

so-called ductless glands, and other tissues which elaborate, or are supposed to elaborate such internal secretions. Two of these, the thyroid and suprarenal glands, have given decisive therapeutic results and have become official in the Pharmacopeia; preparations of the active principle of the suprarenal are described in this book under the heading of "Epinephrin." The other organ products are scarcely beyond the experimental stage, and may therefore be described together. Their active principles have not been isolated, and they are most commonly used in the form of the powdered dried gland. The gross fat and connective tissue should be removed as completely as possible, and the drying should be conducted at a relatively low temperature. The powder is frequently compressed into tablets. It is recommended that the strength of these should be stated in terms of the dried gland. Since there are no tests for the quality, or even identity, of these powdered products, the physician, unless he can himself supervise their preparation, is forced to rely on the general reputation of the manufacturer.

After the description of each gland a list of such preparations as have been submitted to the Council, and which are being marketed in an unobjectionable manner, is given. For the reasons stated, however, the Council disclaims any responsibility for their quality or identity.

#### CORPUS LUTEUM

It is generally recognized that one or more of the most important of the internal secretions of the ovaries originate in the corpora lutea and the latter have been tried recently to a considerable extent in some of the classes of cases in which the entire gland has been used. Thus it is stated that in conditions of amenorrhea or of scanty menstruation it markedly increases the menstrual flow and prevents nervous symptoms accompanying these conditions. It may be given by the mouth in the form of the dried corpora lutea (also called lutein) either as a powder, in capsules, or in tablets, or subcutaneously in the form of a normal saline extract. It is recommended that the administration be begun before the expected natural period and continued during it; after the cessation of the period the administration should be discontinued. It is also stated that in cases of artificial menopause, following operation, the use of the dried corpus luteum has been followed by great improvement.

Corpus luteum has also been proposed for use in obesity associated with amenorrhea and in other conditions of "ovarian insufficiency"; Fränkel states that the drug has no effect in

dysmenorrhea, irregular menstruation and the intoxication of pregnancy.

This drug must be considered to be in the experimental stage.

**DESICCATED CORPUS LUTEUM—Armour.**—Desiccated corpus luteum—Armour, consists of the fresh substance from the corpora lutea from cows' ovaries, removed, dried and powdered without the addition of preservative or diluent.

A yellowish powder, having a peculiar odor. Partly soluble in water.

One part represents approximately 5 parts of the fresh corpus luteum substance. It contains a true lipochrome which may be extracted by alcohol, ether or chloroform. On incineration, it should yield not more than 6 per cent. of ash.

*Actions and Uses.*—See Corpus Luteum.

*Dosage.*—0.03 to 0.06 Gm. ( $\frac{1}{2}$  to 1 grain) twice daily.

Manufactured by Armour & Co., Chicago. Not patented or trademarked.

**LUTEIN TABLETS, H. W. & CO.**—Each tablet is said to represent 1.3 Gm. (20 grains) of fully developed corpora lutea of pigs.

*Actions and Uses.*—See Corpus Luteum.

*Dosage.*—One tablet, three times a day.

Manufactured by Hynson, Westcott & Co., Baltimore. Not patented or trademarked.

#### MAMMARY GLAND

The extracts of the mammary gland are said to have an effect upon the uterus. They have been used in the treatment of profuse and painful menstruation and of uterine and ovarian tumors, but the beneficial results reported can hardly be accepted until confirmed by further observations.

**MAMMARY SUBSTANCE—Armour.**—Mammary Substance—Armour, consists of the mammary gland of the sheep freed from fat, cleaned, dried and powdered, without the addition of preservative or diluent.

A yellowish to orange colored powder, having a slight peculiar odor. Only partially soluble in water.

One part represents approximately  $4\frac{1}{2}$  parts of the fresh mammary gland of the sheep. It contains nucleoproteid which, when treated with dilute sulphuric acid, yields guanin. (S. Fränkel, Descriptive Biochemie, p. 386.) Upon incineration it should not yield more than 9 per cent. ash.

*Actions and Uses.*—See Mammary Gland.

*Dosage.*—0.13 to 0.3 Gm. (2 to 5 grains) three times daily.

Manufactured by Armour & Co., Chicago. Not patented or trademarked.

*Mammary Substance Tablets-Armour.*—Each tablet contains desiccated mammary substance 0.13 Gm. (2 grains).

Dose.—1 to 3 tablets three times a day.

#### OVARY

The ovaries produce internal secretions which are necessary for the proper functioning of the uterus and which also have obscure effects on metabolism and the nervous system. Diminution or cessation of the activity of the ovaries (as at menopause, natural or artificial) often leads to a variety of nervous symptoms; irregularities in their activities seem to be sometimes accompanied by dysmenorrhea. Ovarian substance has been administered, often with apparently good results, for the relief of symptoms following the natural or artificial menopause and in dysmenorrhea, intermenstrual pain, etc. The best results have been obtained in cases of post-operative menopause, especially in young women. Various disturbances of the skin (acne, eczema and prurigo) occurring during the menopause are said to be benefited by it. It is said to give good results in some cases of amenorrhea with chlorosis.

**OVARIAN SUBSTANCE-Armour.**—Ovarian Substance-Armour, consists of the entire fresh ovaries (including the corpora lutea) of the hog, cleaned, dried and powdered, without the addition of either preservative or diluent.

A yellowish colored powder having a peculiar odor. Partially soluble in water.

One part represents approximately 6% parts of the fresh ovary of the hog. It contains gelatin, mucin, nuclein and the active constituent of the corpus luteum. Upon incineration, it should not yield more than 7 per cent. ash.

**Actions and Uses.**—See Ovary.

**Dosage.**—0.06 to 0.2 Gm. (1 to 3 grains) three times daily.

Manufactured by Armour & Co., Chicago. Not patented or copyrighted.

*Ovarian Substance Tablets-Armour.*—Each tablet contains ovarian substance 0.13 Gm. (2 grains).

Dose.—1 to 2 tablets three times a day.

#### PARATHYROID GLAND

The administration of parathyroid has proved of value in a number of cases of tetany following the operative removal or injury of the parathyroid glands. It has prevented the attacks of tetany and seems undoubtedly, at times, to have prolonged life or to have saved it while the injured glands regained their functions. It has proved of value in some cases of gastric tetany and of infantile tetany, although in other cases the results were negative. It has been recommended in paralysis agitans, eclampsia and chorea (especially of adults), but the