

WHOLE THYROID

Whole thyroid is a prescription medication that contains desiccated thyroid extract derived from healthy pigs' thyroid glands. Natural thyroid extracts have been used since 1892. It is a standardized porcine extract and is still used extensively in the USA. It has been used in many patients with great success. It mimics the endogenous production of the thyroid gland. It contains T1, T2, T3 and T4 hormones.

Functions of the different thyroid hormones

The role of Monoiodothyronine (T1) and Diiodothyronine (T2) is still unclear. They are now being investigated as their actions seem to be independent of other thyroid hormones [1]. T2 is involved in the regulation of fat metabolism with a specific cholesterol lowering effect [2].

Thyroxine (T4) is the major hormone produced by the thyroid gland. It is a prohormone for triiodothyronine (T3) as it is converted to the active T3. T3 is the dominant hormone in all body cells. T3 exerts the thyroid function in the different body organs with the predominant action on the brain. T3 crosses more rapidly and more completely from serum to CSF than T4 [3]. It also acts as a cotransmitter in the brain [4] and may play a neuromodulatory role in the adrenergic nervous system [5]. enhances long term memory] and reduces anxiety . Significant correlations between low cerebral T3 and the severity and outcome of neurological disorders [9] have been confirmed. T3 also regulates skeletal development and has beneficial effects on asthma .

Importance of T3

Although Thyroxine is still the usual treatment of hypothyroidism many studies had proven that the combination of T3 & T4 is a much better way of addressing hypothyroidism .

Patients prefer the combination therapy as it improves the feeling of well being In addition, this therapy has been shown to improve mood, neuropsychological functions [] and alleviate depression. In contrast, research shows that treatment with T4 alone does not improve cognition and psychological wellbeing .T3 may also improve memory [18] and help weight loss]. Some animal studies have shown that only the combined treatment of T3 & T4 can ensure euthyroidism in all tissues

Conversion of T4 to T3

Some patients may have difficulties in the peripheral conversion of T4 to T3 [21]. Impaired hepatic function is one of the causes of this condition [22]. Nutritional deficiencies, glucocorticoids (steroids), fasting and aging can also slow down this conversion process leading to T3 deficiency state [23]. Some pharmacological drugs as corticosteroids, as well as radiographic contrast media have been shown to inhibit these processes [24]. In such cases, whole thyroid may elicit a good response.

Why whole thyroid?

Whole thyroid is preferred by many practitioners as it may help to achieve better responses in a wide variety of symptoms than thyroxine alone [25]. Depression, chronic fatigue, menstrual disorders, fibrocystic breast diseases, allergic rhinitis and cardiovascular diseases are some of the conditions successfully managed by whole thyroid. Whole thyroid can be specifically helpful in patients who have removed their thyroid gland surgically or had it destroyed by radiation. As well as in patients who have difficulty in converting T4 into T3 and in those with depressive symptoms not responding to thyroxine only therapy.,