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BHRT

Personalised hormones



NUTRITION

Foods to support your clients during menopause



SKIN

How menopause impacts skin



TREATMENT MENUS

Catering for menopausal clients



**IN THIS
ISSUE:
MENOPAUSE
SPECIAL**

THE BIG MISCONCEPTION ABOUT



We need hormones if we want to age less and extend our health span – It is time to disrupt the status quo about hormones, and this is why writes, aesthetic nurse Tania Malan

Ageing is a complex molecular process driven by diverse pathways and biochemical events that contributes to changes in our body. Anti-ageing medicine is a speciality that has grown exceptionally over the last years and has become an emerging model of healthcare which to characterise with no uniform terms yet.¹

The speciality of anti-ageing medicine is focused on biomedicine to create an “optimal self” and improving one’s quality of life.¹ Anti-ageing medicine is a “technology of the self” with ideological concepts such as personalised, preventative and consumer-directed.¹ An emphasis is now placed on the attainment of good health where humans reshape and modulate themselves to improve quality of life and extend their health span.² “Usual ageing”

is no longer accepted as “normal”.³ It is time to classify biological ageing as a disease.⁴ One of the biochemical events that impacts ageing is the change in hormones and hormonal imbalance. Hormones control every function of the body, and an imbalance can have a significant impact on every major system and organ in the body, but more specifically, quality of life and ageing.⁵

The functions of hormones reach far beyond their most common association with ovulation, pregnancy, and sex drive. Oestrogen and androgens modulate all body functions in various degrees, and hormonal imbalances or decline can impact every major system and organ in the body leading to medical problems that negatively impact patients’ quality of life and shortens life.⁶

In aesthetic medicine, we are well aware of the facial changes caused by bone and fat pad resorption, followed by changes within the skin. A big part of skin changes is attributed to changes in oestrogen during menopause that affects the skin and extracellular matrix. The skin becomes dry, fine, and wrinkled with poor healing. The amount of collagen and elastin reduces by 30%. Many women tell us that they feel they have aged overnight when they are menopausal. The lack of progesterone impacts the sebaceous glands creating more oil in hair and skin, larger pores and miniaturisation of hair follicles, resulting in hair loss.

Hormone imbalances manifest in a variety of symptoms, and no two women experience hormonal decline the same. Some women struggle for years, and

others seemingly fly through it and suffer from a variety of symptoms. Some of the symptoms are insidious and only noted in late onset in life, such as osteoporosis, fragility fractures, cardiovascular disease, inflammation, depression, low energy due to loss of muscle mass, memory loss, Alzheimer’s disease, vulvovaginal atrophy and type II diabetes to name a few.

