spite of this enormous success, John never let it go to his head. He and Virginia shared a passion for crosswords. He used to joke with her. "You know, I'll really know I'm famous when I turn up as an answer in a crossword". A few months ago he called Virginia. "You'll never guess, I'm doing the crossword in the San Francisco Chronicle and I'm in a clue!"

But John wasn't only interested in hormones. He wrote a much wider book on health called "Optimal Health Guidelines". Some of you may have heard him tell the story about the men in his family, all of whom died from heart attacks before the age of 60?

John knew then that his genes were against him. This was the impetus that started him researching all the knowledge that he eventually put into his "Optimal Health Guidelines". John was 74 when he died. He certainly outdid those genes.

John actually wondered speaking to Virginia on the phone, just a few days before he died, if he'd been given an extra decade or 2 so that he could bring his message about progesterone to the world.

When John died he had accomplished his mission. In the last year his position on HRT had finally been vindicated. Now we know that HRT increases the risk of both breast cancer and heart disease.

The day before he died John had finished his corrections on a revised version of "What Your Doctor May Not Tell You About Menopause".

Virginia tells me that John was actually never satisfied with his books, always wishing he'd made changes. But as he finished proofing this book he told her "This is a damn fine book!" He was finally pleased with what he had produced.

John lived life to the full, full of gusto, right the up to the end. The night he died John and Pat, his wife, had people over for dinner, including David Zava, the Saliva Testing expert, and another close friend, a breast cancer expert. John was apparently on excellent form, laughing and joking, slapping people on the back and telling stories in the way that only he did. Anyone who has ever sat and listened to his stories will know what I mean. He died at 3am that morning from a heart attack.

At the time of his death John and Virginia were working on another book called "Hormone Balance Made Simple". Virginia is finishing that and it will be published.

Virginia is also offering a free email newsletter to update us all on the developments that result from John's work. You can subscribe to it on www.johnleemd.com.

I'd like to leave you with a picture of what John loved best when he wasn't pursuing his beloved hormone. John and Pat lived on a farm in Sebastopol, California. He had a beautiful white farmhouse with a wraparound porch looking out over fields. He kept chickens – you could always hear the rooster calling when you spoke to him on the phone.

From the house he could see his red barn, his horses, a huge old fence overgrown with berries that his grandchildren would raid whenever they came to visit. What John loved most was to potter on the farm, just fixing this and that. Let us leave him there, relaxing on his porch, with our gratitude.

Thank you John.

Celia Wright

HRT – where do we go from here?

John R Lee MD

This article was John Lee's last, written especially for NPIS

The recent *Lancet* publication of the Million Women Study¹ (MWS) removes any lingering doubt that there's something wrong with conventional HRT. Why would supplemental oestrogen and a little progestagen (other than real progesterone) increase a woman's risk of breast cancer by 30% or more? Other studies found that these same HRT hormones increase one's risk of heart disease and blood clots (strokes)^{2,4}, and do nothing for preventing Alzheimer's disease^{5,6}. When you pass through puberty and your sex hormones surge, they don't make you sick - they cause your body to mature into adulthood and be healthy. But, the hormones used in conventional HRT are somehow not right – they are killing women.

The question is – where do we go from here? My answer is – we go back to the basics and find out where our mistake is. I have some ideas on that.

Over the years I have adopted a simple set of three rules covering hormone supplementation. When these rules are followed, women have a decreased risk of breast cancer, heart attacks or strokes. They are much less likely to get fat, or have poor sleep, or short-term memory loss, fibrocystic breasts, mood disorders or libido problems. And the rules are not complicated.

Rule 1. Give hormones only to those who are truly deficient in them

The first rule is common sense. We don't give insulin to someone unless we have good evidence that they need it. The same is true of thyroid, cortisol, and all our hormones. Yet, conventional physicians routinely prescribe oestrogen or other sex hormones without ever testing for hormone deficiency. Conventional medicine assumes that women after menopause are oestrogen deficient. This assumption is false. Twenty-five years ago I reviewed the literature on hormone levels before and after menopause, and all authorities agreed that over two-thirds (66%) of women up to age 80 continue to make all the oestrogen they need. Since then, the evidence has become stronger⁷. Even with ovaries removed, women make oestrogen, primarily by an aromatase enzyme in body fat and breasts that converts an adrenal hormone, androstenedione, into estrone. Women with plenty of body fat can make more oestrogen after menopause than skinny women make before menopause. Breast cancer specialists are so concerned about all the oestrogen women make after menopause that they now use drugs to block the aromatase enzyme. Consider the irony: some conventional physicians are prescribing oestrogens to treat a presumed hormone deficiency in postmenopausal women, while other colleagues are prescribing drugs that block oestrogen production in postmenopausal women.

How does one determine if oestrogen deficiency exists? Any woman still having monthly periods has plenty of oestrogen. Vaginal dryness and vaginal mucosal atrophy, on the other hand, are clear signs of oestrogen deficiency. Lacking these signs, the best test is the saliva hormone assay. With new and better technology, saliva hormone testing has become accurate and reliable. As might be expected, we have learned that hormone levels differ between individuals; what is normal for one person is not necessarily normal for another. Further, one must be aware that hormones work within a complex network of other hormones and metabolic mediators, something like different musicians in an orchestra.

To interpret a hormone's level, one must consider not only its absolute level but also its relative ratios with other hormones that include not only oestradiol, progesterone and testosterone, but also cortisol and thyroid as well.

For example, in healthy women without breast cancer, we find that the saliva progesterone level is routinely 200-300 times greater than the saliva oestradiol level. In women with breast cancer, the saliva progesterone/oestradiol ratio is considerably less than 200 to 1. As more investigators become more familiar with saliva hormone tests, I believe these various ratios will become more and more useful in monitoring hormone supplements.

Serum or plasma blood tests for steroid hormones should be abandoned – the results so obtained are essentially irrelevant⁷. Steroid hormones are extremely lipophilic (fat-loving) and are not soluble in serum. Steroid hormones carry their message to cells by leaving the blood flow at capillaries to enter cells where they bond with specific hormone receptors in order to convey their message to the cells. These are called “free” hormones. When eventually they circulate through the liver, they become protein-bound (enveloped by specific globulins or albumin), a process that not only seriously impedes their bio-availability but also makes them water soluble, thus facilitating their excretion in urine. Measuring the concentration of these non-bio-available forms in urine or serum is irrelevant since it provides no clue as to the concentration of the more clinically significant “free” (bio-available) hormone in the bloodstream.

When circulating through saliva glands, the “free”, non-protein-bound steroid hormone diffuses easily from blood capillaries into the saliva gland and then into saliva. Protein-bound, non-bio-available hormones do not pass into or through the saliva gland. Thus, saliva testing is far superior to blood or urine testing in measuring bio-available hormone levels.

Serum testing is fine for glucose and proteins but not for measuring “free” steroid hormones. Fifty years of “blood” tests have led to the great confusion that now befuddles conventional medicine in regard to steroid hormone supplementation.

Rule 2. Use bio-identical hormones rather than synthetic hormones

The second rule is also just common sense. The message of steroid hormones to target tissue cells requires bonding of the hormone with specific, unique receptors in the cells. The bonding of a hormone to its receptor is determined by its molecular configuration, like a key is for a lock. Synthetic hormones' molecules differ in molecular configuration from endogenous (made in the body) hormones. From studies of petrochemical xeno-hormones, we learn that substitute synthetic hormones differ in their activity at the receptor level. In some cases, they will activate the receptor in a manner similar to the natural hormone, but in other cases the synthetic hormone will have no effect or will block the receptor completely. Thus, no synthetic hormone provides the same total physiologic activity as the natural hormone it is intended to replace, and all synthetic hormones will provoke undesirable side effects not found with the human hormone. Human insulin, for example, is preferable to pig insulin. Sex hormones identical to human (bio-identical) hormones have been available for over 50 years.

Pharmaceutical companies, however, prefer synthetic hormones. Synthetic hormones (not found in nature) can be patented, whereas real (natural, bio-identical) hormones are not. Patented drugs are more profitable than non-patented drugs. Sex hormones prescription sales make more money for pharmaceutical companies than any other prescription drug. Women's health is sacrificed for commercial profit.

Rule 3. Use only in dosages that provide normal physiologic tissue levels

The third rule a bit more complicated. Everyone would agree, I think, that dosages of hormone supplements should restore normal physiologic levels. The question is – how do you define normal physiologic levels? Hormones do not work just by floating around in circulating blood; they work by slipping out of blood capillaries to enter cells that have the proper receptors in them. As explained above, protein-bound hormones are unable to leave blood vessels and bond with intracellular receptors. They are non-bio-available. But they are water-soluble and, thus, found in serum, whereas the “free”, bio-available hormone is lipophilic and not water soluble, thus not likely to be found in serum. Serum tests do not help you measure the “free”, bio-available form of the hormone. The answer is saliva testing.

