contrast to T_4, serum levels of T_3 were more than 2ng/ml in most of the hypermetabolic patients. In hypothyroid patients treated with T_3, T_4 or dessicated thyroid, serum levels of T_3 and T_4 were quite variable according to the preparations and doses of thyroid hormone administered and to the duration of the treatment. For example, serum T_3 was increased to the hyperthyroid range within several hours after the administration of T_3 and declined to the normal or hypothyroid range thereafter. Only the level of TSH correlated well with clinical features of metabolic state.

It is suggested, therefore, that serum T_3 is a good index for hypermetabolic and serum TSH or T_4 for hypometabolic state, although, it is very important for the diagnosis to consider the history and the physical examination of the patients in addition to the in vitro test.

Evaluation of Serum Thyroxin Binding Capacity from Tetrasorb and Triosorb Values

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From the well-known influence of serum thyroxin binding capacity (TBC) upon Tetrasorb (T_4) and Triosorb (RSU) values, it would seem that T_4/RSU reflects TBC. On the other hand, Nakajima proposed in 1971 a value (TBC Index) $=1/2$ RSU-0.65 as an indicator of TBC. In the present study, usefulness of these two values in evaluating TBC was studied on the basis of T_4 and RSU values in 72 hyperthyroid, 122 normal and 16 hypothyroid subjects. The results obtained were as follows.

1. In normal subjects, T_4/RSU and TBC Index were in close positive correlation with T_4 with coefficients of correlation of 0.88 and 0.73 respectively. T_4/RSU could be expressed by an equation $T_4/RSU=0.42T_4-0.045$ and TBC Index could be expressed by an equation TBC Index$=0.848T_4-5.575$.
2. In the majority of hyperthyroid patients before treatment, T_4/RSU and TBC Index were significantly less than the values derived from the equations with corresponding T_4 values. In the majority of hypothyroid patients T_4/RSU and TBC Index exceeded the values expected from the equations.
3. In the majority of samples of pregnant women, T_4/RSU and TBC exceeded and in the majority of samples of hypoproteinemic patients T_4/RSU and TBC Index were less than the expected values for corresponding T_4.
4. In hyper- and hypothyroid patients, T_4/RSU and TBC Index approached the expected values after treatment.

It appears, therefore, that both T_4/RSU and TBC Index (Nakajima) can be used as good indicators of serum TBC when evaluated as functions of T_4.