

STRESS, PMS & MENOPAUSE

Almost everyone I meet presents with signs and symptoms of hormone imbalance and, in fact, I have never seen a lab test result that has shown optimal hormone balance in anyone. It's a significant concern.

My female clients often complain of suffering from:

- unexplained weight gain
- tiredness & fatigue
- bloating
- headaches
- PMS
- mood swings
- anxiety
- depression
- Polycystic ovary syndrome (PCOS)
- Fibroids

These are among many symptoms that can arise from hormone imbalance. Fortunately, with laboratory testing and a carefully designed lifestyle programme these imbalances can be rectified safely and naturally.

What Is The Hormonal System?

The hormonal system is the body's chemical messenger system. Hormones are molecules that circulate around the body and tell cells what to do and when to do it. There are many different hormones and each one can regulate many functions within the body. If we can't make the right amount of these chemical messengers or if they are unable to do their jobs properly, it is absolutely certain that health problems will occur. Basically, cells won't be able to talk to each other effectively and in some cases, the whole communication system may break down.

Which Hormones?

Most people are familiar with some of the main hormones, particularly the sex hormones oestrogen, progesterone and testosterone. Some may also hear of insulin, leptin and glucagon. These hormones are important in the regulation of blood sugar and body fat storage. Excessive insulin, which can be caused by eating too many sugars and processed carbohydrates, can lead to type II diabetes and many other problems.

Oestrogen is the hormone that makes you female, endowing you with breasts, hips, menstrual periods, soft skin and a higher pitched voice.

Progesterone helps the female body regulate its menstrual cycles; it's essential for creating and maintaining a pregnancy, it balances the effects of oestrogen and most of your other hormones are made from it.

Testosterone is the male hormone (androgen), but women also make it in small amounts. In women, testosterone primarily contributes to sex drive and helps build bone.

Imbalances in the sex hormones can create many symptoms, especially around the periods of natural hormonal change such as menstruation and menopause .

#1 Progesterone Deficiency	PMS, early miscarriage, unexplained weight gain, anxiety, insomnia, painful & lumpy breasts, cyclical headaches, infertility.
#2 Oestrogen Deficiency	Vaginal dryness, painful intercourse, bladder infections, hot flashes, night sweats, memory problems, lethargic depression.
#3 Oestrogen Excess	Puffiness & bloating, rapid weight gain, mood swings, anxious depression, insomnia, red flush on face, weepiness, breast tenderness, heavy bleeding, migraine headaches, foggy thinking, gallbladder problems.
#4 Oestrogen Dominance	Combination of sections #1 & #3
#5 Androgen Dominance	Acne, excess hair on face and arms, hair thinning on head, ovarian cysts, PCOS, hypoglycaemia/unstable blood sugar, infertility, mid-cycle pain,
#6 Cortisol Deficiency (due to stress)	Debilitating fatigue, foggy thinking, thin and/or dry skin, brown spots on face, anxiety/depression, unstable blood sugar, low

blood pressure, dizziness on standing,
intolerance to exercise, sore neck & shoulder
muscles, palpitations, poor sleep.

Table 1 Sex Hormone Imbalances in women (adapted from www.johnleemd.com)

In many cases, the sex hormone imbalances are actually *secondary* to imbalances in other hormones, which in turn are caused by the accumulation of stress on the body.

Stress

What pops into your mind when you hear or read about the word stress? For most people, stress is synonymous with worrying about finances, relationships, disliking work or a key life-event such as exams, the death of a loved one, a divorce, moving house, etc. If these are the thoughts that pop into mind, then give yourself a pat on the back because you're dead right. These issues and events certainly create a lot of stress on the body. However there are also more insidious causes of stress that most people don't know about. These are listed in table 2. Did you realise that each time you eat a bit of cake, breathe in polluted air, have a cup of coffee or a glass of wine, work late, take antibiotics or use your mobile phone you are causing your body stress?

