

ance is due to dyspepsia; but it is generally owing to that inability to digest and absorb fat so commonly noticed in consumption, even before its development. This fact has been much dwelt on by Dr. Balthazar Foster, who, led by some suggestive experiments of Claude Bernard, uses ether as a means of assisting the digestion and absorption of fat in the case of patients otherwise intolerant of oil.

Claude Bernard has shown that the action of ether "is twofold—(1) it stimulates the pancreas and glands of the duodenum to pour out their secretions freely,\* and (2) at the same time it facilitates the absorption of those very substances which these secretions are designed to digest. In other words, ether not only obtains for us the secretions required to digest," but promotes the absorption of these fats when digested. After a prolonged investigation of the influence of ether, Dr. Foster finds that by its aid, oils and fats which otherwise caused nausea and sickness are retained and digested, and that the combination increases appetite, nutrition, and weight. Dr. Foster employs ether *purus* of the Pharmacopœia in doses of from ten to fifteen minims to every two drachms of oil. The ether may be given either separately or with the oil; but as the ether masks the un-savouriness of the oil, he generally combines them.

Lime-water mixed with the oil sometimes obviates nausea, and even diarrhœa.

Fats are consumed in the body, but sometimes a small quantity escapes with the fœces and urine. The quantity escaping by the urine is, however, insignificant, except in the disease called chylous urine, when fat is often present in considerable quantities. In Bright's disease a little fat is voided with the uriniferous casts in the urine.

\* Bernard maintains that fats are chiefly absorbed by means of these secretions.

**CASTOR OIL.**  
**CROTON OIL.**

THESE oils consist of a bland oil with a variable quantity of an acrid irritating purgative matter, which imparts to these oils their characteristic properties. It exists in small proportion in castor oil and in a larger quantity in croton oil. Croton oil irritates the skin, producing redness, vesication, and, after a strong application, even pustulation, followed by scars. The irritating effect is increased by the admixture of alkalies, and liquor potassæ is sometimes added to intensify the effects of croton oil.

Its action is very variable, sometimes several applications on successive days produce but slight vesication, whilst sometimes a single moderate application produces great irritation, much vesication, and even pustulation. Caution is therefore needful for the first application. Sometimes when applied too energetically, or continued too long, croton oil liniment produces superficial white round scars with a hair follicle in the centre. These scars gradually disappear. Croton-oil liniment applied to the chest of phthisical and bronchitic patients is highly esteemed by some as a counter-irritant. Owing to the vesication it produces it cannot generally be repeated more than once or twice on successive days; sometimes only one application can be borne. Some prefer croton-oil liniment to mustard poultices, in bronchitis and phthisis, and indeed certain patients aver that croton oil gives them greater relief than mustard poultices. The vesication, however, being a decided disadvantage, the patient must carefully avoid conveying any of the croton application to tender parts of the skin, lest troublesome or severe inflammation be excited in the face or scrotum. Dr. Tilbury Fox states that croton oil sometimes produces a symmetrical erythema of the face, lasting for a few days, where no direct application of the drug could have occurred. The author too has seen this erythema of the face occur during the employ-

ment of croton oil; it is difficult to decide whether the erythema depends on the action of the croton oil after its absorption into the blood, or on the volatile acrid principle reaching the face through the air, or by means of the hands.

Pure castor oil is almost tasteless. Croton oil possesses an acrid burning taste. Neither remedy is used for its topical effect on diseases of the mouth.

These oils behave in the stomach and intestines, for the most part, like other oils. Large doses of croton oil inflame the stomach. If not quickly expelled from the intestines, they become absorbed into the blood, and serve the same purposes as other oils.

The acrid matter of these oils, irritating the mucous membrane of the intestine, excites slight catarrh, and by this means purges. As alkalies intensify the action of the acrid principle, the purgative effect of these oils is heightened by their admixture with the alkali of the bile.

These oils, especially castor oil, are commonly used as purgatives. Castor oil is a speedy, certain, and somewhat mild purgative, producing only one, two, or three motions, with little griping. It is said to purge when injected into the veins; and if this statement is true, it must have an especial affinity for the intestines. It is commonly used as a purgative for children, women with child, after parturition, in fever, piles, and fissure of the anus. It is not a good purgative in habitual constipation, as it increases the torpid habit of the bowels, an effect constantly witnessed in children.

Croton oil is a powerful purgative, producing watery stools, with much depression. It is an uncertain purgative, sometimes acting in half an hour, at other times requiring much longer; large quantities, even six or eight drops, may be required; hence it is seldom used, unless, as in apoplexy, coma, and mania, it is important to administer a purgative of small bulk. It is sometimes employed in obstinate constipation when other purgatives have failed. It is a good plan to give a quarter or a third of a minim every hour; by this means a much smaller dose often succeeds than a large quantity given in

one dose. Owing to its acrid taste it is generally administered in the form of pill, except to patients in a state of insensibility, when it is mixed with a little butter or lard, and conveyed to the back of the tongue, and is swallowed involuntarily, or trickles down the throat.