It is quite simple to measure saliva oestradiol, or progesterone, or testosterone levels of healthy people and compare those results with saliva levels of women with breast cancer, for example. In this manner, saliva testing can be used easily to measure the change of saliva hormone levels when hormone supplementation is given. If more physicians did that, they would find that their usual oestrogen dosages are 8-10 times greater than found in normal, healthy people, or that progesterone levels are not raised by giving supplements of synthetic progestagen such as medroxyprogesterone acetate (MPA).

Further, saliva levels (and not serum levels) of progesterone will clearly demonstrate excellent absorption of progesterone from transdermal creams. Transdermal progesterone enters the bloodstream fully bio-available (i.e., without being protein-bound). The progesterone increase is readily apparent in saliva testing, whereas serum will show little or no change⁸. In fact, any rise of serum progesterone after transdermal progesterone dosing is most often a sign of excessive progesterone dosage. Saliva testing helps determine optimal dosages of supplemented steroid hormones, something that serum testing cannot do.

It is important to note that conventional HRT violates all three of these rules for rational use of supplemental steroid hormones.

A 10-year French study of HRT using low-dose oestradiol patch, plus oral progesterone, shows no increased risk of breast cancer, strokes or heart attacks⁹. Hormone replacement therapy is a laudable goal, but it must be done correctly. HRT based on correcting hormone deficiency and restoring proper physiologic balanced tissue levels, is proposed as a more sane, successful and safe technique.

Other Factors

Hormone imbalance is not the only cause of breast cancer, strokes and heart attacks. Other risk factors of importance include the following:

1. Poor diet (excess sugar and refined starches, trans-fatty acids, lack of needed nutrients such as omega-3 fats, full range of essential amino acids, vitamins, minerals, etc.)
2. Environmental (toxic) xeno-oestrogens and hormones not removed by water treatment plants
3. Insulin resistance
4. Stress
5. Lifestyle problems such as excess light at night (poor sleep, melatonin deficiency), alcohol, cadmium (cigarette smoking) and birth control pills during early teens

Men share these risks equally with women. Hormone imbalance and exposure to these risk factors in men leads to earlier heart attacks, lower sperm counts and higher prostate cancer risk.

Conclusion

Conventional hormone replacement therapy (HRT) composed of either estrone or oestradiol, with or without progestagens (excluding progesterone) carries an unacceptable risk of breast cancer, heart attacks and strokes. A more rational HRT using bio-identical hormones in dosages based on true needs as determined by saliva testing is proposed. In addition to proper hormone balancing, other important risk factors are described, all of which are potentially correctable. Combining hormone balancing with correction of other environmental and lifestyle factors is our best hope for reducing the present risks of breast cancer, strokes and heart attacks.

A much broader discussion of all these factors can be found in my book, "What Your Doctor May Not Tell You About Breast Cancer"¹⁰.

John R Lee, MD

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Menopause the natural way

There are few women who would turn down the chance to look and feel younger if a magic pill were offered. But is HRT really such an elixir, or could it actually shorten life? New evidence suggests that researchers and doctors may have been looking at the wrong hormone for 50 years, and that natural progesterone is nature's benevolent answer to HRT.

Women, even more than men, are vulnerable to the image that society projects on them: that 'real women' should look young, slim and wrinkle-free. The rest of womankind, the ones with the menopausal mood swings, greying hair and a middle aged spread, if not exactly seen as crones, are rarely given the status or the attention of their younger cousins. This is putting it crudely, but such fears lurk not far below the surface of most women. In some it breeds a desperation that can drive them to take a drug to keep them younger, even when they know it might be killing them.

The latest verdict on HRT is not good, but a new and natural alternative is now available, using the natural hormone progesterone. Some doctors believed that progesterone is the hormone that women should have been using all along. It has been shown to be protective against cancer and heart disease and may even halt or reverse osteoporosis. It can increase libido, rejuvenate the skin, and help reduce middle aged spread by increasing metabolism. It is also anti-depressant, diuretic and can reduce hot flushes.

But first, what is HRT and why are women being given it?

Progesterone – the forgotten hormone

Women, we have been told, need oestrogen because it is this hormone that drops dramatically at menopause. Therefore, goes the argument, putting it back will reverse the devastating symptoms that some women endure. This reasoning ignores important facts.

Oestrogen does decline at menopause, but the body continues to produce a small amount indefinitely, in the fat cells, the adrenal glands, muscles, liver and brain. It is the other female hormone, progesterone, that drops to almost zero in many women. Yet few researchers have stopped to ask whether progesterone might be the real hormone that women need.

True, most HRT formulas now include an amount of synthetic progestogen, but that is dangerously different from the natural hormone, progesterone, and oestrogen is still the predominant hormone in conventional HRT. Almost unbelievably, although natural progesterone was known to be benign and beneficial as early as the 1940's, since then it has become a virtually forgotten hormone.

Doctors, led to believe that real progesterone was either not available or not usable, routinely prescribe synthetic progestogens believing them to be equivalent to progesterone. But synthetic progestogens are highly toxic and have very different effects on the body from the real hormone. Tragically, in the confusion, progesterone itself got a bad name by mistake. Now doctors in the UK and America are rediscovering that the hormone that everyone overlooked is not only non-toxic, it may also turn out to be the very hormone that women have been praying for.

The oestrogen myth

The female hormone, oestrogen, has become a modern myth. Most women and their doctors now believe that oestrogen makes them sexy, gives them younger skin, banishes hot flushes and depression, halves their risk of heart disease and protects them from osteoporosis. Almost none of this is true.

Oestrogen is the hormone that is responsible for the changes that take place in a girl as she reaches puberty. Under the influence of oestrogen her sexual organs mature and she grows breasts, female curves and pubic hair. From then on, for the first half of every month, oestrogen stimulates and builds up the lining of the womb in anticipation of a fertilised egg. It also encourages the growth and lubrication of the lining of the vagina.

This stimulating effect of oestrogen helps to explain why, in excess, it is toxic. Oestrogen stimulates breast tissue, it can encourage the development of fibrocystic breasts and supplementing with oestrogen is known to increase a woman's risk of breast cancer. It also stimulates the lining of the womb, the endometrium, increasing the risk of endometrial cancer and encouraging the growth of fibroids.

Some researchers make light of these factors, claiming that we should offset the slight risk of cancer against the protection the hormone gives from heart disease and brittle bones. But the risk that a woman takes when she supplements with oestrogen is not slight. Supplementing with oestrogen significantly increases a woman's chances of getting breast cancer and her risk of developing endometrial cancer more than trebles.

Heart protection questioned

And does oestrogen reduce a woman's risk of heart disease? It has long been known that the oestrogen in the contraceptive pill increases the risk of heart and cardiovascular disease. In fact it encourages blood clotting, and makes the body hold salt and water, which can lead to high blood pressure (hypertension). Both these conditions will contribute to stroke embolism, thrombosis and heart attack.

The argument that oestrogen therapy could protect women from heart disease is based on the observation that it lowers cholesterol, but this is no longer recognised as proven protection against heart disease. Furthermore the study, reported in the *New England Journal of Medicine* (15 April, 1993), which led to the claim that HRT almost halves the risk of heart disease, was found to be seriously flawed: an editorial in the same journal criticised the study and called it 'speculative'. In the 1960s there was a trial to see if oestrogen could prevent heart attacks in men. The experiment had to be stopped because their rate of heart attacks increased sharply.

So oestrogen increases women's cancer risk, and seems to be bad news for heart disease too, but at least we know it prevents osteoporosis, don't we? No, sadly it does not. A study also published in the *New England Journal of Medicine* (14 October, 1993) concluded that HRT failed to protect women from osteoporosis. Only women who had taken HRT for more than 7 years – far longer than most women stay on the drug – had a slower loss of bone density, and even those who had taken it for 10 years or more were not protected from fractures.

This is serious news. Millions of women are taking oestrogen in the belief that it will keep them young, when it seems there is a real danger that it might not even keep them alive.

But what about the claim that oestrogen makes women feel good? Because this hormone has become associated with sexiness, this in itself may suggest to women that they feel good on it.

There may also be some truth in this. However oestrogen increases the body's retention of salt and water which can cause bloating and weight gain, factors not usually associated with good feelings; and when the body swells the brain swells too, easily triggering irritability and depression. Depression, pioneering doctors in the field now believe, is closer to oestrogen's true effect on mood.