So what's the big deal? Well, all these stresses piled on top of one another can lead to big problems, all relating to the body's mechanism for coping with stress and the hormones that are involved. It's a bit like the straws on the camel's back: if you keep piling them on there, at some point the camel is going to break. I suggest that as you read this article you put a tick next to all the aspects of your life that are currently causing your stress so that you get an idea of the total stress load on your system.

The Stress Coping Mechanism – “Fight or Flight”

Suddenly a cheetah springs from its cover in the long grass and begins to sprint after the unlucky gazelle. The cheetah's heart is pumping fast, it needs to breathe more in order to get oxygen into its body to power its muscles and as such, blood is diverted into the muscles and away from the internal organs to maximise its chances of catching the gazelle. The same thing is happening in the gazelle's body because it knows that if it can't get away, it will die.

Meanwhile, a few thousand miles away in England, three youths jump out on an unsuspecting woman who's minding her own business walking home from the pub. She doesn't have time to run, even though she wants to. They attack her and steal her bag and mobile phone. She notices that her heart is racing, that she's sweating profusely and breathing heavily.

After 30-seconds of high speed scrambling and chasing, the gazelle has managed to escape. The cheetah is lying on the grass panting and the gazelle looks round, twitches its ears a few times and starts eating grass again.

The woman in Leeds is in shock and is shaking, but she's ok. She wakes up the next day after only a couple of hours' sleep and opens her post. In there is an overdue council tax bill and a bank statement, which confirms that she won't be able to pay the bill. Perhaps the attackers also used her card last night to buy things. She sits with a cup of coffee (and three sugars), swigs her painkillers and blood pressure medication down, worrying about the bill. She's also dreading work as she has deadlines to meet and forgot to do some important work for a client. She decides to phone in sick as it's the weekend tomorrow. She notices that her heart is racing and that she feels anxious. She is stressed.

What's the purpose of these stories? Well, as animals we all have a built-in physiological mechanism that helps us deal with stress and it's the same mechanism as the one the gazelle uses. It's basically a survival mechanism and it's known as the 'Fight or Flight' response.

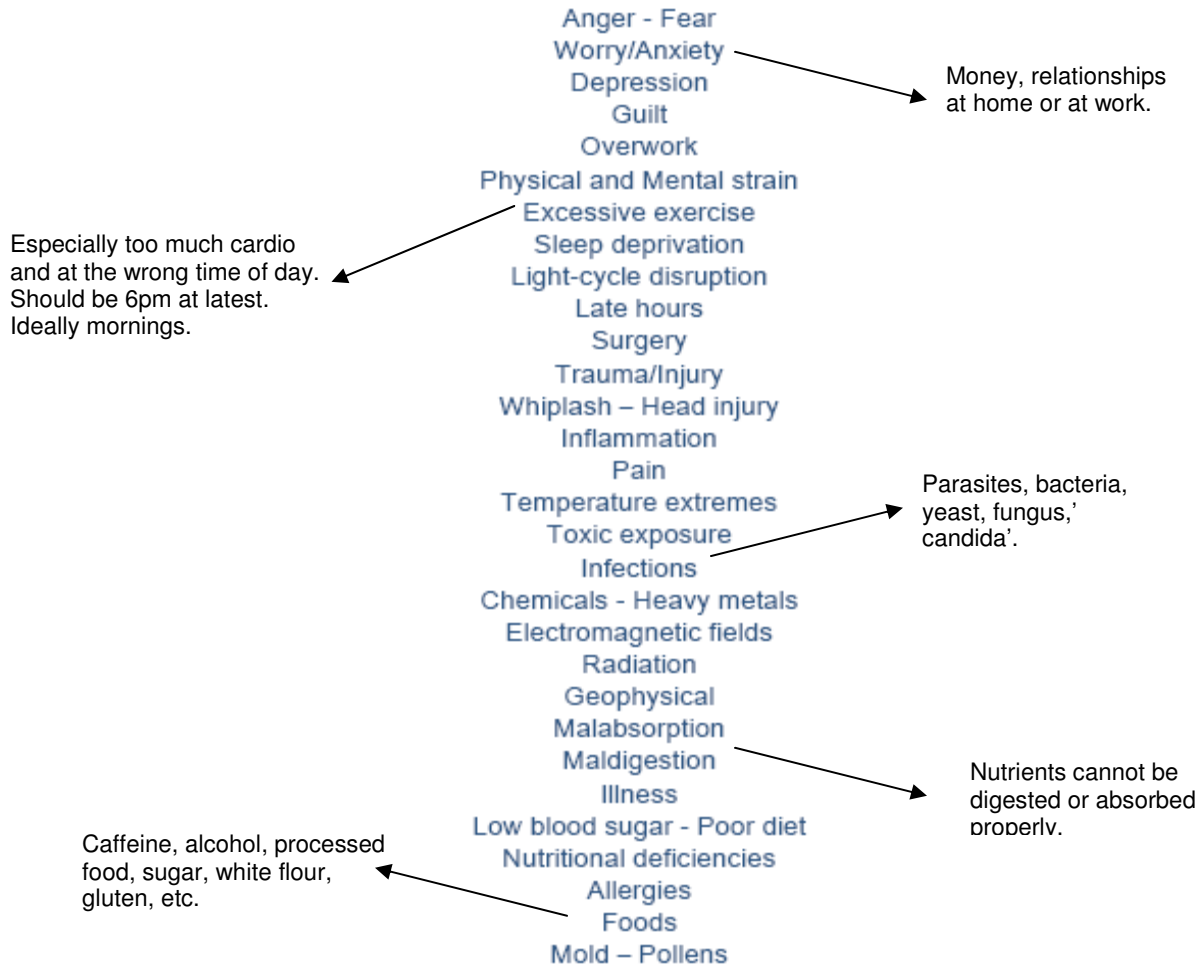
The response to stress is known as 'Fight or Flight' because it is basically a mechanism that is built in to help us survive – to either 'fight' or run away ('flight')!

