Thyroid Information

<u>Hypo</u>thyroid symptoms - Fatigue/sluggishness, weakness, unexplained weight gain or increased difficulty losing weight, coarse or dry hair, dry/rough pale skin, puffy face, hair loss, increased sensitivity to cold, muscle cramps and/or frequent muscle aches, constipation, depression, irritability, memory loss, abnormal menstrual cycles (usually heavier), decreased libido, hoarse voice, elevated blood cholesterol levels, low blood sugar levels

<u>Hyper</u>thyroid symptoms - sudden unexplained weight loss, rapid heartbeat, palpitations (pounding heart), irregular heartbeat, increased sensitivity to heat, sweating, increased bowel movements, nervousness/anxiety, insomnia (difficulty sleeping), breathlessness, abnormal menstrual cycles (usually lighter or entirely absent), fatigue, tremors/trembling hands, muscle weakness, warm moist skin, high blood sugar levels

A Basic Thyroid Blood Test:

- TSH
- Free T3
- Free T4

A Complete Thyroid Blood Test Includes:

- TSH
- Free T3
- Free T4
- TPO
- ATG

TSH — Thyroid Stimulating Hormone is a hormone of the pituitary gland which signals the thyroid to produce thyroxine (T4) and triiodothyronine (T3). TSH test results must be combined with free T3/free T4 results in order to determine a meaningful interpretation of thyroid status. The Mayo Clinic states that TSH alone is <u>not</u> a true indicator of thyroid function. TSH testing by itself may be misleading.

Free T3 & Free T4 - Thyroid hormones are inactive when bound to protein so it is the free (unbound) hormone levels which are most important to monitor. These hormones are involved in almost every process in the body, with T3 being the more active of the two. They are determining factors in metabolic rate, brain growth and development and are required for the secretion of human growth hormone.

Thyroid Peroxidase (TPO) - Also known as thyroperoxidase, it is an enzyme which when expressed in the thyroid, liberates iodine needed for the production of T4 and T3.

Anti-Thyroglobulin (ATG) — Thyroglobulin is a large glycoprotein which is an ingredient for thyroid hormone production. When a molecule is present that works against it (such as ATG) we have weak thyroid function.

Calcitonin — The thyroid hormone that is stored in the parathyroid and which maintains bone health. It is called Miacalcin® by prescription as a nasal spray. Salmon oil is an excellent natural source of calcitonin.