Yet there are some benefits to be had from oestrogen. Hot flushes, although not directly caused by lack of oestrogen, can indeed be reduced by it. However, hot flushes are triggered by the hypothalamus as a response to low oestrogen and progesterone. In most cases the far safer hormone, natural progesterone, will abolish hot flushes without having to use oestrogen at all. Oestrogen can also be helpful for vaginal dryness, although often progesterone will solve this problem too.

The progesterone revolution

In 1994 the Nutrition Line brought to London an American doctor with a revolutionary point of view. For 15 years, John Lee MD had been treating women with natural progesterone instead of oestrogen. Natural progesterone, he believed, was the hormone that modern women were most often missing. Far from endorsing the idea that women need extra oestrogen, Dr John Lee believed that many were already suffering from too much, a syndrome which he named 'oestrogen dominance'.

Dr Lee began to recommend a natural progesterone cream to some of his patients after hearing a talk by Ray Peat PhD, Professor of Blake College, Oregon. One of the problems with natural progesterone was what to dissolve it in. It doesn't dissolve well in alcohol, and the solvents that do work can be highly toxic. Ray Peat, who had been studying female hormones for many years, had ingeniously solved the problem by patenting a method for dissolving it in vitamin E. The resulting cream could be applied to the skin and absorbed into the body much more efficiently than taking it by mouth.

Dr Lee had been looking for some way to protect women from osteoporosis when oestrogen was contra-indicated (for instance after breast cancer). Being open minded and having no alternative to offer these women, he began suggesting that they apply progesterone cream, hoping that it would in some way help slow down bone deterioration.

Osteoporosis reversed

To his astonishment, after a few months, bone mineral density (BMD) tests began to show that the women who were using the progesterone cream (and not taking oestrogen at all) had increased their bone density. When he suggested the cream to his other menopausal patients he got the same results.

It is important to realise at this point just how extraordinary this was. Oestrogen, although it may slow down bone loss, can never reverse it. Taking calcium, boron or other nutrients can help slow down bone loss, but it will not regenerate. No other substance has been shown to restore bone growth. And the reversal with progesterone was not small. Women who had lost a great deal of their bone density, and had already suffered fractures, eventually (over a number of years) regained the bone density of 35-year-olds. Thirty five is about the age when a woman's bone density is at its peak. Typically Dr Lee's patients showed a 10% increase in the first year followed by 3-5% each following year. Even more important, their rate of non-trauma related

fractures dropped to zero. Over the years Dr Lee treated thousands of women for osteoporosis in this way. His work has been published in the *International Clinical Nutrition Review*, *Medical Hypotheses* and the *Townsend Newsletter for Doctors*.

Many progesterone benefits

But that is not the end of the story. After they had been using the natural progesterone for a while, Dr Lee's patients brought him other information. Those who were still having periods reported that their premenstrual tension had vanished. Others told him that their fibrocystic breasts were clearing up. Women who had suffered from water retention for years no longer needed diuretics.

Women who had been suffering from depression were starting to feel good. Some women with low thyroid function reverted to normal, and women with fibroids found that they shrank or were sufficiently contained that surgery could be avoided.

Oestrogen dominance

As the pattern unfolded Dr Lee began to piece together what was happening. Hormone tests showed him that many of the women were progesterone deficient. This was true even among younger women who should have been producing the hormone. What could be causing this?

Progesterone is the hormone secreted by the ovary in the second half of the menstrual cycle. It is made by the empty follicle (or egg sac) after it has released an egg in the process of ovulation. Under the circumstances, this is a critical event to understand: women only make progesterone when they ovulate; if they fail to ovulate they make no progesterone.

But why should that be so important? The answer has to do with oestrogen. In spite of the dangers, oestrogen is of course a totally essential female hormone while it remains in balance. But progesterone has the role of keeping oestrogen in balance; it is said to oppose oestrogen. So when a woman releases no egg during her cycle she will experience unopposed oestrogen or 'oestrogen dominance', a condition which Dr Lee believed to be widespread.

The symptoms of oestrogen dominance include water retention, breast tenderness, PMS, mood swings, depression, loss of libido, heavy or irregular periods, fibroids, craving for sweets and weight gain (especially around the hips and thighs). It was these symptoms that began to reverse when Dr Lee prescribed natural progesterone.

Nature's answer

But progesterone production naturally stops in all women as they approach menopause. Since progesterone is produced at ovulation, it stops when ovulation ceases. Oestrogen production, however, does not cease at menopause. It can still be made in the fat cells. Ironically a fat woman after menopause produces more oestrogen than her thin sister did before menopause. Did nature intend all women to suffer from oestrogen dominance? Of course not. Evidence suggests that women living in the third world do not experience the menopausal symptoms common in the Western world. Clearly diet plays a part. Diets that contain phytoestrogens, such as soya, help block the more powerful oestrogens in the body from attaching to the oestrogen receptors, so that oestrogen dominance does not occur. Such foods cannot replace the missing progesterone, however.

Oestrogen pollutants

A more sinister element is also involved. Not only have most Western women been exposed to synthetic hormones via the pill and other hormone treatments, they also live in a very polluted world. Many of the chemicals in our food and environment, including pesticides and substances found in plastics, hair dyes, cosmetics, spermicides, drinking water and even breast milk are like oestrogen, or oestrogenic, and are capable of having effects similar to oestrogen in the body. They have come to be called xenoestrogens (foreign oestrogens). Dr Lee was not alone in believing that men, women and children in the Western world now get a thorough overdose of toxic and highly undesirable oestrogens.

These xenoestrogens are very potent. Dr Lee believed that one consequence may be that women exposed to these chemicals used up the eggs in their ovaries too quickly, often reaching a state of 'burn out' by their mid 30s, far younger than nature intended. After that they would have periods but would no longer ovulate or only occasionally, so that for the next 15 years or so until menopause they would not be making progesterone and would suffer the symptoms of oestrogen dominance: infertile, uncomfortable and with an increased risk of breast and endometrial cancer.

Interestingly it is also in the mid 30s that osteoporosis often silently begins. And, although nutrition and exercise are an important part of maintaining bone health, Dr Lee believed that osteoporosis was primarily a disease of progesterone deficiency. While oestrogen can only slow down the loss of bone in a very limited way, it is almost certainly progesterone that stimulates the cells, called osteoblasts, which are responsible for laying down new bone.

In view of all the evidence, it does not seem that women should expose themselves to yet more oestrogen by taking HRT. But are they not protected by the synthetic progestogens that are included in this treatment? No! Although a progestogen was originally added to HRT formulations to protect women from the increased risk of endometrial cancer, it has been shown to do the opposite. Synthetic progestogens can cause cancer (unlike natural progesterone which has been shown to be protective) and they have many other toxic side effects.

Rebalancing naturally

So what can women suffering from hot flushes, depression, fatigue, middle-aged spread, creeping osteoporosis and other menopausal symptoms do?

In the first place a good diet, high in fresh and preferably organic vegetables, and low in dairy products and meat, will establish a sound base. Women who have eaten healthily for several years, especially vegetarians, sometimes pass through menopause without bother. Xenoestrogens concentrate in dairy and meat fats, and synthetic oestrogens are often given to cattle as growth promoters. So if you eat meat, try to buy from organic sources and remember that we need much less protein than we think as we grow older. Beans and root vegetables are also good foods; some of these may turn out to contain progesterone precursors. Look out for yams. They will not necessarily be high in diosgenin (Mexican yam is a particular source) but they may contain some.

Nutrition

Nutritional supplements can also be very helpful at this time. Many women find that vitamin E reduces hot flushes, and there is also evidence that vitamin C with the bioflavonoid hesperidin can reduce them too.

GLA, found in evening primrose oil and even more plentifully in starflower oil, provides the raw material for the body to make the protective and calming prostaglandin, PGE1. PGE1 can be helpful in modifying hormonal symptoms; for instance, starflower oil can often relieve premenstrual problems. But to give your body the best chance of making PGE1 you also need the vitamins and minerals used in its production. Two minerals; zinc and magnesium; and three vitamins; vitamin C, vitamin B3 (niacin) and vitamin B6 (pyridoxine or its active form, pyridoxal-5-phosphate); are needed. It also helps if your diet is low in animal fats because they can block the synthesis of PGE1.

Herbs for women

There are also some very useful plants and herbs. It is possible to take Mexican yam as a supplement. No one yet knows for sure what the body does with the natural sterols it contains. It has now been proven that Mexican yam cannot be converted into progesterone in the body. However, it acts instead as a phytoestrogen helping to block the more powerful oestrogens in the body from attaching to the oestrogen receptors.

The Chinese herbs dong quai (a form of angelica), hops and schizandra have been used for women's hormonal imbalances for thousands of years and will probably be found to contain phytoestrogens. In China, ginseng is not recommended for younger women, but when a woman reaches menopausal years it is considered very good, particularly for increasing vaginal moisture and bringing back libido.

