*mates 100 per cent for small doses* (0.2–5.0 mg.), while the initial collection of previously iodinized patients, normal controls, and the collection of all patients from larger doses is considerably smaller. These results are not inconsistent with the smaller collections obtained by Hamilton and Soley[3] from larger doses. This initially collected iodine rapidly leaves the thyroid in the untreated patients given small doses, less than a third remaining after a week, with a slower decline thereafter.

A series of experiments on the behavior of thyroids isolated and surviving in a perfusion apparatus has been instituted; and it has been shown that the behavior of the thyroid in collecting iodine from the perfusion fluid is directly comparable to the results in vivo.[4,*]

REFERENCES

1. Hertz, S., Roberts, A., and Evans, R. D. Radioactive iodine as indicator in study of thyroid physiology. *Proc. Soc. Exper. Biol. & Med.*, 1938, *38*, 510–513.
2. Hertz, S., Roberts, A., Means, J. H., and Evans, R. D. Radioactive iodine as indicator in thyroid physiology; iodine collection by normal and hyperplastic thyroids in rabbits. *Am. J. Physiol.*, 1940, *128*, 568–576.
3. Hamilton, J. G., and Soley, M. H. Studies in iodine metabolism by use of new radioactive isotope of iodine. *Am. J. Physiol.*, 1939, *127*, 557–572.
4. Mainini, C. G. Personal communication.

* For discussion see page 473.