

# WHAT IS THYROID BINDING GLOBULIN (TBG)?

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According to the internet, Thyroid Binding Globulin is a type of globulin that binds the thyroid hormones in the blood stream.

It is one of three transport proteins along with transthyratin and serum albumen that are required for carrying thyroid hormones, T3 and T4, into the bloodstream.

Most of the protein that binds T3 and T4 is TBG.

Serum TBG blood tests indicate the amount of TBG that is occurring in the bloodstream at the time of the test.

The benefit of doing a TBG level in a patient helps identify a possible thyroid issue.

NOTE: The various clinical symptoms that are associated with hypothyroidism can be seen by going to Google and Important Facts You Should Know, About Hypothyroidism, with my name.

Depending on the levels of TBG in a patient, it can determine if that patient can benefit from the use of their own normal levels of thyroid hormones, or not.

Interestingly enough, if a patient is diagnosed with hypothyroidism and prescribed only a T4 supplement, the medical literature indicates that using only a T4 supplement only, may increase the TBG level.

What are some of the common products that are used, that will adversely affect the production of TBG?

The following is a list of those products

- . Aspirin
- . Hormones like total adrenal estrogen, which will bind the receptor sites of T3 and T4
- . Birth control pills that contain estrogen
- . Opiates
- . Opiods
- . Dilantin
- . Phenothiazines
- . Prednisone
- . Depakote
- . Depakevic

What are the causes for the production of increased amounts of TBG?

Liver disease

What are the causes for the production of increased amounts of TBG?

- . Liver disease
- . Acute, intermittent porphyria, which is a rare, genetic blood disorder.
- . Hypothyroidism

NOTE: Elevated amounts of TBG occur during pregnancy and in the new born.

What are the causes that reduce the production of TBG?

- . Acromegaly
- . Acute illnesses that reduce the production of thyroid hormones
- . Hyperthyroidism
- . Malnutrition
- . Nephrotic Syndrome.

It becomes quite clear that the release and use of thyroid hormones in a patient may depend at least in part, on the amount of Thyroid Binding Hormone that is available in the patient's blood stream, including levels of total estrogen.

Also, if a patient is diagnosed with hypothyroidism, it might be best to use a T3 supplement as opposed to using a T4 supplement that may be turned into more TBG.

In testing a patient for a thyroid issue, it might be best to consider measuring the following serum levels:

- , TSH
- . TBG
- , Total T3
- . Total T4
- . Total estrogen
- . Cortisol
- . TSI, which stands for Thyroid Stimulating Immunoglobulins
- . TPOab, which stands for Anti-thyroid Antibodies.

This complement of tests for hypothyroidism may help in identifying why a patient can still be hypothyroid with normal amounts of T3 and T4.

These are just some thoughts from a veterinarian in hopes of possibly helping you decide on the best diagnostics and treatment for your hypothyroidism

Sincerely,

Dr. AL Plechner

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