Bone food

For taking care of your bones, you should look for a good source of calcium (800-1000mg a day including what you get from food), magnesium (300mg) and 400iu of vitamin D. The mineral boron is useful too and since bone is fundamentally made from connective tissue vitamin C is also essential. More recently 45µg vitamin K2 has also been shown to have a positive effect on bone. In choosing supplements always remember that a good multivitamin/mineral formula should be your foundation to which you can add the right combination formulas, vitamins or minerals for your specific needs, in this case probably a good menopause supplement and a good bone nourishing or 'osteo' formula plus vitamin K2.

Symptoms of oestrogen dominance

John Lee's theory was that many women suffer from excess oestrogen, which is not being 'opposed' by progesterone. The excess may come from chemical pollutants, the use of the pill, HRT or other hormone treatments or from a lack of progesterone. In each case progesterone appears to rebalance the symptoms. Oestrogen is a valuable and necessary hormone but in excess it increases the risk of cancer of the breast and womb and triggers the symptoms below:

- Water retention, oedema
- Breast swelling, fibrocystic breasts
- Premenstrual mood swings, depression
- Loss of libido
- Heavy or irregular periods
- Uterine fibroids
- Craving for sweets
- Weight gain, fat deposition at hips and thighs

Understanding osteoporosis

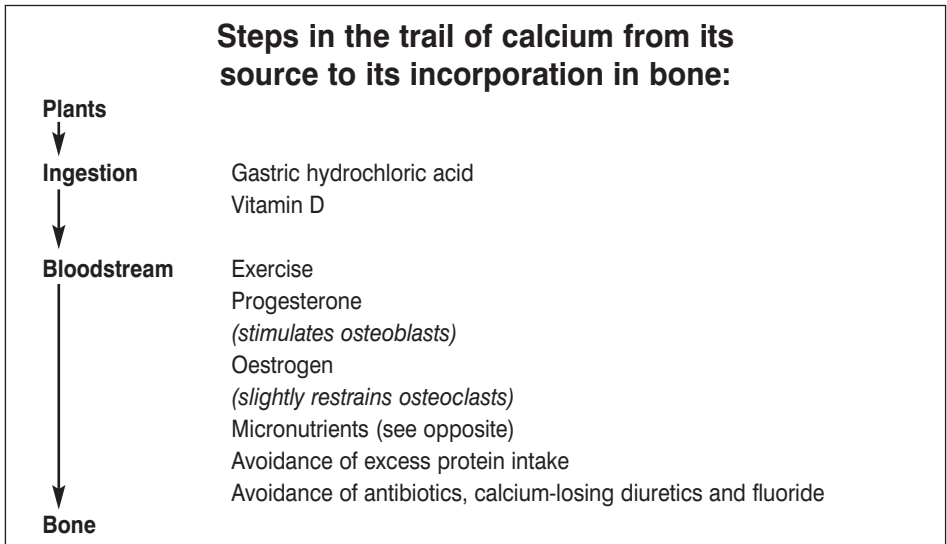
By John R Lee MD. Edited by Dr D F Smallbone.

What bones are

Bones are living mineralised support tissue of the body. They are constantly being made, un-made (resorbed) and made anew. This process is carried out by osteoblast cells which make new bone and osteoclast cells which resorb previously made bone. Old bone can become brittle and more likely to fracture. As old bone is resorbed by the osteoclasts, new bone is made by the osteoblasts to replace it. Compact bone (i.e., cortical bone) of the arms and legs has a “turnover” time of 7 years usually and the more porous lighter bone (i.e., trabecular bone) of the vertebrae, heel bones, and ends of the long bones has a “turnover” time of 2 years usually. In this manner bones can grow in size and strength, can heal themselves if they are damaged or broken, and can remain strong throughout life.

The calcium chain

Bone can be thought of as mineralised cartilage. It is made of collagen fibres (which require vitamins C and A) that are mineralised for strength. The primary mineral involved is calcium. Calcium from the soil is taken up by plants. Upon ingestion, the calcium is absorbed into the bloodstream (a process which requires gastric hydrochloric acid and vitamin D). From the blood stream, the calcium will be incorporated into bone as needed if the bone cells are healthy and are provided with the proper nutrients and hormones. In humans, proper balance of bone resorption (by osteoclasts) and new bone formation (osteoblasts) is controlled by the gonadal hormones, i.e., oestrogen and progesterone for females and testosterone for males. In addition, the stress of exercise is a stimulant for new bone formation. This chain of events in females is represented in the diagram below.



Important micronutrients

Minerals

- Magnesium supplementation recommended
- Zinc supplementation recommended
- Manganese, boron, silica and copper are available from unprocessed food diet
- Fluoride is toxic to osteoblasts and should be avoided

Vitamins

- D supplementation usually required
- C (ascorbic acid) supplementation usually required
- A (beta carotene) supplementation recommended
- B6 (pyridoxine) supplementation may be recommended
- Vitamin K2 supplementation is recommended

Protein problem

Excess dietary protein causes negative calcium balance, i.e., more calcium is lost in urine than is taken in by ingestion. Proper intake is approximately 1.5-2oz/day for 10 stone (63.6 kilo) person. Meat and cheese are about 25% protein by weight.

The role of oestrogen and progesterone

Progesterone production starts at the time of ovulation. If conception does not occur, progesterone levels fall again. This fall helps triggers menstruation.

If conception does occur, progesterone levels continue to rise. This is necessary for the survival of the embryo. Progesterone levels remain high throughout pregnancy.

What causes osteoporosis

- A. During the many years of menstruation, bone building may be deficient due to inadequate mineral and/or other nutrient intake. Poor teenage diet with low mineral intake predisposes to osteoporosis in later life. This is especially true of the average diet consumed by many women, in which the major calorie intake consists of refined starches and processed foods. The major deficiencies are likely to be the following: vitamin C, zinc and magnesium. In addition, there may be excess protein intake which promotes a negative calcium balance in which more calcium is lost in the urine than is taken in by the diet. This leaches calcium from bones. Excessive phosphorus intake from drinking fizzy drinks such as cola also leaches calcium from bones. Furthermore, exercise is inadequate in many women. Bones not put to the physical stress of good load bearing exercise universally lose calcium. Finally, cigarette smoking is associated with a loss of bone mass. Thus, many women arrive at their menopausal years with considerable (20-30%) loss of bone mass.
- B. During the 5-8 years before menopause, many women have anovulatory menstrual cycles, that is, they are not ovulating each month and therefore not producing progesterone for those months despite the appearance of normal cycles. The loss of progesterone reduces the activity of the osteoblast cells and thus less bone building goes on. This tips the balance in favour of osteoclast dominance (bone resorption). Osteoporosis is occurring despite the presence of adequate oestrogen.
- C. With menopause the ovaries no longer produce sufficient oestrogen; this allows a modest increase in osteoclastic bone resorption and thus accelerates the osteoporotic process. If oestrogen is supplemented, this accelerated bone resorption can be slowed; this effect of oestrogen, however, is insufficient to reverse bone loss. Furthermore, this oestrogen effect lasts only for 3-5 years and has only a minor effect in the whole osteoporotic process. The main cause of osteoporosis is the lack of bone building secondary to progesterone deficiency. Osteoporosis cannot be reversed except by restoring adequate progesterone.

Prevention and treatment of osteoporosis

1. Diet of whole grains (taken separately from mineral-containing foods), fresh vegetables (especially leafy greens) and limited red meat. Avoid refined starches and fizzy drinks. No cigarette smoking.
2. Supplement adequate vitamins C, D, K and beta carotene; and minerals magnesium and zinc. Calcium from the diet is usually sufficient, but one 300mg supplement/day is OK. If aged over 70 years, consider a supplement of betaine hydrochloride (hydrochloric acid) with meals.
3. If postmenopausal and having no medical or family history of breast cancer, endometrial cancer, clotting disorder, diabetes or obesity, a small dose of supplemental oestrogen may be considered. It is unusual for this to be recommended unless symptoms of vaginal dryness or hot flushes are present.
4. Transdermal (topical) progesterone cream can be applied to alternating skin sites daily for 2-3 weeks each month if still having periods, or continuously if not. Treatment progress should be monitored by serial bone density of lumbar vertebra at 6-12 month intervals, using dual photon or dual energy X-ray techniques. Quantified computer tomography 9QCTO can be used also, but such tests are more expensive and involve higher doses of X-ray.

What about other treatments?

A. Synthetic progesterone

A number of progesterone-like drugs (called progestins) have been synthesised from progesterone, testosterone, or de novo. They all are inferior to natural progesterone in bone building and cause unwanted side effects, some potentially quite serious. These compounds should not be used.

