on the day of surgery, while slightly increased on the 1st postoperative day, had maximal increase on the 3rd postoperative day then gradually returned nearly to the preoperative level by the 5th or 7th day of surgery.

In 22 cases of non-toxic nodular goiter (20 cases were performed enucleation and 2 cases with unilateral hemithyroidectomy), the resin uptake of $^{131}$I-T$_3$ after surgery revealed increase in allmost cases. These effects, which commenced on the day of postoperation, were maximal on the 3rd postoperative day, then returned to or nearly to the preoperative level by the 5th or 7th postoperative day.

By these results, it was suggested that postoperative alternations of $^{131}$I-T$_3$ resin uptake was influenced by various type of thyroid disease and operative methods.

Change of TBC and Resin Sponge Uptake After the Administration of TSH and T$_3$

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It was investigated that whether or not TBC changed accompanying with the change of thyroid function after the administration of TSH (Thytopal 10 USP) or T$_3$ (100 ug/day), and if it did so, the changes of Resin Sponge Uptake (RSU) corresponded to TBC. High TBC were obtained in hypothyroid subjects and the values overlapped with that of normal and hyperthyroid subjects. Unsaturated TBC were not overlapped between each groups and TBC were nearly saturated with endogenous thyroid hormone in hyperthyroid subjects. RSU were high in hyperthyroid subjects and overlapped in normal and hypothyroid subjects. Correlation between unsaturated TBC and RSU were obtained.

In TSH responded group, there were no differences of regression coefficients between unsaturated TBC and RSU before and after TSH injection. In TSH responded group, PBI increased and it was likely that TBC decreased and RSU increased but the increase of RSU was not significant. In normal subjects, RSU decreased slightly with the administration of T$_3$ for 7 days.

$^{131}$I-Triiodothyronine Resin Uptake Test as an In-vitro Test of TSH Response of the Thyroid Gland

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To examine the availability of $^{131}$I-triiodothyronine resin sponge uptake (RU) in serum as a test of response of the thyroid gland to exogeous TSH, it was compared with the thyroidal uptake (TU), which is routinely used, as TSH-test in a total 80 euthyroid volunteers and patients with some thyroidal diseases.

Both tests were simultaneously performed before and 24 hours after TSH (thytopar 5 USP) injection and increase of RU more than 3% was judged as positive response. The results of both tests corresponded in 63% of all cases, but in 78% of euthyroid volunteers among them. It seemed to be noteworthy that RU and