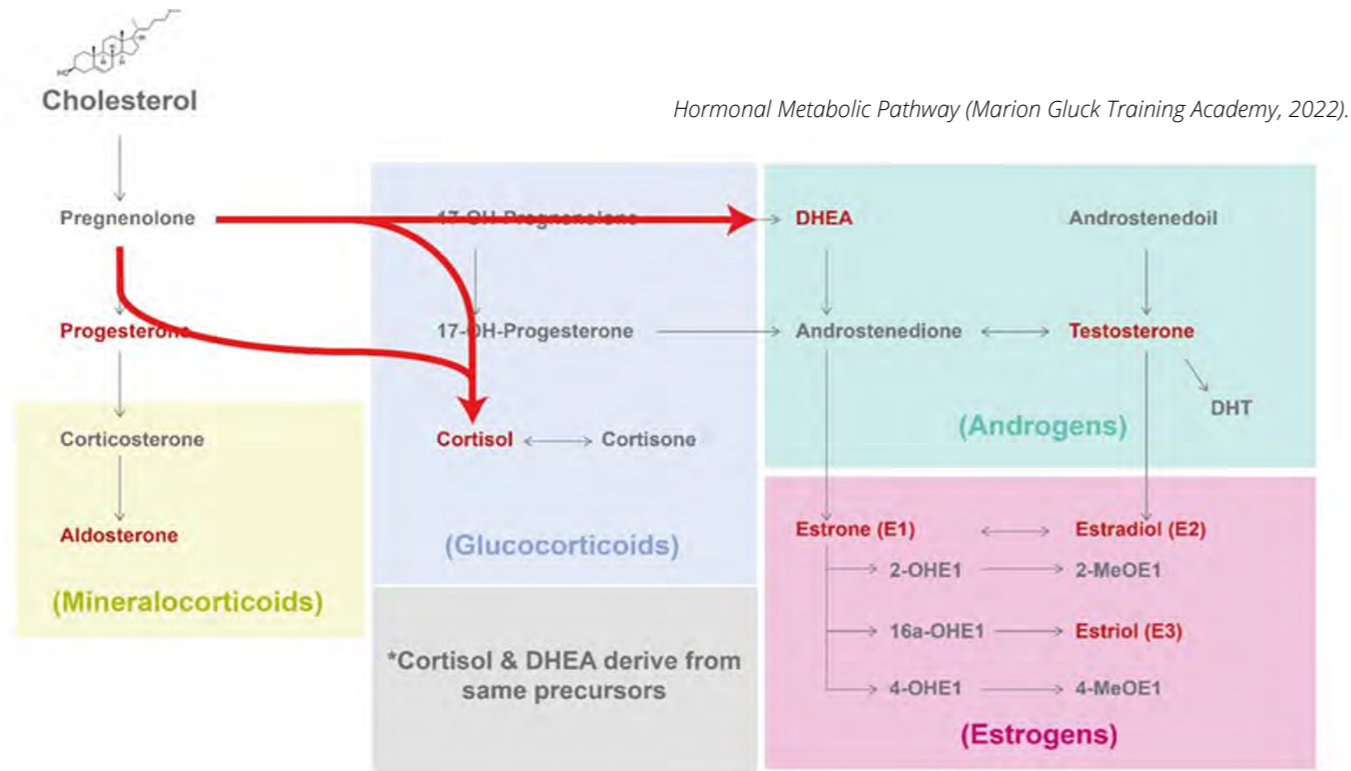
The word menopause means monthly pauses, and it is the stage in life when the reproductive system retires. Unfortunately, there is still this misconception that menopause is something a woman arrives at and then needs to get through. This could not be further from the truth. We need our hormones for longevity and to extend our health span. Hormone function falls into two categories: anabolic (to

build tissue) and catabolic (to break down tissue). Anabolic hormones are testosterone dehydroepiandrosterone (DHEA), oestrogen and progesterone. Its function is to keep us youthful and re(build) our tissue. Catabolic hormones such as cortisol break down tissue during stress and anxiety to prepare the body for fight and flight. Our peripheral tissues (except endometrium) requires intracellular physiological concentrations of oestrogens and androgens.

It is important to understand the metabolic pathway for hormones, especially the function of DHEA, which is never mentioned in general practice. DHEA is a hormone that converts into estrone (E1) and estradiol (E2), including testosterone. It plays a major function in longevity and wellbeing. There is substantial research regarding DHEA

and its supplementation surrounding common concerns with ageing: libido, bone health, body composition, metabolism and skin integrity and appearance.⁷ DHEA increases skin hydration and sebum levels and a significant increase in epidermal thickness.⁸

The DHEA studies proved that supplementing with DHEA normalised some effects of ageing, such as decreasing insulin resistance, triglycerides, and inflammatory cytokines, enhance muscle mass (energy), improve bone density and decrease visceral and subcutaneous fat.⁹ Furthermore, adequate vitamin D levels are required for optimal hormonal balance, especially oestrogen. Low levels of vitamin D lead to lowered oestrogen levels.



Hormonal benefits to the body

Using hormone replacement for longevity. What are the benefits of our hormones, and how would it look if we balance hormone levels for our patients?

Oestrogen	Progesterone	Testosterone	DHEA (Dehydroepiandrosterone)	Vitamin D
<ul style="list-style-type: none"> Regulates temperature Maintains collagen levels in the skin Increases blood flow Promotes healthy sleep Reduces risk of heart disease Maintains bones and muscle strength Lowers risk of colon cancer Helps maintain memory Decreases wrinkles Enhances concentration 	<ul style="list-style-type: none"> Fertility Regulates menstrual cycle Natural anti-depressant Reduce anxiety Soothing/calming Relaxing Help with memory Restores sleep Promotes bone strength Improves cholesterol levels Diuretic effect Reduce risk of breast cancer Improves stamina Relieves PMS symptoms Progesterone production slows down the onset of menopause 	<ul style="list-style-type: none"> Crucial for maintaining muscle mass Energy Maintain bone composition Libido Mood Quality of Life Self-confidence 	<ul style="list-style-type: none"> Precursor to oestrogen and testosterone Increases libido Increases energy levels Improves mood Improves body composition Improves memory Increases sense of wellbeing Increases self-confidence Anti-ageing properties Longevity markers Alleviates symptoms of menopause Boosts immune system Protects against diabetes Helps deal with stress 	<ul style="list-style-type: none"> Steroid hormone Supports strong bones Improves muscle function Protects against multiple diseases Optimum dose benefit overall health and wellbeing Compliments BHRT

