



# ACPC

Association of Compounding  
Pharmacists of Canada

## Bio-Identical Hormones - Clarifying The Confusion

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**Bio-Identical hormones are hormones which are structurally identical to human hormones. Although their source may have originated from either a yam or soy, the hormones are converted in the laboratory to be structurally identical to those found in the human body. This does not include synthetic hormones which are structurally different than those found in the human body. Bio-identical hormones are available both commercially and by compounding pharmacists. Conversely, using the term hormone replacement therapy or HRT may refer to all hormones, including those that are derived from both plants or non-humans (such a CEE, or conjugated equine estrogens) and structurally they are *similar* to hormones found in humans but they have slight differences which produce large *differences* biologically.**

**The use of bio-identical hormones refers to the use of hormones such as estradiol, estrone, estriol, progesterone and testosterone to name only a few. The use of such natural hormones does not advocate inappropriate prescribing practices such as the use of unopposed estrogens in a non-hysterectomized patient.**

**The use of hormones of any type should be to make patients feel better. In fact, is this not the purpose of all medication, to treat or prevent disease? In an effort to relieve symptoms, the replacement of hormones can in fact create additional problems. These problems include increased risk of breast cancer, increase risk of cardiovascular disease or coronary artery spasm (which increases the risk for heart attack and stroke) are much greater when synthetic progestins are used.<sup>1</sup> Synthetic progestins are not bio-identical with progesterone, which is the natural human hormone. Synthetics are often called "progestagens", thus creating confusion for patients.**

The Association of Compounding Pharmacists of Canada is a voluntary Canadian organization that represents the group of compounding pharmacists. Health Canada is not the organization which oversees Health Care professionals, this is the source of much misinformation; Pharmacy Regulatory Authorities (PRAs) have this mandate. Each pharmacist is required to have a degree in pharmacy from an approved educational facility, a minimum of four years study, and then they must pass licensing exams set by the Pharmacy Examining Board of Canada. Each province sets its own standards and holds pharmacists responsible for adhering to those Standards. The PRAs hold pharmacists responsible for their on-going education, the products they dispense, their services, their advertising and their conduct. To say they are “unregulated by Health Canada” leaves the reader with the impression that the system allows for anyone to sell “hand-mixed creams”. In fact, bio-identical hormones fall under the same stringent rules and regulations that all Canadians have come to expect when they are purchasing prescriptions. They must first visit a prescriber who is licensed to practise in Canada and when they receive a prescription they can attend the pharmacy of their choice. In Ontario, the “Guidelines for Compounding Preparations” complement general practice standards and distinguish “compounding” from “Manufacturing” which is subject to the Food and Drugs Act (Canada); which is overseen by Health Canada.

Bio-identical hormones are one option for treatment of the symptoms of menopause. Physiological data and clinical outcomes demonstrate that bio-identical hormones are associated with lower risks, including the risk of breast cancer and cardiovascular disease. Furthermore, the use of bio-identical hormones is more efficacious than their synthetic and animal-derived counterparts.<sup>2 3</sup> The art of compounding provides patients with options for treatment that would not be available to them otherwise, for example, the use of low-dose testosterone for female patients for low libido. The [Menopause and Osteoporosis Update 2009](#) published by THE SOCIETY OF OBSTETRICIANS AND GYNAECOLOGISTS OF CANADA (SOGC) recommends that doctors prescribe HT in the lowest dose required, and for the duration necessary, to treat troubling menopause symptoms. Current research confirms that HT is both a safe and effective way to treat symptoms of menopause. Your healthcare provider can help you understand the risks and benefits of different treatments.<sup>4</sup> Compounding offers patients options which can be tailored for their individual needs and is just one way for patients to take control of their treatment to obtain a result that best suits their personal healthcare needs.

<sup>1</sup> Holtorf, K. MD The Bioidentical Hormone Debate: Are Bioidentical Hormones (Estradiol, Estriol, and Progesterone) safer or More Efficacious than Commonly Used Synthetic Versions in Hormone, Replacement Therapy? *Postgraduate Medicine, Volume 121, Issue 1, January 2009*.ISSN – 0032-5481, e-ISSN – 1942-9260.

<sup>2</sup> Derzko, Christine M MD, FRCSC. Bioidentical Hormone Therapy at Menopause. *Endocrine Rounds, Volume 9 Issue 6, 2009*.

<sup>3</sup> Holtorf, K. MD The Bioidentical Hormone Debate: Are Bioidentical Hormones (Estradiol, Estriol, and Progesterone) safer or More Efficacious than Commonly Used Synthetic Versions in Hormone, Replacement Therapy? *Postgraduate Medicine, Volume 121, Issue 1, January 2009*.ISSN – 0032-5481, e-ISSN – 1942-9260.

<sup>4</sup> The Society of Obstetricians and Gynaecologists of Canada (SOGC)  
[http://www.menopauseandu.ca/therapies/hormone-therapies\\_e.aspx](http://www.menopauseandu.ca/therapies/hormone-therapies_e.aspx) February 2011

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