In the wild, the fight or flight response only lasts for a short time because it ends in either death or exhaustion. In the story above, the gazelle knows the stress is over because the cheetah is exhausted so it can rest assured that it's safe. In this situation the gazelle's body has the opportunity to rest and recuperate, ready for the next bout of 'fight or flight' stress.

Contrast this with the woman who was mugged. She was in a flight or flight situation as she was being mugged. But rather than being able to rest and recuperate, she woke up to more stress and in fact, that stress was there even before she was mugged. This is the big difference. In our modern lives, we are exposed to constant stress. This causes big problems over time. According to many health experts, stress in its many forms is the cause of most chronic illnesses, including heart disease, diabetes, auto-immune conditions and cancer:

As Dr. Ben Johnson, M.D. asserts in *The Secret* “If you put enough stress on the chain, the chain will break”. Illness and disease is a mere sign that body has been subjected to too much stress and hasn’t been given the time or building blocks to regenerate.

Table 2. Potential Sources of Stress



The Stress Hormones

When the body is under stress, a gland in the brain called the pituitary quickly sends out hormones (chemical messengers) that head for the adrenal glands. These hormones tell the adrenals to make and release lots of stress hormones to help deal with the stress.

The adrenal glands sit on top of the kidneys – like little hats - and churn out more than forty different hormones. For the purposes of this discussion we'll only cover cortisol, which the body's major stress hormone.

Adrenal Fatigue

Stage 1 - Stress Overload

The source of stress is irrelevant to your body: its initial reaction is the same. The adrenal glands make more of the stress hormones cortisol and DHEA. This first stage is called hyperadrenia, or over activity of the adrenal glands. Normally when the stress dissipates – think of the gazelle escaping the cheetah - the glands have time to recondition and prepare for the next stressful event.

However, if your stress levels remain high – think of the lady who was mugged, with her debt, bills, coffee, sugar, medical drugs and deadlines at work - your body will remain locked in this first stage of adrenal stress. If your stress hormone levels remain high for long periods of time, your body's ability to recover can be reduced and the ability of your adrenals to make cortisol and DHEA can be compromised.

