# Postmenopausal Health webinar transcript

**Dr Yvonne Chow (00:04):**

Hi, my name's Yvonne Chow, and I'm an endocrinologist at Jean Hailes. This webinar will focus on postmenopausal health. I have nothing to disclose. This is the STRAW diagram, which describes the stages of reproductive aging. When we think about menopause, we often think about classical symptoms such as hot flushes and mood swings. These symptoms certainly are part of menopause and they characterise the early transition. However, in most women, this is only a small interval in their lifespan, and indeed it's the postmenopausal phase that follows that make up a significant portion of women's lives. So this webinar will focus on health issues that are particularly relevant at this stage of women's lives.

**Dr Yvonne Chow (00:55):**

As you can see, there are widespread biologic actions of oestrogen due to the fact that oestrogen receptors are distributed throughout the body. And in postmenopausal women, there is a state of persistent low oestrogen, and there are, as you can see, many widespread clinical manifestations. So it's well known that oestrogen stimulates the growth of breast tissue and sex organs. Oestrogens also have neuroprotective effects and they reduce perimenopausal mood fluctuations. Oestrogens are arterial vasodilators and oestrogen receptors are present in the smooth muscle cells of the coronary arteries and endothelial cells. In the bone, oestrogens directly inhibit osteoclast and slow bone density loss. And finally, in the liver, oestrogen stimulate the uptake of low density lipoproteins through the increase in production of lipoprotein receptors.

**Dr Yvonne Chow (01:57):**

I want to take this opportunity to highlight a special situation in menopause hormone therapy management, and that is in women who go through menopause earlier than the age of 40, something that we define as 'premature ovarian insufficiency'. Often this is a more difficult diagnosis to make because women present with symptoms that are often not thought of as due to menopause, given their younger age. And the symptoms are often less clear cut and follow a more fluctuating and variable course. But once the diagnosis is made, and it can often be a very distressing diagnosis, especially when fertility is involved, I make it very clear to women that menopause hormone therapy is really obligatory, and should be continued until the average age of menopause, which is 50 or 51, to keep them in line with their peers. So this is a distinct difference to women who go through menopause at the average age where the indication for hormone therapy is really based on symptoms.

**Dr Yvonne Chow (03:02):**

In women with premature ovarian insufficiency, even if they don't have any menopausal symptoms, they should be on hormone therapy. And I educate all my patients that they need to continue this until that average age of menopause. Because often these patients may get lost to follow-up, so it's really important that they don't turn up a few decades later with insufficiency fractures because they've actually prematurely stopped their hormone therapy. The main reasons is we want to prevent osteoporosis, we want to preserve their bone density, and also cardiovascular health.

**Dr Yvonne Chow (03:47):**

So now to the main part of our webinar, we're going to focus on three important health issues. The first one is bone health. Secondly, we'll talk about cardiovascular health. And finally we'll also cover sexual health. So first we'll begin with bone health. There are multiple factors that lead to low bone density, as shown by this diagram here on the left. A key contributor to the menopause related drop in oestrogen, means that there is an increased production of cytokine RANKL leading to increased bone resorption. The lower oestrogen levels also cause the reduced production of the cytokine osteoprotegerin, OPG, which normally inhibits RANKL. And on the right hand side, this diagram illustrates the major differences in bone remodelling between men and women. And in the first phase of bone density loss after menopause, you can see that oestrogen deficiency causes a rapid loss of trabecular bone, and then there's also cortical thinning. And then in the second phase, there is cortical porosity which develops, and bone is more prone to fragility fractures.

**Dr Yvonne Chow (05:08):**

This is a diagram that shows data from the Australian Bureau of Statistics, and it shows the changes from the previous slide that show the changes at the bone density level, and how it translates into significantly higher rates of osteoporosis in women compared to men. So this diagram shows the prevalence of osteoporosis by age and by sex, with males being shown here in the blue, and women being shown here in the green. And you can see that the prevalence really does take off in osteoporosis compared to men around this age here of menopause in women. And of course it continues as both genders get older. Osteoporosis affects at least one in four women over the age of 75, whereas it only affects one in 10 men over the age of 75. So there's a big discrepancy there.

