

## **Cycling of Hormones - A New Paradigm for Bio-Identical Hormone Replacement Therapy**

As baby boomers age, many women are debating whether or not they need hormones. The outcomes of the Women's Health Initiative (WHI) trial scared doctors and women alike. This study, on the effects of Premarin (artificial estrogens) and Provera (a synthetic progestin), was halted in 2002, three years early, because of an increased risk of breast cancer in women taking these hormones<sup>1</sup>. Analysis of the study also revealed that risk of heart attack started increasing in the progestin group early in the study. Additional studies such as the HERS II (heart and estrogen/progestin replacement study) agree with the findings of the WHI trial. Several other studies have shown that synthetic progesterone/progestins have an unfavourable effect on lipid levels and may promote cardiovascular disease<sup>2</sup>.

### **Bio-identical vs artificial hormones**

There has been a lot of media attention lately, educating consumers about menopause and bio-identical hormones. Bio-identical hormones have exactly the same molecular structure as the hormones produced within the human body which makes them non-toxic to the body. Bio-identical Hormone Replacement Therapy (BHRT) therefore differs from conventional hormone replacement therapy, which involves animal-derived and synthetic hormones. Premarin, for example, is extracted from the urine of pregnant mares and contains horse estrogen molecules. Most bio-identical hormones are extracted from a cholesterol-like molecule found in plants and are identical to those found in humans. Understandably, bio-identical hormones do not display the side effects of synthetic progestins and conjugated estrogens<sup>3</sup>.

### **Copying nature**

Bio-identical hormone cycling has been developed to mimic the hormone levels of a healthy woman. It provides women with a more accurate cycling approach rather than just a static form of hormone replacement. Over a 28-day menstrual cycle, nature has ensured women receive varying doses of hormones.

Women no longer need to debate hormone replacement therapy. Those who suffer discomfort from menstruation to menopause may find a solution in cycling of hormones. Mounting anecdotal evidence from women on a cycling protocol indicates that they no longer experience the debilitating symptoms of menopause, such as hot flashes, migraines, brain fog, and sleeplessness. Women report that they now sleep better, have increased energy, enjoy better sex lives, are less moody and have their lives back.

Cycling transdermal bio-identical estradiol (with or without estriol) and progesterone to mimic normal menstruation could have the following benefits:

- a) Cycling protects the endometrium from hyperplasia (increasing of cells within an organ beyond what is normal)<sup>4,5</sup>.
- b) Cycling of transdermal (through the skin) hormones may result in a reduced risk of breast cancer compared to oral administration and/or continuous administration of hormones<sup>6,7</sup>

- c) The antiproliferative (reducing of cell numbers) effects of progesterone are enhanced by cycling hormones.

#### **Cycling of hormones - A New Paradigm for BHRT**

- Using natural hormones: only plant-derived, bio-identical hormones.
- Natural restoration: multi-phasic, cyclic dosing mimicking a healthy menstrual cycle with a menstrual period on day 28. Natural replacement provides a peak of oestrogen on day 12 and 21 and progesterone on day 21, with a resultant period after the 28 day cycle in the case of an intact uterus.
- Natural solutions: the majority of menopausal symptoms are eradicated with a vast improvement of sleep and libido.

It is important to maintain a youthful cycle as this confirms that your body is in balance. A normal menstrual cycle tells the brain that the body is fertile – the optimal state of health. Your state of wellness begins to decline as you approach menopause. By trying to restore the body's natural rhythm you can keep your body in a good state of health.

Remember that this is not a “one-size-fits-all” approach, which is precisely why it is better for your individual body.

#### **THE USE OF VARIOUS OESTROGENS**

Oestrogen is primarily made by the ovaries and consists of a combination of three compounds: estrone (E1), estradiol (E2) and estriol (E3). In the suggested cycling protocol below, E2 cream can be used alone, but there are clear advantages in using Bi-Est cream which consists of two naturally occurring oestrogens: estriol and estradiol. Considerable evidence exists to show that estriol protects against breast cancer. Estradiol protects the bones, heart and brain.