Another way to look at this is to think of your adrenal reserve as a savings account. If you continually withdraw money from savings and don't replace it, you are eventually unable to recover financially.

During stage 1 of adrenal burnout many people actually feel quite good. The reason for this is that the stress hormones tend to keep us on our toes, awake and feeling energized. Again using the savings account analogy, it feels good to be spending all that money to begin with, while the bank balance is still high.

Fatigue and other adrenal symptoms are signs that your body's reserve has been overdrawn and your adrenals are becoming exhausted. If the stress continues, the high levels of cortisol and DHEA begin to drop. As the high levels of these hormones can no longer be sustained, a person enters into stage two of adrenal exhaustion.

Stage 2 - Fatigue

Some individuals have genetically strong adrenal glands and can maintain good health under high levels of stress for many years. Others may enter into stage two more quickly. Eventually, if we continue to experience excess stress, we enter into stage two of adrenal exhaustion. This transition period usually lasts between six and eighteen months during which the stress response of the adrenal glands is gradually compromised. Under chronic stress conditions the adrenals eventually "burn out." At this point the glands become fatigued and can no longer sustain an adequate response to stress. This condition ultimately leads to stage three or hypoadrenalism, when the bank account has all but run dry.

Stage 3 - Exhaustion

In stage three of adrenal fatigue the glands have been depleted of their ability to produce cortisol and DHEA in sufficient amounts and now it becomes more and more difficult for the body to deal with and recover from stress. Constant fatigue and low-level depression can appear in otherwise emotionally healthy people because cortisol and DHEA help maintain mood, emotional stability and energy levels. As cortisol and DHEA levels are depressed, people experience depressed mental function. Brain function suffers as these hormones are depleted. Both poor memory and mental confusion can be a direct result of adrenal hormone depletion. Many physical symptoms can be associated with adrenal exhaustion (see #6, Table 1).

If adrenal health is not regained, their poor function may lead to diseases such as osteoporosis, autoimmune conditions, diabetes and cancer. If you would like to read about this in further detail, the book '[Adrenal Fatigue](#)', by [Dr. James Wilson](#) is a great starting point.

Stress & Sex Hormones

The sex hormones oestrogen, progesterone and testosterone work together and it is their balance that is the most important. Too much or too little of one or the other can cause a variety of symptoms (Table 1).

Note that the both the stress hormone group and sex hormone group are what we call 'steroid hormones', i.e. they are made from cholesterol. When there is constant stress on the body, more cholesterol gets used up to produce the stress

hormones, thereby leaving less for the production of sex hormones.

Because cholesterol is the precursor for the stress hormones, raised blood cholesterol is often merely an indication that the body is under stress. The body is producing more cholesterol in the liver to help the body deal with the stress.

Eating too much saturated fat and cholesterol in the diet is NOT the usual cause of high cholesterol in the blood. The liver makes around 70% of the cholesterol in the body. If the dietary intake of cholesterol increases, the liver's production of cholesterol decreases, and vice versa.

Hormonal symptoms such as mood swings, irritability, sweet cravings and headaches can be related to the failure of the adrenals to adapt to stress. Female hormone symptoms such as PMS, menstrual cramping, infertility, night sweats and hot flashes can be adrenal related. Many women endure these symptoms without ever imagining that they can easily be resolved.

Many women feel they are on an emotional roller coaster with their female hormones, yet rarely is the role the adrenals play in female hormones explored. In a healthy female body, pre-menopause, the adrenal glands produce around 40% of the sex hormones estradiol (a type of oestrogen) and progesterone. During menopause the ovaries slow down in their production of the sex hormones (especially progesterone) and the adrenals are left to make the rest. In fact, they should now make 90% or more of the sex hormones now that the ovaries have become inactive.