**Dr Yvonne Chow (06:09):**

But despite what we know about bone density loss with menopause, there is really very little data to support the universal screening of women between the age of 50 and 65 for osteoporosis. There are several clinical trials that have been studied in this setting to try and identify what are some of these predictors. There was an Australian study by Susan Davis, which was published back in 2015, and they looked at a range of variables. And there were three key risk factors that were identified. And that was being postmenopausal, having a low body body mass index, and no history of using menopause hormone therapy or not currently using menopause hormone therapy. It was interesting that in that study that traditional risk factors that we associate with osteoporosis risk, such as smoking, was not particularly helpful.

**Dr Yvonne Chow (07:10):**

In my clinical practice, I don't usually do a bone density scan as a rule of thumb when women come to me as they go through menopause, but I would consider organising a baseline bone density scan if they had some of these risk factors that Sue Davis and her team identified. And of course, this is in addition to the other risk factors that have been recognised by Medicare and attract an MBS reimbursement.

**Dr Yvonne Chow (07:46):**

So my approach to managing postmenopausal osteoporosis is focused around two main things. The first one is lifestyle intervention. And so, lifestyle measures are really incredibly important. And even if a woman who I deem is not particularly high risk for osteoporosis, and I haven't organised a bone density scan, being postmenopausal, and knowing what we've seen previously about the bone density loss that occurs with the drop in oestrogen, I still have a chat with them about ensuring that they have in place these lifestyle strategies for preserving their bone density. And so number one, I think dietary calcium is really important, and many people nowadays in the modern diet may not often have enough dietary calcium, and the best way to get calcium is through food. The second measure is vitamin D supplementation, and most of us in Melbourne don't get enough sunlight, and we'd need a vitamin D in the form of a supplement.

**Dr Yvonne Chow (08:52):**

And finally, weightbearing and exercises have been shown to improve bone density and help keep that skeleton healthy and dynamic. So these three measures are really important in any postmenopausal women, regardless of whether they've got osteoporosis or osteopenia. And then secondly, I talk about antiresorptive therapy or medication in women who have high fracture risk. And there are a number of medications that we can use that has been shown to improve bone density and most importantly reduce fracture risk. So firstly, menopause hormone therapy has actually been shown to reduce fracture risk and improve bone density. So particularly in the younger women, so women in their fifties, often, and if they are also symptomatic from menopause, then menopause hormone therapy is actually the best option for them. They don't necessarily need a bisphosphonate. But in older women with osteoporosis, then obviously the bisphosphonates, denosumab, and in really high risk situations, we do have anabolic agents available in Australia.

**Dr Yvonne Chow (10:05):**

In terms of how I assess fracture risk, I commonly use the FRAX or the Garvan tool, which are two clinically validated fracture risk prediction tools. This table summarises the features and also shows some of the differences between the two tools. Depending on where what your patient cohort is in your clinical practice, I often find the FRAX tool really useful, because they have different calculators depending on ethnicity. So if, for example, if you have a Vietnamese patient, then it may be better off using the FRAX tool and using the Vietnamese risk calculator to give them really a much more individualised fracture risk prediction. And commonly used thresholds, or risk thresholds for initiating anti-resorptive treatment is a 10-year hip fracture risk of 3% or more, or a 10-year risk of fragility fracture that's 20% or more.

**Dr Yvonne Chow (11:16):**

So the next health issue I want to talk about that's highly relevant for women at menopause is cardiovascular health. So this diagram illustrates that there are a range of changes at the time of menopause, that is due to a combination of menopause and also aging, that result in women having an increased cardiovascular risk. Oestrogen deficiency has direct effects on the vasculature through activation of the renin-angiotensin system. There is also increased endothelin and reduced nitric oxide synthase. And overall these lead to reduced vasodilation and result in higher blood pressure. There is also an increase in oxidating stress, and this contributes to atherosclerosis. And there are also indirect effects of oestrogen deficiency on cardiovascular health. There's an overall increase in the total body fat, and there's a redistribution of fat from the periphery to the centre, causing central adiposity. There is also increased insulin resistance, with lower HDL and higher LDL and triglyceride levels. And adipokine secretion is also altered, leading to chronic inflammation. And all these factors culminate together, contributing to more atherosclerosis in the postmenopausal woman.

**Dr Yvonne Chow (12:50):**

This diagram here from the Framingham Heart Study shows that, quite elegantly that there is a high incidence of cardiovascular disease in women after that average age of menopause. And this diagram shows that women have lower rates of cardiovascular disease compared to men before menopause, but this quickly catches up after menopause occurs. Another way in which you can have a look at the effects of oestrogen on the cardiovascular system is through the well-described timing hypothesis in menopause hormone therapy. So hormone therapy has really had a checkered history. In the 1980s, observational studies suggested that menopause hormone therapy can reduce cardiovascular disease in women. And so as a result of that, large scale randomised controlled trials were then undertaken to have a look at the prevention of chronic disease such as cardiovascular disease with menopause hormone therapy. However, the famous example of the Women's Health Initiative, and other examples like the HERS study, unfortunately they did not demonstrate any cardiovascular disease benefit with menopause hormone therapy.

