

Many poisons do their harm by their immediate action upon the esophagus and the coats of the stomach. Hence, if any liquid or soft solid substance is soon swallowed, it tends to diminish the effect. To this end liquids, such as water or milk, may be freely given. Oils also have a protective agency, and these diminish the virulence, especially of the acrid poisons.

It is also a safe indication to remove from the stomach by means of emetics the substance which has been swallowed. A teaspoonful of mustard in a tea-cup of warm water is generally nearest at hand, and may be given to an adult, or half the quantity to a child, every ten minutes until vomiting is excited. A half teaspoonful of powdered ipecac, given in the same way, will act as well. Tickling the throat with a finger or a feather five minutes after the emetic has been given is likely to hasten its effect. They may well be aided in their action, as well as the stomach protected, by the use of flaxseed, or slippery-elm tea, or eggs, or jelly, or a teaspoonful of melted butter, or lard, or molasses. Whenever the poison is one producing stupor, cold to the head, warmth to the extremities, rubbing the skin with a flesh-brush, and attempts to rouse the person by alternate warm and cold sprinklings may be tried.

Better than all, the chemical antidote should be given, if known. Where an acid has been swallowed, soda, saleratus, lime, magnesia, or prepared chalk should be mixed with water and given in frequent doses. Of these the best is the calcined magnesia, given freely. If an alkali has been swallowed, as a lump of potash or lime, then acids, as vinegar, cider, lemon-juice, and the like, are indicated; but the use of oily and mucilaginous drinks must not be omitted. In poisoning with copper and its compounds, vinegar must be carefully avoided. The recent cases of pie-poisoning in New York city were probably owing to the action of some acid upon a copper kettle, or on copper in some other form.

Oxalic acid, used for cleaning metal, is sometimes taken for Epsom salts. Chalk, whiting, or other alkali should be freely used before any attempt to excite vomiting.

Prussic acid, although called an acid, is feebly so, and kills by its direct poisonous power over the nerves of organic life. The concentrated juice of peach leaves and kernels, of laurel, etc., may affect in the same way. Hartshorn, alternate cold and warm effusive stimulants to the surface and internally are more important than any other means. Artificial respiration, the same as directed for drowned persons, may be required. Smith's antidote of a half teaspoonful of pearlash, followed by 10 grains of copperas in water, is of service where you are sure as to the acid having been taken.

Sugar of lead and other salts of lead are best neutralized by white of eggs, Epsom salts, and lemonade.

When blue vitriol, or verdigris, has been taken, white of eggs, paste of wheat flour and flaxseed tea, sweetened with sugar, are indicated.

When green or white vitriol, or litharge, or yellow ochre have been swallowed, chalk and flaxseed tea are of service. If lunar caustic has been swallowed, a cupful of salt and water is the antidote.

Phosphorus, as used for poison of vermin and for matches, is sometimes eaten by children. Magnesia or other alkali, with water or mucilaginous drinks, are the readiest means of relief.

Creosote or an overdose of carbolic acid is to be met by white of eggs, milk and wheat-flour paste.

For poisons of the narcotic kind, such as opium, aconite, belladonna, henbane, digitalis and tobacco, there is not at hand any antidote. Stimulating emetics, stimulants to the surface, and, if need be, artificial respiration are indicated. Heavy draughts of strong coffee help to postpone the narcotism of opium. Lemonade or other mild acids are deemed of some service.

Overdoses of camphor or chloroform are an indication for alcoholic stimulants. We are still without certain antidotes for several of the narcotics.

Arsenic, either in its metallic form as gray fly-powder or the white arsenious acid, has an antidote in the hydrated peroxide of iron. Until this can be secured, warm water, milk, plenty of eggs, and lime water must be our reliance. The most frequent mistake of vegetable foods are the substitution of other varieties for the edible mushroom and the use of poke root (*Phytolacca decandra*) for horse-radish. No antidotes are known. But the indication is to use mustard or other stimulating emetics, and prevent further trouble by a few drops of laudanum, frequently repeated, until pain or sickness abates.