However if adrenal function has been depleted during years of stress from poor nutrition, medical drugs, caffeine, mental and emotional stress, etc. then it's easy to see why women can suffer with so many awful symptoms leading up to and during menopause: their adrenals just can't make enough sex hormones, whether it's progesterone, oestrogen or testosterone, because they are too tired! Even if the adrenals are able to produce enough sex hormones, cortisol actually blocks the action of progesterone, meaning that even more progesterone is required.

Interestingly, it has been observed that the ovaries may produce estrogen for many years after menopause, but their production of progesterone drops to almost zero (this will vary between individual women). This can also lead to oestrogen dominance where there is not enough progesterone to balance the effects of estrogen because the adrenals are too tired to make the progesterone! Symptoms of weight gain, anxiety, painful & lumpy breasts, insomnia, heavy

bleeding, mood swings and bloating can all be caused by this imbalance (see #4, Table 1).

It is also of concern that oestrogen dominance is very strongly linked to the development of breast cancer. For further information on this topic, read any books by Dr. John Lee, M.D. or visit www.johnleemd.com. www.raypeat.com is another useful resource.

Testosterone levels in men also suffer as a result of weak adrenal output, which can cause many symptoms, notably impotence, depression and a loss of muscle mass. Since sex hormone levels drop as cortisol and DHEA levels drop, sex drive diminishes in both men and women.

Healing Your Hormones Naturally

Very rarely do doctors consider the role of the adrenal glands in female hormone balance. Instead, the focus has always been to concentrate on replacing the sex hormones – oestrogen and progesterone – with synthetic versions of those hormones.

When women suffer symptoms of hormone imbalance, Hormone Replacement Therapy may be suggested by their doctor. Some women choose to take HRT and some do not. A major research project called the Women's Health Initiative had to be STOPPED because it revealed that synthetic HRT in the study groups was causing greatly increased incidences of breast cancer, heart disease, thrombosis, gall bladder disease and stroke in menopausal women. You can read other articles on my website that specifically address menopause.

Synthetic hormones are not the same as the hormones made in the body. In order to be sold as drugs by the pharmaceutical companies, the structure of the hormone molecules has to be changed. It is illegal for natural hormones to be patented and there is much more money to be made from unsuspecting women if the product has a fancy name.

Because the synthetic hormones do not have the same structure as those made in the body, the messages they convey in the body may be wrong. Think of it being a bit like two keys that look identical to the eye, but have one tiny difference that makes only one work in the lock. If the synthetic hormone doesn't fit correctly in the hormone receptor's lock in the cell, it either won't work properly or will block the action of the body's natural hormones.

For example, the two types of oestrogen in Premarin taken separately are natural and not synthetic but not all the oestrogen in Premarin is natural to humans. About half of it is human oestrogen, and about half is horse oestrogen, extracted from the urine of pregnant mares. So even though the manufacturers try to market Premarin as natural, it's only really natural if you are half human, half horse! We just don't know how horse oestrogen really behaves in the human body.

Amazingly, synthetic HRT is often prescribed without any testing to determine the hormone levels in women. So very often, women are given hormones when they don't even need them. The prescriptions themselves normally only come in one or two dosing levels. This makes it very difficult to fine-tune the HRT to each individual. It's also important to note that doctors hardly ever test the adrenal hormones to see whether or the adrenal glands are in need of support.

Natural Hormone Replacement

Hormones can be balanced naturally.

The first step in assessing your hormonal system's condition is to measure the functioning of your adrenal glands with the Functional Adrenal Stress Profile. The saliva samples you submit to the laboratory are put through sophisticated hormonal assays that measure the levels of cortisol and DHEA hormones over a 24-hour period. The test could not be simpler – you collect four saliva samples in the comfort of your own home at four different times of the day (usually between 7-8am, 11am-12pm, 4-5pm and 11pm-12am).

The results will help to identify where your adrenal hormone imbalances lie and will provide the framework for a healing protocol that will include nutrition, exercise and lifestyle changes. In order to speed up your healing, it may also be useful to take specific supplements.