For more information go to:

<http://www.imcmed.co.za/articals/Fellowship%20Position%20Paper%20of%20Hormone%20Measurement%20and%20Replacement%20-%208-4-09.pdf>

**Dr Golding's suggested cycling protocol:**

<b>Cycle Day</b>		<b>Actual daily E2 - 3mg/1ml</b>	<b>Estrogen: E2 cream 3mg/1ml</b>	<b>Actual daily progesterone 100mg/1ml</b>	<b>Progesterone cream 100mg/ml (10%)</b>
1	bleeding - heavy	3.75	1 scoop am and 1/4 pm internally	0	No progesterone
2	bleeding - heavy	3.75	1 scoop am and 1/4 pm internally	0	No progesterone
3	bleeding - medium	3.75	1 scoop am and 1/4 pm internally	0	No progesterone
4	bleeding - light	3.75	1 scoop am and 1/4 pm internally	0	No progesterone
5		3.75	1 scoop am and 1/4 pm internally	0	No progesterone
6		6	1 scoop am and 1 x pm internally	0	No progesterone
7		6	1 scoop am and 1 x pm internally	0	No progesterone
8		6	1 scoop am and 1 x pm internally	0	No progesterone
9		6.75	1.25 scoop am and 1 x pm internally	0	No progesterone
10		6.75	1.25 scoop am and 1 x pm internally	0	No progesterone
11		6.75	1.25 scoop am and 1 x pm internally	0	No progesterone
12	Blood test to be done	7.5	1.5 scoop am and 1 x pm internally	0	No progesterone
13		1.5	0.5 scoop am internally	0	No progesterone
14		1.5	0.5 scoop am internally	100	0.5 scoop am and pm
15		3	0.5 scoop am and pm internally	100	0.5 scoop am and pm
16		3	0.5 scoop am and pm internally	200	1 scoop am and pm
17		3	0.5 scoop am and pm internally	200	1 scoop am and pm
18		3.75	1 scoop am and 1/4 pm internally	250	1.3 scoop am and pm
19		3.75	1 scoop am and 1/4 pm internally	250	1.3 scoop am and pm
20		3.75	1 scoop am and 1/4 pm internally	300	1.5 scoop am and pm
21		3.75	1 scoop am and 1/4 pm internally	350	1.8 scoop am and pm
22		3.75	1 scoop am and 1/4 pm internally	300	1.5 scoop am and pm
23		3.75	1 scoop am and 1/4 pm internally	250	1.3 scoop am and pm
24		3.75	1 scoop am and 1/4 pm internally	250	1.3 scoop am and pm
25		3.75	1 scoop am and 1/4 pm internally	200	1 scoop am and pm
26		0	stop estrogen (E2)	200	1 scoop am and pm
27		0	stop estrogen (E2)	100	0.5 scoop am and pm
28		0	stop estrogen (E2)	100	0.5 scoop am and pm