**Dr Yvonne Chow (14:10):**

And in fact, in the oestrogen-only arm of the WHI, they had to terminate it early, because they showed actually an increased risk of stroke. And of course we all know that the combined arm, the combination therapy arm, was terminated early as well, due to that increased risk of breast cancer. However, more contemporary studies, such as the KEEPS and ELITE trials suggest that it's actually the timing of the menopause hormone therapy that is important. If it's initiated within 10 years of menopause, or in women under the age of 60, they actually have beneficial effects on the cardiovascular system. It's only really in older women that, when you initiate hormone therapy, that there is that increased cardiovascular harm. And it probably is due to the fact that when you have a prolonged period of low oestrogen, there is obviously, there's time for the atherosclerosis process to take place. And then when you reintroduce oestrogen, which is prothrombotic, then you increase that risk of plaque formation and plaque rupture.

**Dr Yvonne Chow (15:28):**

So in terms of how I manage cardiovascular health in postmenopausal women, I do probably what many of you will do in your everyday practice, which is checking their blood pressure on routine bloods, checking the lipid profile, and assessing for diabetes or prediabetes, and aggressively manage these risk factors. I do want to make a special mention that there's been a change in clinical practice, and that aspirin is no longer considered useful for primary prevention of cardiovascular disease. So we've got large randomised controlled trials such as ASCEND and ARRIVE that show that really there's not much benefit, particularly in older people where there is probably more risk of bleeding.

**Dr Yvonne Chow (16:17):**

And then the second thing I look at is weight. And often women themselves actually bring it up themselves, because often the weight gain that occur at midlife can be very demoralising for women, and it's certainly very important to them. Weight gain is very, very common as women get older, as they go through menopause. On average, women gain half a kilo each year between 45 and 55, which amounts to something like five kilos by the time they finish the menopause transition. And contrary to a very popular thought, it's not due to the direct effects of oestrogen deficiency, it's a combination of aging and lifestyle factors that often arise as a result of menopausal symptoms. So if women have poorly controlled menopausal symptoms, such as poor sleep, or moodiness, or hot flushes, they're less likely to be physically active, less likely to exercise, and they're more likely, and they're often tired, and they're more likely to reach for foods that perk them up. And often these foods are not great for the weight.

**Dr Yvonne Chow (17:35):**

And the other factor is as men and women age, there is more fat mass compared to lean body mass, and this results in a lower basal metabolic rate. So as we get older, we actually should be, to maintain the same weight, we should be eating less, and that is not usually the case for most of us. And so that's often why weight gain creeps up on us as we get older. And to lose weight is even doubly hard, because of that lower basal metabolic rate. So it's harder than even 10 years ago, and this is often a very common description that women will bring to me.

**Dr Yvonne Chow (18:22):**

To manage the weight gain that postmenopausal women experience, I think of it in terms of three broad categories. The first one is lifestyle measures, which is mainly with diet and exercise. I have to admit that by the time women see me about their weight, often their lifestyle is pretty optimal. So I often talk to women about medication for managing their weight. But if they haven't, I always find it very useful to refer them to a dietician, to at least help them understand their diet and how to make sure that they have a good spread of nutrients and it's well balanced. Many people will often tell me that they've already done their research online, but nothing replaces a dietician who is really a professional in that area of nutrition. And so I find that really useful if they haven't seen one already.

**Dr Yvonne Chow (19:26):**

I often will use medication to manage the weight gain, because as women get older it just gets incredibly hard, and any dietary changes are just really difficult to sustain without the assistance of medications. And then finally, I do talk about surgery. And I find that if a woman comes to me and the expectation is to lose a real significant amount of weight, so more than a five to 10% that is probably realistic with medication, then I do talk to them about perhaps surgery rather than wasting their time and effort on medication beforehand only for them to want to proceed to surgery anyway. Surgery is also a very good option if there are a number of metabolic comorbidities present already, because it has been shown to result in a sustained remission of these conditions. So often a referral to a bariatric surgical team should be discussed early on.