If you have obvious symptoms of sex hormone imbalance, these can also be accurately tested using simple saliva samples in a Female Hormone Panel. Once your hormone levels are known, it's possible to see which natural hormones to supplement and to fine-tune the doses accurately working alongside a licensed practitioner. During this process it is essential to track your symptoms to ensure you do not take too much of the hormones.

According to Dr John Lee, M.D., it is absolutely critical to follow three rules when using natural hormone replacement:

1. **Only take hormone supplements if they are needed.** You can only identify if hormones are needed by testing! If you are not assessing, then you are merely guessing.
2. **Only use bio-identical hormones.** Bio-identical hormones have precisely the same molecular structure as those produced by the body. They therefore do exactly the same jobs as the hormones replaced by the body. Be aware not to buy products from the shelves of health food shops unless you absolutely know for sure that the product contains the hormones you need. There may be many 'false' products on the market. It's always best to get advice from an independent practitioner, not the health store owner!
3. **Use physiological dosing.** It is essential not to take too many hormones as different imbalances may be created. By testing hormones accurately it is possible fine-tune the amount required by each individual and during different days in the menstrual cycle (if the woman is pre-menopausal).

The hormone tests may reveal many imbalances in hormone levels. Supplemental hormones such as progesterone, pregnenolone or DHEA may be needed for a time to reset the hormone levels in the body. It may also be helpful to use specific herbs, such as licorice root extract, which can help to take stress away from the adrenal glands.

However, even bio-identical HRT on its own is not likely to work unless all the lifestyle factors listed in Table 2 are addressed gradually. It's not possible to get your body working properly just by adding a hormone: there are no magic bullets unfortunately.

If the electric warning light was on in your car, would you replace the bulb (the symptom) or look for the cause (the fault in the electric). Replacing oestrogen or progesterone without addressing the other lifestyle factors (i.e. the cause of the hormone imbalance) is a bit like fitting a new bulb in the dashboard while ignoring the cause of the fault.

Dietary changes usually need to be made, with particular attention on stabilizing blood sugar, eliminating allergy-causing foods and healing the digestive system.

Blood Sugar

Low blood sugar can cause anxiety, irritability, dizziness and faint spells, Common causes of blood sugar imbalances are skipping meals - especially breakfast - and eating too many carbohydrates (sugar, bread, sweets, pasta, white rice). This can also create imbalances in hormones, such as insulin and

glucagon. Excessive insulin leads to insulin resistance, weight gain and eventually type II diabetes. It is therefore very important address blood sugar issues whenever hormone balancing is the goal. Blood sugar can be stabilized by eating regularly and consuming less junk food, sugar and caffeine and more protein and good fats, oils and vegetables. If blood sugar is unstable – highs and lows – the adrenal glands get stressed and more cortisol is produced. Since all the hormones are connected, secondary hormone imbalances will result.

Gluten

Gluten is found in the protein fraction of grains such as wheat, barley, rye and spelt. People who are gluten intolerant need to avoid foods containing gluten. The gluten causes inflammation in the sensitive lining of the gut. Since cortisol is an anti-inflammatory hormone, the adrenals are always working in stress mode to produce cortisol while these people are eating gluten. To [avoid gluten](#), only eat corn/maize, millet, buckwheat and rice.

Another problem with gluten is that it damages the cells in the gut that produce lactase, the enzyme required to digest lactose, or milk sugar. So anyone with a gluten intolerance is also likely to have a problem digesting cow's milk products.

SIgA & Immunity

Furthermore, the cells that produce secretory IgA (SIgA) are also damaged. One of the things that many people don't realize is that 80% of the body's immune system is housed in the gut. SIgA contains antibodies to parasites, bacteria, viruses, yeasts and fungi. Increased cortisol is also known to lower SIgA levels. So if the body is under a lot of stress and cortisol is high, you become more susceptible to infections. This is why people tend to get colds and infections after a period of stress.

If you are exposed to parasites or other invaders while your SIgA is low, there is also a bigger chance that they will be able to get a foothold in your body. This will again produce inflammation as the immune system continues to fight the invaders, thereby further elevating cortisol. A vicious cycle is perpetuated and finally, if the adrenal glands are making lots of cortisol, the cortisol will actually shut down proper function of the digestive system over time.