These are merely directions for those sudden cases of emergency which may occur in any family, and which, in the country, at least, occur when the physician is not within ready

reach. With the use of disinfectants, insect remedies, Paris green (arsenic), and with the increasing familiarity of the people with various chemicals, public health requires great care as to labeling all such articles. The medicines left over the physicians' prescriptions should either be marked or thrown away. Teach those under your control not to eat any vegetable or leaf without knowing what it is. All flowers with the cups turned downward or hooded, and all stalks which exude a milk-white juice when broken, are to be regarded as poisonous. All paints, whether of oil or water colors, should not be held in the mouth. It behooves all householders to have a special place for keeping all extra hazardous or doubtful compounds, and to cast away all unmarked or unneeded bottles and packages.

**DISINFECTANTS.**—The National Board of Health, in its circular on "Disinfectants and How to Use Them," makes a clear distinction between disinfectants and deodorizers, and disseminates the wholesome truth that "disinfection can not compensate for want of cleanliness or of ventilation." The recommendations of the board as to the disinfectants to be employed are as follows: For fumigation (that is, the purification of an infected atmosphere), roll-sulphur; for sewers, cess-pools, and the like, sulphate of iron (copperas), dissolved in water in the proportion of 1½ pounds to the gallon; for clothing, bed-linen, etc., sulphate of zinc and common salt in the proportion of 4 ounces sulphate and 2 ounces salt to the gallon. The interaction of these two compounds doubtless results more or less promptly in the formation of sulphate of sodium and chloride of zinc, which last is recognized as being the most energetic of the mineral disinfectants. The recommendation of the board to employ the zinc compound in the form of sulphate (with salt), instead of applying the chloride of zinc directly, may perhaps be explained on the ground that the sulphate of zinc is a stable salt that remains in solid form, and may be exposed to the atmosphere without change; whereas the chloride of zinc cannot be preserved in solid form save in hermetically-sealed vessels, having such a powerful avidity for moisture that it rapidly liquifies by abstraction of moisture from the air. This property renders zinc chloride inconvenient to handle. By its indirect production after the recipe of the board, this objection is overcome. The board does not recommend carbolic acid for general use, for the reasons that the quality of the commercial article varies greatly, that it is difficult to determine its quality, that it must be used in comparatively large quantity to be serviceable, and that it is liable, by its strong odor, to give a false sense of security.

**ENGINEERING NOTES.**—Of the present state of work at the *St. Gotthard tunnel*, it is reported that a serious obstacle has lately been encountered in some soft strata, the enormous pressure of which has, up to the present, resisted all attempts at successful penetration. The most solid beams are bent after a little time, and a resistance-wall of 1 meter thickness was completely crushed. Another of 2 meters thickness is now constructing. In these strata, the boring machine is useless, and only hand-labour can be employed.——The daily press of the past week chronicles the arrival, at the Isthmus of Panama, of M. de Lesseps, with a party of engineers. The first work of the party, it is noted, will be to verify disputed points in the existing surveys of that portion of the Isthmus. Lesseps is reported to have declared his unshaken faith in the practicability of the *sea-level canal* approved by the Paris Conference.——A bill has been introduced into the National House of Representatives for the creation of a permanently deep, wide, and *straight channel through Sandy Hook bar* to the port of New York.——On the 8th of December, preliminary work for the driving of the *Mersey tunnel* was commenced. The engineers will drive trial headings both from the Liverpool and Cheshire sides of the river, to determine the nature of the strata to be encountered before beginning the main railway tunnel.

**CONGESTIVE HEADACHE.**—The use of the old domestic remedy a tight bandage, during the attack is useful. I make use of a rubber bandage, applied thoroughly from the eyes up, with a thin pad over each temporal artery, if the temporal ridge be sharp enough to keep the bandage from compressing the arteries. Instead of rubber, a well applied muslin bandage may be put on and then wetted, using compresses over the temporal arteries. The comfort thus given is sometimes surprising.—*Sanitarian*.

The *Chemiker Zeitung* is authority for the announcement that the German Imperial Department of Public Health is about instituting measures for the repression of secret and proprietary remedies; and that in Switzerland the sale of patent and secret medicines is about to be submitted to very stringent regulations.