**Dr Yvonne Chow (20:35):**

So as an endocrinologist, my domain is generally in the use of medications to assist patients with weight loss. We have a number of agents available in Australia, and I'll go through each of them. The first one is phentamine, or Duromine, in Australia. This has been around for a while and it's often used in the primary care setting. It's the cheapest of medications, it's somewhere, it's probably a hundred dollars now, so it's probably a little cheaper. And the main side effects is anxiety, can increase blood pressure, dry mouth, and cause sleep disturbance. So not actually, not a great one to use in menopause or postmenopausal women where they already perhaps struggle with these problems already as due to their menopause. But it is the cheapest medication on offer for weight loss. And it's also very easy to take in the form of just an oral capsule. I often use a low dose, 15 milligrams, in combination with topiramate, so that I can get more effective weight loss without, hopefully, the side effects. And this I often use long-term.

**Dr Yvonne Chow (21:47):**

The next two medications are injectables. So we have liraglutide, in Australia known as Saxenda, and semaglutide, which is also known as Ozempic in Australia. These are both GLP-1 agonists, so we also use these in the management of type 2 diabetes. And their main side effects is on the gut, so commonly nausea, reflux, they could also cause constipation or diarrhoea. Very rarely it has been associated with pancreatitis. So you always talk to patients that if you get severe tummy pain, then they need to stop the medication and seek medical advice. So Saxenda is certainly the most expensive medication we have. It's about $330 now. And it's also a daily injection. So I have been increasingly using more Ozempic, because it's only $150, more than half the cost of Saxenda, and it's only a weekly injection. So very convenient in many patients. I've actually swapped over many patients from Saxenda to Ozempic.

**Dr Yvonne Chow (22:53):**

Ozempic is currently TGA approved and on the PBS for the management of type 2 diabetes. Has not been TGA approved for weight loss yet, but we have randomised controlled trial data to show that it is effective as a weight loss agent in individuals who don't have diabetes. And just recently in America the FDA has approved semaglutide for weight loss, so hopefully that approval will follow from our TGA soon. But now in Australia we do have Ozempic available, and I have been using it off-label, on a private script, for patients, and it's $150, so still cheaper than Saxenda. The next option is Contrave, which is a combination tablet. It contains naltrexone, which is an opioid antagonist, and also bupropion, which is actually an antidepressant that you also find in smoking cessation products. The main side effect is very similar to GLP-1 agonist, and that is mainly gut-related side effects. But the other issue to be aware of with Contrave is that it can lower the seizure threshold. So you certainly would use with caution, or you would not use it in patients who have other risk factors that also lower the seizure threshold, such as heavy alcohol consumption. It's about $250 per month, and it involves taking about four tablets a day. So two tablets in the morning, two tablets at night.

**Dr Yvonne Chow (24:32):**

But it certainly is an option, particularly for patients who don't like the idea of injections. And finally, we have all orlistat or Xenical, which has been around for quite some time. This medication works by interfering with fat absorption in the gut. So, not surprisingly, side effects are steatorrhoea, flatulence and risk of vitamin deficiencies. It's cheap, $90, well, it's cheaper relative to the other medications, and you take a capsule with each meal. You don't need a prescription to obtain this medication, you can actually get it through the pharmacist. But I think, due to the side effects, it's really not a very popular medication, so I don't really have many patients on this at all. So currently I've been prescribing a lot of Ozempic due to, it seems to have that sweet spot of the cost being not too bad, and the convenience of it, and it's effective.

**Dr Yvonne Chow (25:33):**

So we don't have head-to-head trials for these medications. So I can't say which medication is more effective. But on average, I find that weight loss medications in people who respond, they usually achieve five to 10% of baseline body weight loss. And I ensure that patients are well aware of this, so that I set the expectations, because you certainly don't want an unhappy patient who expect 30% weight loss when that's really not what's been shown in the trials. I often go through these options with the patients, and they often will pick based on their preference, depending on convenience and cost. Often you'll know in the first few months whether the patient is going to respond to that medication, because if they haven't really lost 5% of their weight by six months, they're probably wasting their time and money. So often at four to six months I will reassess. And if they're not really losing much weight or if they've had issues with side effects, that's when I try a different medication. So whilst you may start with one, often you may need to switch to another one. And sometimes, I find, just like blood pressure management, often low doses of several medications are often quite complementary, and may be useful in minimising side effects and achieving effective weight loss.