As these oils remain but a short time in the intestines, the greater part passes out with the motions. But little of the acrid matter probably passes into the blood, since, unless croton oil is swallowed in large quantities, those serious symptoms witnessed when it is injected into the veins do not occur.

Like other purgatives these oils may influence distant organs, as the kidneys, and act as diuretics.

Croton oil has been used in hydrocephalus, and it is asserted to have removed the excess of fluid from the ventricles of the brain.

Mr. Sewell, of Ottawa, Canada, recommends croton oil in sciatica, obstinate pleurodynia, and crick of the neck. He states that other purgatives cannot be effectively substituted for croton oil. He lays great stress on the evacuation of blackened fæces by croton oil. No doubt some cases of sciatica depend on a loaded rectum or descending colon, when any purgative will be useful; but apparently these are not the cases referred to by Mr. Sewell. This treatment sometimes relieves, or even cures, patients who are not constipated, but it produces a good deal of temporary weakness.

Diarrhoea of children sometimes yields to eight or ten drops of castor oil suspended in mucilage, but unfortunately the indications for this treatment are unknown; hence it often fails, and is inferior to other methods.

In the early stages of diarrhoea it is a common practice to administer a dose of castor oil, or some other purgative, to carry away the irritant exciting the discharges.

A drop of castor oil introduced into the eye will often allay pain and intolerance of light, produced by a fine irritant, as sand.

Castor oil may be taken, without much taste, in beef-tea

highly peppered and well salted, or the oil may be beaten up with an equal quantity of the froth of porter, and tossed off before the constituents have separated. A mixture consisting of castor oil, half an ounce; fresh mucilage of acacia, three drachms; distilled water, five drachms, has very little taste. It may be flavoured with oil of peppermint or oil of lemons.

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#### GLYCERINE.

GLYCERINE is a useful application for chapped lips and hands, and for rough, furfuraceous, and inelastic skin, left after eczema or other skin complaints, restoring suppleness to the tissues, and allaying burning, tingling, and smarting. Glycerine of starch is still better. Glycerine undiluted may cause inflammation and smarting, hence it should be mixed with an equal quantity of rose-water or eau de Cologne. Glycerine of starch renders the skin soft and supple. In xeroderma a bath should be taken daily, and the ointment rubbed in after wiping the body thoroughly dry. Glycerine is a good application for dryness of the meatus of the ear; and when the tympanum is ruptured it covers the opening in the tympanum with a thin film, supplying for a time the place of the lost membrane.

Dr. M. Rosenthal recommends glycerine as a solvent for alkaloids employed hypodermically. One drachm of glycerine will dissolve ten grains of muriate of morphia, twenty grains of sulphate of quinia, and only one grain of curare.

The lips, tongue, and gums, when dry and coated with dried mucus in acute diseases, should be washed and kept moist several times a day by glycerine, which greatly improves the comfort and appearance of the patient. If the sweet taste of glycerine is unpleasant, it will answer as well if diluted with an equal quantity of water or lemon juice.

In the last stage of chronic diseases, as phthisis, the mucous

membrane of the mouth becomes dry, red, shiny, and glazed, a condition which causes much distress, and is usually accompanied by great thirst. This harassing state is relieved by rinsing the mouth with a wash of glycerine and water. Undiluted, glycerine is apt to make the mouth clammy and sticky. Glycerine will sometimes cure thrush.

Glycerine of carbolic acid is a useful application to foetid sores and open cancers of the surface of the body or of the uterus. It removes the offensive odour of the discharge, and improves the condition of the sore.

Glycerine of borax is a good application in pityriasis of the scalp, apthæ, and thrush.

Glycerine has been used in place of sugar, as in diabetes. It has also been recommended as a substitute for cod-liver oil, but experience has failed to support the recommendation.

One of the best preventives of bed-sores is glycerine or glycerine cream. The part exposed to pressure should be washed morning and evening with tepid water, and carefully dabbed quite dry with a soft towel, and then gently rubbed over with a little glycerine or glycerine cream. If the skin is sore or tender, the glycerine cream is best. A draw-sheet made of linen, and sufficiently large to be firmly tucked in at both sides of the bed, (as any folds or creases are very apt, by irritation, to produce tenderness, and eventually sores), will prevent soiling of the bed-clothes. This preventive treatment should be commenced before the on-coming of redness or tenderness.

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#### ON DIFFERENT KINDS OF TANNIN. ON GALLIC ACID.

THESE substances produce little or no change in the unbroken skin, but are astringent to sores and mucous membranes, checking secretion by contracting the vessels and condensing