B. Etidronate and other bi- (or di-) phosphonates

These drugs impair osteoclast function and thus reduce bone resorption, leading to a gradual (in 2 years or so of use) increase in old bone and an apparent modest increase in bone mass. The accumulated old bone is, however, not good bone and results in an increase in hip fracture incidence by the third or fourth year of use. These drugs are complicated to use, expensive, and their long term toxicity is presently not known.

C. Calcitonin

In humans, calcitonin is a hormone made in, amongst other places, the thyroid gland. Post-thyroidectomy patients experience osteoporosis no worse than women with intact thyroids. Osteoporosis is not a disease of calcitonin deficiency. However, injections of calcitonin will stimulate bone formation and are recognised as being a treatment for Paget's disease, a rare disease of bone. The drug is extracted from salmon pituitary glands. When injected into humans there is a brief period of new bone formation. However, one's immune system rather quickly develops antibodies against this salmon extract and blocks further benefit. When discontinued, one's bones quickly lose the temporary benefit that had been gained.

D. Fluoride

Because fluoride binds to calcium, it was thought by some to be of some potential help in increasing bone calcium. When used in "therapeutic" doses of 30mg or more a day, a modest increase in bone mass does occur, but the acquired bone is of such poor quality that after 3-4 years of fluoride "treatment", hip fracture incidence increases by 300-600%. In addition, fluoride toxicity (gastro-intestinal inflammation, ulcers and bleeding, as well as periarticular pain) is so great that 40% or more of the patients must discontinue the drug. Doctors Riggs and Kleerekoper and others who once touted this treatment now admit it has no place in osteoporosis.

The bone effect of fluoride at lower doses, such as fluoridated water, has been tested in the past few years in 5 good epidemiologic studies* and all 5 studies show that fluoridation increases the incidence of hip fractures. One test (*JAMA*, 12 August, 1992) found that fluoridation increases hip fracture by about 30% in women and 40% in men! Despite spurious claims by some public health officials to the contrary, there are no valid studies that indicated hip fracture protection from fluoride.

Osteoporosis is not a disease of fluoride deficiency. Fluoride is toxic to bones at all levels, including the level of water fluoridation.

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Some basic information on natural progesterone

Please note that the information given below is for information and educational purposes only. Consult a doctor for advice on your individual health requirements.

What is progesterone?

Progesterone is the hormone produced by the female ovary after ovulation. It supports and maintains pregnancy but has other important functions too. It is the precursor to other vital hormones. It is needed to 'oppose' oestrogen and to keep it in balance. Progesterone receptors are found in brain cells, in nerve sheaths and in bone cells, indicating that progesterone is involved in their function. It also appears to be involved in a range of other biological functions.

It is important to understand that a woman's ovaries *only make progesterone when she ovulates*. There is growing evidence that many of today's women are failing to ovulate regularly, particularly after the age of 35. A woman may bleed regularly every month but not be ovulating or producing progesterone.

After menopause, the female body makes little or no free progesterone, in fact the male body makes more. On the other hand, women continue to make oestrogen throughout their lives, even if they have had their ovaries removed. Oestrogen is made by the adrenal glands and in the body fat and the muscle cells. The fall in oestrogen production at menopause is only about 40%. Some obese women produce more oestrogen *after menopause* than thin women do in their pre-menopausal years!

The theoretical basis for HRT is the idea that if women suffer problems during the menopausal years then it must be because they have an oestrogen deficiency. The fact that they have a complete loss of progesterone at menopause has been forgotten. It was Dr John Lee's belief, based on more than 20 years of clinical practice with progesterone, that it is progesterone that most women need, not oestrogen (although some women, he believed, also benefit from a very low dose of oestrogen in addition).

There are three main kinds of oestrogen naturally made by the body (oestradiol, oestrone and oestriol), but only one form of progesterone. In the last 40 or more years, progesterone has largely been forgotten and synthetic versions called progestagens, have been prescribed instead. Many researchers and doctors have erroneously used the name progesterone to mean both progesterone itself or one of the synthetic progestagens. This has led to a great deal of confusion. In all literature provided by the **Natural Progesterone Information Service** the name progesterone refers only to the natural female hormone.

What are progestagens?

Progestagens (called progestins in America) are synthetic hormones that are similar but *not identical* to progesterone. Because a natural substance such as progesterone cannot be patented, it is generally not profitable for a pharmaceutical company to obtain a licence to produce it as a medicine (to license a medicine can cost millions of pounds). But if that natural substance is *slightly changed* it can then be patented and licensed as a medicine.

However, such a substance is no longer 'natural' to the body. Even a tiny change from the natural hormone can result in considerable side effects.

All known progestagens cause particularly undesirable consequences in the body - as can be seen by the long list of side effects listed in medical textbooks. This is because progesterone has a very central role to play in making other hormones. It is like trying to build a jigsaw around the wrong piece. Unfortunately, for many years progesterone has been 'lumped in' with the progestagens and many doctors have assumed that progesterone also causes these serious side effects. Evidence is now clearly emerging that this is not the case.

What is natural progesterone?

Natural progesterone is the hormone produced by the ovaries (and also by the male body). This hormone can also be made in the laboratory from plant sources such as Mexican yam. The result is identical in every way to the hormone produced by the body and is called natural progesterone because it is bio-identical to the hormone the ovaries make.

The process for manufacturing natural progesterone from plant sources has been known since the 1930s. It is true that the natural progesterone now available on prescription has been synthesised – the body also synthesises the progesterone it makes – but it is not synthetic, that is, it is not unnatural. It is the body-identical hormone, progesterone.

Because natural progesterone cannot be patented, for financial reasons it is almost impossible for a natural progesterone cream to be licensed as a medicine. Any progesterone creams sold in the UK must therefore be sold as 'unlicensed medicines' and they are only available on prescription.

Why are women prescribed natural progesterone?

Natural progesterone is prescribed for the many symptoms of progesterone deficiency, in particular for menopausal problems and osteoporosis. It can also be used in the treatment of PMS, low libido, fibrocystic breast disease, uterine fibroids, endometriosis, cervical hyperplasia and ovarian cysts and can be helpful in some cases of infertility. For further information see "Natural Progesterone, the Multiple Roles of a Remarkable Hormone" by John R Lee MD and other books available through the **Natural Progesterone Information Service**.

How safe is natural progesterone?

Since this is the hormone that nature itself produces, when it is only given in the dose that nature herself supplies, it is considered to be extremely safe. During the second half of her cycle a woman's ovaries produce approximately 20mg of progesterone a day. But during pregnancy the level of the progesterone produced by the placenta rises to more than 300mg. Since nature considers it safe to expose women and their babies to such very high levels of progesterone, this is an indication of the high safety level of natural progesterone. The mistaken belief that progesterone can cause difficulties is based on confusion between the normal function of progesterone and the toxic side effects of synthetic progestagens. In fact, many progestagens are closer in function to testosterone or oestrogen. The reports of scientific research using synthetic progestagens confirm that these synthetic hormones have a devastating effect on the body. But there is no clinical evidence to show that natural progesterone, when given at the normal physiological level, is unsafe to use.

Why is natural progesterone often used as a cream?

Independent laboratory tests show that progesterone absorbs very well through the skin (as do other hormones, which is why hormone patches are common). It is absorbed into and stored by fat cells, which then supply a regular small dose into the bloodstream. When it is given by mouth a very much larger dose has to be given because it is mostly destroyed by the liver as soon as it is absorbed. Dr Lee believed a good progesterone cream should supply about 20-30mg of progesterone a day. This is the amount that healthy ovaries produce during the luteal phase (the second half of the menstrual cycle).

Progesterone is also available in the UK as suppositories, which can be used either anally or vaginally. However, the dose of progesterone supplied by suppositories currently available is 10-20 times higher than the ovaries would normally supply. Dr John Lee's research and clinical results are based on prescribing progesterone at the normal physiological level and no higher.

What do you do if you're already on HRT and want to switch?

Consult a doctor who can advise and assist you with the switch to natural progesterone. HRT normally comes in two parts, one supplying oestrogen, the other progestagen.

1. Oestrogen

Do not stop taking the oestrogen component of HRT right away! Withdrawing from oestrogen overnight could trigger severe menopausal symptoms. It is important that, guided by a doctor, a woman withdraws from the oestrogen component of HRT over a period of months.

2. Progestagen

If you and your doctor have decided to opt for the natural hormone then, in Dr Lee's experience, you can stop taking the progestagen immediately and start using natural progesterone, in the normal physiological dose (20-30mg), right away.

Do women need to take oestrogen as well?