The effects of hormonal decline/imbalance on the body

Oestrogen	Progesterone	Testosterone	DHEA (Dehydroepiandrosterone)	Vitamin D
<ul style="list-style-type: none"> Hot flushes Night sweats Low mood Memory loss Urinary Incontinence Vaginal dryness Osteoporosis 	<ul style="list-style-type: none"> Loss of fertility Anxiety Endometriosis Post-natal depression Pre-menstrual tension Irregular cycles Heavy periods Headaches Hot flushes Night sweats Mood changes Vaginal dryness 	<ul style="list-style-type: none"> Fatigue Irritability Depression Aches and pains in joints Dry and saggy skin Osteoporosis Weight loss Increased risk of heart attack Loss of muscle movement 	<ul style="list-style-type: none"> Fatigue Lack of motivation and drive Aching joints Loss of muscle tone Weight gain Depression Irritability Sluggishness Inflammation 	<ul style="list-style-type: none"> Tiredness Fatigue Joint and muscle pain Skin conditions Low Mood Failure to thrive Seasonal affective disorder Hair loss

Balancing hormones in aesthetic medicine - a variety of approaches

The purpose of aesthetic medicine is aimed at agelessness for our patients. It, therefore, makes sense to balance patient hormones to improve health and wellbeing but also impact their skin, bone, hair, and so much more. With the advances in bio-identical hormones, it has now become possible to offer our patients a tailored service using bio-identical hormones (BHRT) for hair, skin and impacting the whole body.

BHRT shares the same chemical structure as endogenous hormones and fits receptors perfectly, and as a result, it has fewer side effects than synthetic hormone replacement (HRT). They are derived from plant sources – wild yam (diosgenin) and soya beans (beta-sitosterol) that are compounded into powdered form,

and their delivery methods and dose can be adapted based on patients' blood work.

BHRT prescriptions are formulated by a compounding pharmacy to specific dosage requirements and created exclusively for individual patients. Compounding pharmacists use a combination of active pharmaceutical ingredients in specific measured dosages to make personalised medicinal treatments based on the needs of individual patients. Bio-identical hormones are often prescribed in the form of a transdermal cream as dosages can be easily adjusted.

Topical hormonal formulations specifically aimed at the skin are available to treat ageing skin, especially dryness, and fine lines, with Estriol 0.3% or Estradiol 0.05% for post-menopausal women with significant dryness saggy skin and deeper lines and wrinkles.

Bio-Identical Hormone Treatment (BHRT) VS Hormone Replacement Therapy (HRT):

BHRT	HRT
True hormone replacement therapy	Hormone substitution therapy
Body identical (bio-identical)	Not naturally occurring (non-identical)
Mimic endogenous hormones	Foreign to body
Perfect receptor fit	Imperfect receptor fit

Hormonal Metabolic Pathway (Marion Gluck Training Academy, 2022).

