

Some remarks on the Anatomy and Physiology of the Thyroid Gland and on Enlargement of the Thyroid, usually called "Goitre": Its Incidence, Course, Causation, Prophylaxis and Treatment

BY

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ANATOMY

THE thyroid gland, the enlargement of which is called Goitre, is a very vascular, dusky brownish body which embraces the upper part of the wind pipe and extends up on each side of the thyroid cartilage (Adam's apple). It is composed of two lateral lobes united by a transverse portion, or isthmus. Externally, it is rounded and covered by a strong sheath of fascia from the neck; it is also covered by the numerous muscles which extend from the tongue bone (hyoid) to the thyroid cartilage (Adam's apple), and thence to the breast bone; its deep surface is concave and fits about the wind pipe. Each lateral lobe in its posterior border touches the gullet and envelops the carotid artery, and is in close proximity to the jugular vein. (See Fig. 1.) The weight of a normal thyroid gland is about one ounce, but the organ is relatively larger in the female and child than in the male. The gland is richly supplied with blood by four large arteries (the superior and inferior thyroid), two on each side, one above and one below. It is also well supplied with nerves from the sympathetic system which accompany the blood vessels. The gland is composed of a number of cells or vesicles, which are closed and of various shapes and sizes and filled with a glairy fluid of a yellowish colour (colloid), which escapes when the gland is cut. (See Fig. 2.) The gland is covered with a thin tissue, which is called connective tissue, and dips down into the gland, dividing it into lobules of various shapes and sizes. The vesicles in young children contain little colloid matter; they are filled with cells of the epithelial type, and colloid matter does not develop until later. (See Fig. 3.)

PHYSIOLOGY

The *function* of the thyroid is rather obscure, but it undoubtedly has an immense influence on metabolism.* The colloid matter in the vesicles of the gland has, except in the very young, iodine always present in it.

* Thin, snowy covering.

The change of food substances into elements that will be incorporated into the body.