**Dr Yvonne Chow (27:04):**

So once you've helped a patient achieve the weight loss, I find that often the hard part is keeping them at that lower weight to help them maintain that weight loss. And I find that ongoing medication use is really helpful for this. I know that there are no long-term studies, beyond three years, of weight loss medication, but I find anecdotally that if we stop the medication, in many patients, their weight will often inevitably unfortunately go up, and that can be very disheartening. This diagram here shows what happens at the end of a trial, and you stop the medication. And this is one involving Saxenda or liraglutide. And you can see that when you stop, the weight does tend to trend up. So I often, before I start a medication for weight loss, I talk to patients about the weight maintenance aspect, and I talk to them about how often I view these medications as long-term medications. Very similarly to antihypertensives. We don't stop the medication once we've achieved a certain amount of weight loss.

**Dr Yvonne Chow (28:20):**

For example, when we achieve a certain blood pressure target, we don't stop the blood pressure tablet. We don't add any more, but we don't stop the current tablets that they're on, because I'm sure if we stop blood pressure tablet, the blood pressure will inevitably go back up as well. And I think this is very similar to weight. I'm also very clear with patients that you often will lose most of that weight at the beginning, in the first few months, and then the weight loss will slow down, and it will eventually plateau as you see here. So it will stop, but it doesn't mean that the medication is not working, because by continuing the medication, as you see, it's what it takes to keep the person at that weight. So I often say, don't feel that once your weight is no longer continuing to drop that it's not working, you should stop it, because when you stop it, this is actually what happens. So I often say to patients, the expectation is that if you can tolerate the medication and it's helpful, and it's been successful, I often do actually look at continuing it. Maybe at a lower dose, but I usually do continue it.

**Dr Yvonne Chow (29:26):**

All right, so finally, the final health topic I would like to talk about is sexual health. Asking about sex is a really important part of the menopause consult or ongoing care, because it is actually highly prevalent. Sexual problems are highly prevalent. And so, postmenopausal women often will report, if asked, will report reduced or loss of libido, and this can lead to reduced desire to have sex. It can result in reduced satisfaction or pleasure with sex, or difficulty in achieving an orgasm. And it can also be quite distressing in the relationship, because there may be a discrepancy in desire with their sexual partner. So if you don't take anything else from this webinar, I think what I would like you to take is, it's really important to ask women about their sex lives, as part of their postmenopausal health.

**Dr Yvonne Chow (30:29):**

I think, you can ask about, one way to approach it would be to ask start off by asking about vaginal dryness, and whether sex is painful. And hopefully that will segue into a discussion about their sexual wellbeing. And often we will have to lead that discussion, because most women will not bring it up themselves. But if you do, they hopefully will be able to tell you a bit more about their experience, and that's how you can help them.

**Dr Yvonne Chow (31:01):**

Libido is, it's a really multifaceted concept, and I think it's really quite representative of a woman's total physical and mental wellbeing. I often think that if any of these aspects are not right, then that can affect libido. And often it's not just one aspect, it's not just one single factor. So in the physical domain, clearly poorly controlled menopausal symptoms will contribute to low libido. The genitourinary syndrome of menopause, such as vaginal dryness, can be an issue. Weight gain, particularly around the time of menopause, can affect a woman's self-esteem, and affect their libido in that fashion. And also if a woman had other comorbidities that are not quite well managed, can also contribute.

**Dr Yvonne Chow (31:56):**

What's also happening in a woman's life, whether it's in their family or at work, will also contribute. So any external stresses. Depression, anxiety, often very, very common issues at menopause, Antidepressants used to treat that, and we know that SSRIs are a class of medications that's well known to affect libido. And also, women may have previous trauma or abuse from past relationships, or even from earlier in life, and that can play into libido. And finally, the relationship the woman has with her partner, there may be unresolved conflict that's not being addressed. Often women have been in long-term monogamous relationships, so the quality of couple time may be an issue. And finally, as women are getting older, often so are their partners. And so, their partners may also have issues also their health, and also they may have their own reasons for having sexual dysfunction. And this all plays into libido.

**Dr Yvonne Chow (33:14):**

So as an endocrinologist, I have to talk about androgens. So androgens play an important role in sexual physiology, and they modulate sexual behaviour in women, just as it does in men. And in women, two main organs are responsible for androgen production, and they are the adrenal glands and the ovaries. And we know that as women get older, particularly from the fourth decade onwards, there is a decline in androgen production. There was a study, it was a cross-sectional study from Australia of about 1500 women in the community, and it has shown that, quite beautifully, that there is this gradual decline in androgens with aging. And it starts actually well before that menopausal age. So it starts in your thirties.