Cycle Day		Actual daily Bi-Est - 3mg/1ml	Estrogen: Bi-Est cream (50:50) 3mg/1ml	Actual daily progesterone 50mg/1ml	Progesterone cream 50mg/ml (5%)
1	bleeding - heavy	3.75	1 scoop am and 1/4 pm internally	0	No progesterone
2	bleeding - heavy	3.75	1 scoop am and 1/4 pm internally	0	No progesterone
3	bleeding - medium	3.75	1 scoop am and 1/4 pm internally	0	No progesterone
4	bleeding - light	3.75	1 scoop am and 1/4 pm internally	0	No progesterone
5		3.75	1 scoop am and 1/4 pm internally	0	No progesterone
6		6	1 scoop am and 1 x pm internally	0	No progesterone
7		6	1 scoop am and 1 x pm internally	0	No progesterone
8		6	1 scoop am and 1 x pm internally	0	No progesterone
9		6.75	1.25 scoop am and 1 x pm internally	0	No progesterone
10		6.75	1.25 scoop am and 1 x pm internally	0	No progesterone
11		6.75	1.25 scoop am and 1 x pm internally	0	No progesterone
12	Blood test to be done	7.5	1.5 scoop am and 1 x pm internally	0	No progesterone
13		1.5	0.5 scoop am internally	0	No progesterone
14		1.5	0.5 scoop am internally	50	0.5 scoop am and pm
15		3	0.5 scoop am and pm internally	50	0.5 scoop am and pm
16		3	0.5 scoop am and pm internally	100	1 scoop am and pm
17		3	0.5 scoop am and pm internally	100	1 scoop am and pm
18		3.75	1 scoop am and 1/4 pm internally	125	1.3 scoop am and pm
19		3.75	1 scoop am and 1/4 pm internally	125	1.3 scoop am and pm
20		3.75	1 scoop am and 1/4 pm internally	150	1.5 scoop am and pm
21		3.75	1 scoop am and 1/4 pm internally	175	1.8 scoop am and pm
22		3.75	1 scoop am and 1/4 pm internally	150	1.5 scoop am and pm
23		3.75	1 scoop am and 1/4 pm internally	125	1.3 scoop am and pm
24		3.75	1 scoop am and 1/4 pm internally	125	1.3 scoop am and pm
25		3.75	1 scoop am and 1/4 pm internally	100	1 scoop am and pm
26		0	stop estrogen (Bi-Est)	100	1 scoop am and pm
27		0	stop estrogen (Bi-Est)	50	0.5 scoop am and pm
28		0	stop estrogen (Bi-Est)	50	0.5 scoop am and pm

Based on a 28 day cycle

**Or use as prescribed by your medical practitioner**

**Directions for Application for Progesterone cream**

<http://www.imcmed.co.za/pdf/Progesterone%2010%2002%2009.pdf>

### **THE FIRST THREE MONTHS**

You may experience symptoms as your system adapts to the prescription. Changes that may occur include: breast tenderness, change in sleep patterns, hypoglycemia, dizziness, water retention and slight headache.

### **BLEEDING OUT OF RHYTHM**

Bleeding before day 21 may be due to too much or too little oestrogen. Consult your doctor if this occurs.

### **CONTRA-INDICATIONS**

Do not follow this protocol if you are on any of the following: Arimidex, Anastrozole, Letrozole, DIM, 13C, Aromasin, Exemestane, Fosamax, Raloxifen and Tamoxifen.

Do not stop taking medication without consulting your medical practitioner.

### **REFERENCES:**

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<sup>1</sup> Writing group for the women's health initiative investigators, "Risk and benefits of estrogen plus progestin in healthy postmenopausal women" *JAMA* 2002; 288:321-333

<sup>2</sup> Mayo Clinic Women's Health Source, Sept 2002 pg 3

<sup>3</sup> Deensi A, et al. Effect of transdermal estradiol and oral conjugated estrogen on C reactive protein in retinoid-placebo trial in healthy women. *Circulation* 2002; 106:1224-8a

<sup>4</sup> Ishiwata I, et al. Effects of progesterone on human endometrial carcinoma cells in vivo and in vitro. *J Natl Cancer Inst* 1978 May; 60(5): 947-54

<sup>5</sup> Dai, D., Wolf, D., Litman, E., et al. Progesterone inhibits human endometrial cancer growth and invasiveness: down-regulation of cellular adhesion molecules through progesterone B receptors. *Cancer Res* 2002; 62:881-6

<sup>6</sup> Kerdelhue, B., Jolette, J. The influence of the route of administration of 17 beta-estradiol, pulsed vs oral upon DMBA-induced mammary tumour development in ovariectomised rats. *Breast Cancer Res Treat* 2002 My; 73 (1) 13-22

<sup>7</sup> Diel P Laudenbach-Leschowsky U, et al. Pulsed estradiol has a limited ability to induce uterine proliferation in ovariectomised Wistar rats. *Moll Cell Endocrinol* 2005 Jan 31; 230 (1-2): 7-15