Conditions where BHRT is indicated

<p>Premature menopause/ Premature Ovarian Failure (POF) or Insufficiency (POI)</p> <ul style="list-style-type: none"> Loss of normal ovary function before age 40 or early adolescence Result in irregular periods Other causes: <ul style="list-style-type: none"> - Surgery - Chemotherapy - Radiation - Disease 	<p>Perimenopause</p> <ul style="list-style-type: none"> Menopausal Transition Start Early 40's Wider fluctuations of hormones and oestrogen levels relatively high compared to oestrogen The fluctuation of oestrogen and FSH are the cause of symptoms experienced Can last four to 10 years Ends when not had a period for a year Worsening PMS symptoms 	<p>Menopause</p> <ul style="list-style-type: none"> Menstrual irregularity Age is varied Symptoms varied Full menopause when periods have stopped for one year 	<p>Post-menopause</p> <ul style="list-style-type: none"> Not had a period for a year Cessation of ovarian function End of fertility Very low hormone levels For some, the symptoms of menopause might have eased Risk of disease increases during this period Average duration seven years
	<p>Hormones affected:</p> <ul style="list-style-type: none"> Oestrogen decline Progesterone decline Follicle-stimulating hormone (FSH) 	<p>Hormones affected:</p> <ul style="list-style-type: none"> Follicles Depleted Oestrogen decline Progesterone decline 	<p>Hormones affected:</p> <ul style="list-style-type: none"> Oestrogen Progesterone FSH is very low
	<p>Physical symptoms:</p> <ul style="list-style-type: none"> Fatigue Headaches Weight gain Hair loss Irregular periods Breast tenderness Bloating Cramping Hot flushes Night sweats Aches / painful joints 	<p>Physical symptoms:</p> <ul style="list-style-type: none"> Insomnia Hot flushes Night sweats Fatigue Dry skin Poor concentration Aches and pains Feels like joints locking 	<p>Risks:</p> <p>Osteoporosis</p> <ul style="list-style-type: none"> Lack of oestrogen leads to increased bone turnover Loss in bone mineral density, risk of increased fractures and low quality of life <p>Cardiovascular (CVD)</p> <ul style="list-style-type: none"> Redistribution of fat to the abdomen and impaired glucose tolerance Abnormal lipid metabolism leads to increased cholesterol and the risk of hypertension
	<p>Sexual symptoms:</p> <ul style="list-style-type: none"> Vaginal dryness Loss of libido Painful intercourse 	<p>Sexual symptoms:</p> <ul style="list-style-type: none"> Urinary problems Loss of libido Vaginal dryness 	<p>Vaginal atrophy</p> <ul style="list-style-type: none"> Dryness, itching, painful intercourse, painful urination, urinary urgency and urinary tract infections
	<p>Emotional symptoms:</p> <ul style="list-style-type: none"> Mood swings Anxiety Irritability Memory loss Depression Loss of confidence 	<p>Emotional symptoms:</p> <ul style="list-style-type: none"> Irritability Low mood and depressive symptoms Anxiety crying episodes Insomnia Memory Loss 	<p>Alzheimer's</p> <p>Oestrogen's important role in neuroprotective action:</p> <ul style="list-style-type: none"> Cognitive impairment Memory loss Mitochondrial dysfunction Neuroinflammation Age-related disorders

Images provided by author

Case Study

The first time Georgina set foot in my clinic, I knew there was much more going on than just lines and wrinkles. She looked life tired. During her consultation, she explained what treatments she thought she needed for her face. She had numerous aesthetic treatments over the years, and nothing seemed to help. Her past medical history included a severe car accident with life-changing scars and fibromyalgia. She was deeply unhappy and felt tired all the time, failing to thrive with body ache and increased anxiety. She frequently exercises but does not cut muscle (needed for energy) and cannot get rid of her protruding belly. Her legs are oedematous and libido non-existent, and she had reduced cognitive function, brain fog and poor memory.

I addressed her most pressing needs first, which were her skin and changing facial structures associated with ageing. I also did routine blood tests consisting of oestrogen, progesterone, testosterone, DHEA and vitamin D. All of her markers came back low as I expected.

Women particularly feel well when their hormonal levels are:

- Testosterone levels between 1.5-4
- Oestrogen levels between 300-500
- DHEA levels between 2-6
- Progesterone levels are adapted based on patients' anxiety and reduced sleep and must be given alongside oestrogen for women with an intact womb
- Vitamin D levels below 50

Georgina's levels were all low. Oestrogen at 69, testosterone at 0.69, DHEA at 0.8 and Vitamin D at 16. I started her on BHRT containing all of the above hormones. Within two weeks, her fibromyalgia had significantly improved, and she started to thrive. Her hair is thicker, her skin much firmer when injected, and her energy levels and outlook on life improved with reduced anxiety. Most of her symptoms were alleviated with



Images provided by author

the use of hormone replacement therapy. Her transformation took place at a cellular level, and she is thriving.

Conclusion

The nomenclature of anti-ageing needs to change to agelessness. Our patients do not want to look younger; they want to look and feel better within themselves at their age. Ageing is now classified as a disease with very specific causes, and declining hormones are one of the reasons. Knowing precisely which hormones are affected and addressing those goes a long way to truly regenerate and restore patients at cellular level inside and out.

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