**Dr Yvonne Chow (34:18):**

So whilst there is a well-known decline in androgen levels with aging, what we actually measure in the bloodstream doesn't actually have a very good correlation to self-reported sexual function in women. So there is, and there's a number of reasons for this. The first one is that the circulating androgen levels are not often reliable indicators of what's happening at the receptor or at the tissue level, because androgens often exert their effects on the same cells that they were produced in, a paracrine effect, and it doesn't necessarily have to be released into circulation. And then there's also the conversion of DHEAS and androstenedione to testosterone and DHT, and these are mediated by enzymes that we don't necessarily measure either.

**Dr Yvonne Chow (35:15):**

So whilst there doesn't seem to be a very strong correlation between the actual level of testosterone that we measure and sexual function, there are, as I said, there are clear reasons why that's not the case. And what we do have is, we do have some data that supports that supplementing testosterone can improve sexual function in postmenopausal women. And that's really the main area that we have found some benefit. It's very common that I get asked by women, can testosterone also help improve their cognitive function or help them build their muscle mass? And the honest answer, or the evidence-based answer to that is, no.

**Dr Yvonne Chow (36:02):**

The other, I guess, unknown around testosterone use is the long-term safety. We don't have data that's shows that it's safe beyond two years. Doesn't mean it's not safe, we just don't know. And I think two probably real important issues that hopefully research in the future will address is, the cardiovascular safety of it, and also breast cancer risk. Because testosterone in women gets gets aromatised into oestrogen. So when you give a woman testosterone, you are theoretically also giving them oestrogen as well. And so in a way, you are giving a woman oestrogen, which we know can be associated with breast cancer. So you do wonder what the breast cancer safety is around testosterone replacement as well.

**Dr Yvonne Chow (36:54):**

This slide here summarises some of the logistics around using testosterone in women in Australia. So in the appropriate woman, who I would consider is a woman who, in terms of her libido, in every other aspect her life is as optimal as it is. So I've got her on a good menopause hormone therapy regimen, her menopause symptoms are well controlled, she's in a happy relationship, and she doesn't have any other ongoing health issues, yet her libido is still low. Then I would think that she would possibly be an appropriate candidate for testosterone supplementation. So I would start by doing a baseline testosterone level, to make sure that it's not high to begin with. I'm not looking for a low testosterone level, because our current essays are not validated to look for testosterone deficiency in women. So it's really just to rule out any high testosterone level, because you wouldn't give testosterone to a woman who's already got a high level of testosterone.

**Dr Yvonne Chow (37:52):**

But if it's low or in the normal range, then that's a woman who you could potentially give testosterone to. Then I'm really careful with my discussion around the risks, and so, particularly that long-term safety aspect of it. There are also the possibility that it can cause acne, hirsutism, it can cause a localised skin reaction because it's given as a cream, and very rarely, virilisation. These, side effects I find are usually very, very rare because we are using really small doses of testosterone. So in Australia, the main preparation available is Androfeme, it's a 1% testosterone cream, which is it's made by Lawley Pharmaceuticals over in Perth. You can now obtain it at any pharmacy, in most pharmacies in Australia now. So you don't actually have to send the order form to Perth anymore, so that makes it a lot more convenient. The starting dose is 0.5 mls, which is about five milligrams of testosterone daily, and Androfeme comes with sort of like a syringe to help women measure out that dose, and you just apply it on your thighs or on your arms.

**Dr Yvonne Chow (39:13):**

Usually I will bring the woman back around two to three months to check the total testosterone level, and that's to make sure that I'm not exceeding the physiological levels for a premenopausal woman. Then I'll often assess for clinical response, because if they're not experiencing much improvement in the libido after about six months, then I stop the testosterone, because clearly it's not working. Before that. if the libido's not improving, but they're not quite in the right range, then you can certainly increase the dose of the Androfeme. But I think the endpoint is, if they're not getting a response, then we should be stopping it. So I would only continue if they have noticed an improvement in the libido.

**Dr Yvonne Chow (40:08):**

So thank you very much for your time in listening to this webinar. I would encourage you to have a look at our Jean Hailes website for more resources that will hopefully be helpful, that you may find useful, and we have a range of other resources and also our webinar library. Thank you very much for your time.

**End of transcript**

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