In Dr John Lee's clinical experience (unless they are in the process of changing from HRT), **most women do not need to supplement with oestrogen in addition to progesterone.** He recommended that menopausal women try using progesterone alone for at least 3 months before deciding whether oestrogen should also be used. Dr Lee maintained that there are only 2 reasons why oestrogen might be prescribed in addition to progesterone – if a woman is either suffering from vaginal dryness or hot flushes that are not completely controlled by progesterone – and he believed women should try progesterone alone for 3-4 months first. In most cases oestrogen will not be needed. Since oestrogen can be toxic, only the smallest possible amount should be used, much less than is normally prescribed for HRT.

If I need oestrogen which kind is best?

Dr Lee believed that the oestrogen patch offers the safest method because the dose can be controlled precisely. He suggested reducing the dose even further by sticking the patch over a hole cut in a sticking plaster so that only part of the patch is in touch with the skin. This is a method developed by his patients to find the smallest dose of oestrogen that would balance their symptoms. **He did not recommend combined natural progesterone and oestrogen creams** because it is not possible to vary the dose of the oestrogen.

If you do use oestrogen cream you should be aware that the less well known form, oestriol (or estriol), although safer as far as cancer is concerned, is not advisable while trying to reverse osteoporosis.

Are there any side effects with natural progesterone?

If a woman is not making her own progesterone then supplying it at the level that the ovaries would normally produce does not cause side effects. However, in the first few weeks of starting to use the natural hormone, a few women may temporarily experience an exaggeration of their previous 'oestrogen dominance' symptoms such as breast tenderness, headaches or depression. This is rare and generally passes after the first month, taking longer in a very few cases. It probably happens because progesterone sensitises the body's oestrogen receptors (and vice versa), making the oestrogen in the body more effective. This is why a woman on HRT must reduce her oestrogen intake by half as soon as she begins to use progesterone, as the oestrogen will have a far greater effect. It is more likely to occur if a woman has a build up of oestrogen, whether from chemical pollutants (many of which are oestrogenic), from the pill or HRT, or because she has not been producing her own progesterone (which normally keeps oestrogen in check) for a considerable time.

Women who run into this problem sometimes find it helpful to increase their progesterone for a while to bring their oestrogen into balance more quickly. Other women have found it more comfortable to cut back and build up slowly. A very small number of women find progesterone is not for them.

How do women feel on natural progesterone?

Most women feel very comfortable on natural progesterone. Most shed their menopausal symptoms – hot flushes, mood swings, etc. They tend to feel energised. They may lose some weight, especially around hips and thighs. Water retention is also generally reduced. Headaches, especially if they are related to your cycle, are often much helped. A lot of women report feeling more 'up' in mood (remember that progesterone is very high in late pregnancy, a time when many women feel good). Cravings may also be reduced. Many women experience reduced breast tenderness and, given time, can get rid of breast cysts. We also know from Dr Lee's published results that bone density increases. We have heard of women being freed from the pain that osteoporosis can inflict. However, although most women's experience is very positive, there are women who find it difficult, especially at first, and there are a few women that it doesn't suit at all.

Can progesterone help prevent or reverse osteoporosis?

Over the course of many years, Dr Lee collected the bone mineral density scans of thousands of his patients, showing quite objectively that their bone density increased significantly. In a published study in *Medical Hypotheses* (35, 314, 318, 1991) he reported that a group of 66 patients increased their bone density over 3 years by an average of 15%. We hear similar stories from women in the UK with very encouraging increases in their bone density. But remember that there are other factors needed to build bone, including calcium, magnesium, vitamin D, vitamin K and vitamin C. Weight bearing exercise is also important. Progesterone does seem to help with the pain of osteoporosis and may help relieve pain in some cases of arthritis. See "*Natural Progesterone, The Multiple Roles of a Remarkable Hormone*" by John Lee MD.

Can progesterone help PMS?

Yes, in many cases it can be very helpful, especially if you know you're not ovulating. (One way to test this is to take your temperature each morning when you wake. If you notice a distinct temperature rise around the middle of the month you have probably ovulated.) You can also have your progesterone levels tested around day 21 of your cycle (counting the first day you bleed as day 1), to see if you are making enough. If it is low then additional progesterone will probably be very helpful. If you are a young woman you may only need to use progesterone for a few months and then stop; in Dr Lee's experience this can sometimes bring a woman's hormone function back into balance.

Women with PMS may also need a nutritional supplement that contains magnesium, zinc, vitamin B6, vitamin B3, vitamin C and biotin, because these nutrients are needed to make the prostaglandin PGE1 which helps relieve conditions like PMS. The herbs agnus castus, dong quai, white peony and black cohosh, as well as the omega 6 fatty acid gamma linolenic acid (GLA), found in starflower or evening primrose oil, are also helpful.

Can it help endometriosis?

Natural progesterone can be used to prevent menstrual bleeding, which triggers the pain of endometriosis although it is not the cause. In his book "Natural Progesterone, The Multiple Roles of a Remarkable Hormone" Dr Lee explains how, by applying sufficient progesterone from day 10 to day 26 of the menstrual cycle, bleeding and pelvic pain will be considerably reduced and, over a period of time, the body has a chance to recover. None of his patients following this regime have had to resort to surgery. This must be done under the supervision of a doctor.

Can natural progesterone be used after breast cancer?

There is evidence that if surgery for breast cancer is performed in the second half of a woman's cycle (when her progesterone is highest) she has less chance of metastases (the development of further cancer). This is part of the evidence that shows that progesterone is protective against cancer. A 30-year retrospective study at the prestigious Johns Hopkins University in America found that women who were progesterone deficient had 5.4 times more incidence of breast cancer and 10 times more deaths from cancer of all kinds (*Am J Epidem.* 114, 2, 1981). This again indicates the protection that progesterone gives against cancer. Finally, French studies (*Fertility and Sterility* 63: 785-91) show that progesterone actually slows the rate of mitosis (cell division) in breast duct cells. Based on this evidence and on his many years of experience with his own patients, Dr Lee believed that it is protective for a woman to use progesterone after cancer (applied in rotation around the body as indicated before, **not applied to the breasts**). If a woman is taking tamoxifen, which is a weak oestrogen itself, progesterone can help protect her from any risk involved in this treatment. The above information is for interest only and in any post-cancer treatment, a woman should be advised by her doctor.

Can I take use natural progesterone after a hysterectomy?

The standard medical view is that progesterone is only needed for pregnancy and to protect the endometrium or womb. However, it is now known that progesterone has many other functions in the body. Progesterone receptors are found in the brain, in nerve sheaths, and in the cells which make new bone, to name a few. In addition there is growing evidence that

progesterone can protect against breast cancer. So a woman who has had a hysterectomy may well want to talk to her doctor about taking progesterone to help protect her bones and her breasts, as well as to smooth her way through the menopause.

What about facial hair?

Progesterone is a precursor to other vital steroid hormones in the body. When women's bodies don't make progesterone their adrenal glands make the hormones they need from a different precursor called DHEA. This pathway leads to the formation of more androgenic or male hormones (which women make anyway to a small extent) and a woman may develop a hairy chin or legs and lose some hair on her head in typical male pattern baldness as a result. Supplementing with natural progesterone may help this problem over time.

What about fertility?

Progesterone can help some forms of infertility, particularly those due to low progesterone in the second half of the cycle. See Dr Lee's books.

What about men?

Progesterone is not a feminising hormone and will not harm men. In fact their bodies make it too. Although men do not seem to suffer deficiency of this hormone as women do, it has been reported to help restore male libido. It may also help certain cases of men suffering from osteoporosis and prostate problems.

Can men benefit from progesterone?

By Dr. David Smallbone M.B., Ch. B., L.R.C.P., M.R.C.S., M.F.Hom., F.C.O.H.

Introduction

It is important to understand that progesterone is not solely a female hormone. Although in women it is responsible for protecting the unborn child from rejection during pregnancy, progesterone performs many other functions in both men and women. Men's bodies produce progesterone in the adrenal glands and in the testes, although the amount produced is less than that made by women of menstruating age when they ovulate.

Secondly, it is important for men to know that progesterone has no feminising effects on the male body. In fact, progesterone normally increases libido in men (and in women). However, high doses may inhibit sperm production and progesterone may, therefore, have a relative contraceptive effect.

Prostate problems

Benign prostate hypertrophy (BPH), the enlargement of the prostate gland, is a common problem in men over 50. It appears to be due to the failure of cells to die off when their useful life is over. Although benign in itself (apart from the inconvenience), prostate enlargement can develop into cancer of the prostate over time.