What I am trying to say here is that you can't have a healthy hormone system or a healthy immune system without having a healthy digestive system. The three are inexorably linked. You cannot possibly digest and absorb the building blocks for your hormones if your digestive system is damaged. In any case, many of the

same symptoms that are caused by hormone imbalances may also be caused by digestive problems.

Xenohormones

Xenohormones are substances not found in nature that have hormonal effects in all living creatures. All xenohormones are toxic. They tend to have oestrogenic effects on both male and female bodies. Common sources of xenohormones are:

- Solvents & adhesives.
- Petrochemically derived pesticides, herbicides and fungicides.
- Car exhausts.
- Emulsifiers found in soaps and cosmetics.
- Nearly all plastics.
- Industrial waste such as PCBs and dioxins.
- Meat from livestock fed oestrogenic drugs to fatten them up.
- Synthetic oestrogens and progestins found in the urine of millions of women who take birth control pills and synthetic HRT, which is flushed down the toilet and makes its way into the food chain.

Organic solvents are a real problem. They are lipophilic, which means that they have an affinity to fat. They enter the blood stream very easily through the skin and accumulate in fatty tissues such as the brain, the nerves and in fat cells (yes, they contribute to weight gain). Glues, fiberglass, nail varnish/polish and remover. Basically, if you can smell it, you are putting it in your body. I invite you to read 'Detoxify or Die' by Dr. Sherry Rogers for an extensive discussion on this topic.

One of the big problems is that they accumulate in very small amounts over long periods of time and may not actually create problems for many years. In fact, problems may not occur in first generation exposure, i.e. the offspring may show the symptoms, not the parent who was exposed. They can cause problems in such minute amounts that testing is often not sensitive enough to identify xenohormones as contributors to health problems.

It is very common to find PCBs, dioxins, DDT and a number of pesticides in human breast tissue. We don't really know the exact effects of these compounds in isolation, never mind when they all accumulate together.

Some effects of human exposure to xenohormones:

- Undersized penises and/or undescended testes in boys born to women exposed to PCBs.
- A 50% decrease in sperm count since 1938.
- An increased incidence of testicular and prostate cancer.
- A potentiating or stimulating effect in breast cancer.
- A potentiating or stimulating effect in endometriosis.
- Endometrial cancer.
- Cervical cancer in women whose mothers were given diethylstilbestrol (DES), a potent synthetic oestrogen, during pregnancy.
- PMS.
- Fibrocystic breasts.
- Postmenopausal osteoporosis.
- Change in sexual orientation.
- Oestrogen dominance syndrome (see #1 & #3, Table 1).
- *Dr. John Lee, 'What Your Doctor May Not Tell You About Premenopause', p.88.*

Reducing Your Xenohormone Load

- Drastically reduce reliance on pesticides including house sprays such as ant spray, fly spray, flea spray, lawn spray, garden spray.
- Markedly decrease or eliminate consumption of foods most likely to be contaminated with these chemicals. Eat organic food, free from hormones and pesticides. Support the environment and local economy by shopping at local butchers, grocers and farmers' markets. You can find a list of resources for the UK here.
- Avoid exposure to solvents, plastics and products such as commercial cosmetics, personal care products and soaps. You can buy excellent natural and certified organic products from ONE Group, one of the best, most ethical and responsible companies I have come across.
- Do not heat food in plastic containers and especially not in the microwave.
- Wear natural clothing as much as possible and sleep on cotton bed linen.
- Choose wood or stone tile floors rather than carpets. The glues and solvents in the carpets emit toxic molecules for several years.
- Hang dry cleaning out in the open air before hanging in the wardrobe or wearing.
- Speak to your doctor about avoiding all synthetic hormones – HRT and contraceptive pills.

Please note that you should not discontinue any form of medication, including the contraceptive pill or HRT, without first consulting your medical doctor.