The male hormone, testosterone, is not itself in a particularly active form. For full action, testosterone needs to be converted into di-hydrotestosterone (DHT), which is some 100-fold more active. However, any excess DHT needs to be neutralised or damage may follow, including cancer cell production. Progesterone appears to play 2 distinctly positive rolls in preventing prostate disease. The first is that progesterone inhibits an enzyme called 5-alpha reductase, which governs the conversion of testosterone to DHT, and thus prevents excess DHT from being produced.

Secondly, progesterone plays a role in reducing the risk of cancer in both men and women. All cells have a definite lifespan and upon reaching that degree of maturity, they commit suicide. This event is known as apoptosis (the second "p" is silent). If cells persist beyond their "sell-by" date, they are more prone to become cancerous and when they divide the new cells they produce are more likely to be abnormal and potentially cancerous. Both oestrogen and testosterone are cell growth promoters. This is their role. We now know that oestrogen (when unopposed by progesterone) influences the genetic coding in oestrogen-responsive cells and turns apoptosis off - thus the cells live too long, produce too many 'daughter' cells and potentially too many mutant cells. It is probable that testosterone has a similar effect on cells. It has also been shown that progesterone influences the genetic coding in cells in the opposite way, switching apoptosis back on again. When oestrogen and progesterone (and probably testosterone and progesterone) are in balance, cells should die on time and before they produce abnormal progeny.

Although progesterone almost certainly protects men from excessively active testosterone (i.e., DHT), it will also protect men from the toxic xeno-estrogens, now plentiful in the environment and chemicals commonly used in households. In fact, Dr John Lee believed that today's near epidemic levels of BPH and prostate cancer were due to excessive exposure to

these xeno-oestrogens. Sources of xeno-estrogens can include commercially raised beef, chicken and pork, spermicide, detergents, soft plastics, pesticides, herbicides, personal care products and even tap water.

Male pattern baldness

The onset of the male pattern of baldness is often governed by hereditary factors. In these cases, there does not appear to be any response to natural progesterone. However, in cases where there appears to be no hereditary tendency, the baldness may be due to over-conversion of testosterone into DHT. In these cases, progesterone seems to help diminish the rate of loss and, sometimes, may help reverse the process.

Osteoporosis in men

Osteoporosis is a disease of both genders. The process is very gradual and shows few symptoms in the early years of its progress. Often the first sign is a loss of height, very commonly quite dramatically and of a significant degree – up to 3 or 4 inches. The best policy is to pre-empt this occurrence by preventing the onset of osteoporosis.

In women, oestrogens suppress a group of bone cells called osteoclasts, preventing them from *re-absorbing* bone. A certain amount of re-absorption is necessary, however, because 'old' bone becomes brittle and needs replacing, or it is likely to shatter with even a minor impact. Where re-absorption has taken place another group of cells, called osteoblasts, are stimulated to form new bone where the old has been removed. We now also know that osteoblasts have progesterone receptors in their cell walls and that these bone-formers also seem to be stimulated by progesterone. This is why progesterone is thought to be helpful in preventing osteoporosis.

In men, as in women, oestrogen (which men's bodies also produce) suppresses the osteoclasts and, therefore, ultimately also the bone-forming osteoblasts. But testosterone also plays a role in promoting bone formation, and the laying down of denser bone. It now appears that there are progesterone receptors in men's osteoblasts too. Thus, in men, when testosterone levels fall later in life, it is possible that bone density can be maintained by the use of progesterone.

As in women, the use of natural progesterone should be started well in advance of potential osteoporosis, for example in late 50s or earlier, to prevent onset developing in late 60s and early 70s.

How much progesterone for men?

Men's bodies produce less progesterone than menstruating women and the dose should therefore, be lower. Dr John Lee, who prescribed progesterone for men with BPH and prostate cancer with reported success, recommended that men use 8-12mg of natural progesterone daily.

Case studies

A.P., 44, lives in a picturesque Wiltshire town with her husband and their 3 children. Within her busy schedule she finds time to teach Latin part-time at an independent local school.

“I started the menopause early, experiencing hot flushes at around 37, a year before I had my youngest child. My doctor said I was perimenopausal, and although it wasn’t exactly great news – I had always associated menopause with ‘middle age’ and beyond – I was grateful I had 3 lovely children, and didn’t plan to have any more. The weird thing was that there was no particular reason for the premature symptoms – I was very healthy and fit. Consequently, I had no sympathy from friends and contemporaries.

“My GP said I should go on HRT, which I did, and it immediately zapped the hot flushes. The bad news was that I started to suffer from painful, debilitating headaches that came with a feeling of nausea, like migraine. I also felt permanently premenstrual. Under the guidance of my doctor, I tried other forms of conventional HRT but shunned the idea of implants, as I would have been stuck with whatever reaction they caused for the 3-month duration. Then I saw a magazine editorial praising the benefits of natural progesterone. It mentioned a DIY hormone test performed with saliva, instead of the blood test, which you can only have through GPs. I bought the special kit and sent the sample off to America to be analysed.

“When the results came back I contacted a private doctor, who told me the dose I needed to address my symptoms. Unfortunately, when I went back to my GP, he wouldn’t give me a prescription, but instead prescribed a pessary-style product that was messy – and disastrous from a self-esteem point of view. The only answer was to go back to my private doctor, who gave me a private prescription for a natural progesterone cream.

“The results were brilliant; my headaches stopped immediately. I get the occasional hot flush, but it’s timed in with my monthly cycle and, to be honest, negligible. This is my only symptom now and it’s a small price to pay. I feel more energised and I sleep better thanks to the disappearance of the headaches.

“I have to be vigilant about maintaining the cream correctly – not to run out of supplies and interrupt the flow. I have been using it for 4 years now and, 3 years ago, I went for a bone scan, which showed very good results. So, I really trust my natural regime; I feel it is safer than conventional HRT and I’m confident that I’m not exposing myself to increased risk of breast cancer. Not only that, along with a healthy diet and regular exercise, it is a reliably preventative measure for my bones.”

Jane C., 45, is an ordained interfaith minister and spiritual counsellor. She lives in the countryside with her husband and 2 dogs.

“I had an early menopause at the age of 30 and when I eventually took natural progesterone it was as protective maintenance for my bones. What I wasn’t aware of was the added bonus that it would enhance my health holistically. The premature menopause had made it difficult for me to conceive and I underwent a programme of fertility treatment. But the treatment proved unsuccessful and with that disappointment came symptoms of stress and depression. The action of the progesterone helped balance my hormones and emotions but the benefits were physiological too: My negative state of mind was suppressing my immune system – I used to feel tired all the time and was always coming down with something. My general wellbeing improved favourably once the progesterone got to work.

“I used the natural progesterone as an ongoing form of treatment and within a few months I didn’t feel tired and drained in the same way. My energy levels increased and I ceased to be a magnet for all the viruses doing the rounds. I am convinced that the natural therapy boosted my immune system and that the treatment may have kicked in sooner had my periods not ceased around 5 years before.

“Mindful of the threat of osteoporosis, I had a bone scan just before I started taking progesterone. I’m really glad I had the examination as my bone density was below the acknowledged average ‘line’. A few years into the treatment, I had the scan again. Amazingly, this time my bone quality was *above* the accepted line. My specialist said “whatever you’re doing, keep doing it”! As far as I’m concerned, HRT doesn’t prevent bone loss, it just helps to maintain the status quo. This is why natural treatment is so valuable – I’ve actually *increased* my bone density.

“To maintain all-round health, I eat a balanced diet and do a lot of walking – my husband and I love walking our 2 dogs. In fact, last year I noticed some vaginal discomfort that increased as I walked. On my doctor’s advice I tried the progesterone cream internally – and it sorted it out. My GP is somewhat more cynical. He wouldn’t prescribe natural progesterone until, he says, the clinical trials are peer-reviewed and published. In the meantime, I recommend the treatment to anybody and everybody.

“I believe that the pressure from modern day society can upset our hormonal balance, making it harder to conceive. If I’d known about natural progesterone when I embarked on that course of fertility treatment, it may have regularised my periods and enhanced my chance of conceiving.”

Diana G., 64, lives in the country with her husband Tim, 2 horses, 2 dogs, 2 cats and 1 gander.

“When I was breast-feeding my first child I noticed a hard lump in my right breast near the sternum. Naturally, I was concerned, but when I went to my GP, he told me to go home and forget about it. I did just that and since then I have breast-fed two more children. But the lump never really went away and when I started to physically experience strange sensations I went back to my doctor. At the time I had reached 50 and was embarking on the menopause.

“This time round, my doctor was more attentive. He conducted exploratory tests – which showed serious results: I underwent a mastectomy and removal of the lymph glands – several of which were affected with cancer. My surgery was followed by a course of chemotherapy and years of taking prescribed tamoxifen. During this time I experienced hot flushes, along with tiredness and lack of energy, which undermined my quality of life.

“Eventually I gave up on the tamoxifen. At the same time, I heard favourable reports about treatment with natural progesterone, which struck me as a much more sensible way of addressing my symptoms. I read as much as I could find about natural progesterone and attended a UK lecture given by Dr John Lee, the American expert who has written several books on the subject.

“I was also recommended to contact a private UK doctor who worked with natural progesterone. After a comprehensive consultation he prescribed a natural progesterone cream. I have been using the preparation for more than 6 years, and am pleased to say that my quality of life now is excellent. All along, incidentally, my GP has refused to prescribe progesterone cream, although I understand that some doctors will.”

Dynamic therapist Rachel M., 49, lives with her husband in the north of England. She is a qualified reflexologist and Bach Flower practitioner and works in private practice at home and in health clinics. She has also worked in psychiatric care. She reports:

“I heard about natural progesterone through a meeting at the Association of Reflexologists, where Dr David Smallbone was giving a talk. This rang a bell, as I had attended a lecture several years ago given by Dr John Lee. I remember being really taken by what he was saying and thinking ‘when the need arises, I’m going down this road’.

“When I was 47, I experienced some niggling signs – nothing major – like localised itching and heavier, more painful and erratic periods. I got in touch with Dr Smallbone to see if there was a case to begin treatment. I did a natural saliva test, available from a healthcare manufacturer, and sent it to the USA to be analysed (I think blood tests from the doctor are time-consuming and I didn’t want HRT anyway).

“On the basis of the results, and having fully read up on the subject, I arranged a consultation with a private doctor. He prescribed natural progesterone cream, which I apply morning and evening. The doctor warned that it might take several months to kick in but in fact my symptoms started to ease off within 6 months.

“Some years down the road I’m extremely happy with my natural HRT regime. I feel so good being free of side effects and menopausal symptoms. The only thing that affects my wellbeing is air travel and when I recently suffered a bereavement the emotional stress upset my cycle. In the main, though, my periods are now normal and manageable, and I’ve scuppered that day-before headache. Not only that but my mood swings have abated too. All very good news for my husband, of course.”

How to obtain natural progesterone

Do I need a prescription?

Natural progesterone can only be legally supplied in the UK with a prescription from a doctor. No progesterone cream has yet been licensed as a medicine in the UK (or elsewhere) so at present these creams are only available as 'unlicensed medicines', which nevertheless require a prescription. Two natural progesterone creams are legally available for prescription at present: Projuven and ProGest cream.

Because these creams are unlicensed medicines, they do not appear in your doctor's drug reference guides. The doctor or pharmacist supplying you with a cream will need to contact the cream's distributors for information on availability and product details. The NPIS Doctor's Pack which we supply (see enclosed literature list) will give your doctor the information he or she needs for prescribing, as well as supplying background scientific information on the use of natural progesterone.

Can I get it on the NHS?

Some GPs will prescribe a progesterone cream, depending on whether they are fund-holding practices who will bear the cost themselves, or whether their Area Health Authority will pay. Alternatively your GP may be willing to give you a private prescription for which he or she will make a charge (£10-£12 is normal) and then you will need to pay for the cream yourself. However, your GP may be unwilling to give you a private prescription and, in this case, you can choose to consult a doctor privately.

Consulting a private doctor

Enclosed with this Handbook you should have received a list of private doctors who regularly use progesterone in their practice (when appropriate), including some that will give consultations by phone or post. When you are given a private prescription always ask for one that covers several tubes of cream so that you save on the cost of going back to the doctor too frequently. The cost of a private consultation varies and it is best to check this when making an appointment.

Personal imports into the UK

If you choose not to consult a doctor at all you can legally import progesterone creams from outside the UK, provided they are solely for your own use. However, it is illegal to supply any product containing progesterone to anyone in the UK without a prescription. You will find a number of websites offering progesterone from America and other countries. The quality of these is not controlled by MHRA and should be considered with caution.

What if I live outside the UK?

In this case, you are subject to the laws of the country you live in. Call NPIS for further information.

What if the doctor suggests HRT?

Your doctor may suggest HRT or other forms of hormone treatment. Should you not wish to use HRT, remember that it is your responsibility to make this clear to the doctor concerned.

Yam is not progesterone

To clear up a common misapprehension, although natural progesterone can be made from yam in a laboratory, the body is not itself able to convert yam into progesterone. Yam can be valuable in hormone balance as it does provide a natural form of plant oestrogen, but it is not a natural progesterone substitute.

How much do I need?

When buying any progesterone product, do check the exact amount of progesterone it contains. Most doctors recommend a dose of 20-40mg per day but this will vary depending on your particular medical needs.

If you are using any other product which also contains herbs or phyto-oestrogens, or tablets or pessaries, you must discuss the dose with your doctor or distributor. All products should provide instructions for use and the amount will vary according to the strength of the product. Your doctor will advise a dose appropriate for you.

What about suppositories?

In addition to progesterone creams, you may also be offered progesterone in the form of suppositories. These deliver a very high dose and are usually prescribed as 200mg or 400mg to be given several times a day. Dr Lee believed that such doses were likely to cause considerable side effects and did not recommend them. Also there are some home-made creams being offered for sale. These are not recommended, as such creams have not been designed for skin absorption. Also the level of progesterone they contain is variable.

How to use natural progesterone

How do you know if you need it?

Progesterone is a safe and beneficial hormone, but you don't need extra if your body is happily producing its own. This book should have given you an idea of whether you have a progesterone deficiency (and therefore oestrogen dominance), but to be really sure check to see if you are ovulating. If you have passed the menopause, of course, you are definitely not making your own progesterone. Using a natural progesterone cream would then be an excellent way to restore your hormone balance and ensure that you have the full protection that a healthy progesterone level brings.

Are you ovulating regularly?

One of the most reliable ways of checking for this is to buy a basal thermometer (like an ordinary thermometer but with a bigger scale and just the few degrees either side of normal body temperature: 98.4 Fahrenheit or 36.9 Centigrade).

Beginning on the second day of your cycle (the day after you start to bleed) take your temperature the moment you wake in the morning. Do this before you talk to anyone, or brush your teeth, or even before you go to the bathroom. Just put the thermometer under your tongue the moment you wake and leave it for 1 minute. Keep a book by your bed to record your temperature. It will fluctuate a little day-by-day, but if you ovulate there will be an unmistakable rise of between half and 1 degree, on or around day 14. If there is no noticeable change in your morning temperature by day 21 you haven't ovulated.

You can also check if you're ovulating by taking a saliva hormone test for progesterone. Take your saliva sample on day 21 of your cycle, when progesterone should be at its peak. See the enclosed NPIS Products & Services leaflet for details of the NPIS Saliva Testing Service.

How to use natural progesterone

We suggest you consult your doctor or health care practitioner before deciding to use a progesterone cream, and for advice on how much to use. These notes provide an information guideline only.

Natural progesterone can be applied almost anywhere on the body but it absorbs best from soft tissue area such as insides of your arms or thighs. It can also be applied to the face and neck. Progesterone is beneficial for the face, but once it has been absorbed from any area of the body it will reach the whole body.

Your monthly cycle table

Day 1 is the first day of bleeding

Day: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
22	23	24	25	26	27	28														

How much cream should I use?

Ideally, your doctor will tell you what dosage you need. Progesterone creams come in different strengths so it is important to know what the correct dosage is.

Many creams provide a measure and tell you how much progesterone each measure provides. If there is no measure you will probably be asked to use a teaspoon as a measure. A reputable cream should tell you how many milligrams (mg) of progesterone it contains, and the total weight of the cream, usually in grams*. You can use these 2 figures to work out how much progesterone there is in a half or a quarter teaspoon.

For example, if a cream contains 1800mg of progesterone and the total cream weighs 60 grams, you will get 20mg from 0.6 grams of total cream. This is approximately a quarter teaspoon of cream.

*Note: 1 gram = 1000mg

How soon will I feel the benefit of natural progesterone?

Each woman is unique. Expect to use a cream for at least 3 months before experiencing full effect.

Will natural progesterone make me bleed if I have passed the menopause?

No, natural progesterone does not cause bleeding. Occasionally, you may experience an unexpected period when first using it. Do not be concerned. This is probably a healthy shedding of your womb lining.

When should I not use natural progesterone?

Do not use natural progesterone if you are pregnant or while you are breastfeeding, except on your doctor's advice.

How long can I use natural progesterone?

For as long as you wish. Natural progesterone will help protect you for many years to come.

Notes

Notes

The Natural Progesterone Information Service

**NPIS, The Oak, Coolgarrow, Enniscorthy, County Wexford. Ireland
Tel: 07000 784849 or 00353 539 232 463. Email: news@npis.info**