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READY REMEDIES

TO BE USED

IN CASES OF POISONING

AND

OTHER ACCIDENTS,

WHERE MEDICAL AID IS NOT IMMEDIATELY ATTAINABLE.

BY

JAMES JOHNSON, M.R.C.S.

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CONTENTS.

PART FIRST.—POISONS.

PART SECOND.—ACCIDENTS, &c.

ATTACKS OF DISEASE.

ADDRESS.

IT is not generally known that we possess, in many articles used for domestic purposes, remedies or antidotes for some of the most violent poisons. To point these out is one of the objects of the present work: and when we consider the number of lives annually lost from poison, not for want of the means of cure, but for want of the knowledge of those means, the utility of this little work cannot be questioned. This of course only applies to those instances where, from distance or otherwise, medical aid is not immediately attainable. *Let it be borne in mind, that this book is not intended to supersede in the slightest degree the assistance of the Medical Practitioner, but only to indicate those* READY REMEDIES *which are in the reach of all, and may be used with safety and advantage until more efficient aid arrives.*

The sudden danger, which is the natural consequence of poison being received into the system,

leaves little time, in the majority of instances, to obtain the attendance of a medical man, and cases must be familiar to the minds of all, in which life has been sacrificed by poison, where, as will be seen hereafter, the antidote may have been in the same room with the dying person, unknown and therefore unused; one instance is here adduced as proof:—A farmer, residing at some distance from a country town, swallowed by mistake a solution of oxalic acid for Epsom salts. Rendered instantly aware by the taste, of the deadly potion he had taken, he mounted his horse and rode for life or death for the nearest assistance, but the dose had been sufficiently powerful to act immediately on the heart, and he was found, fallen from his horse, dead by the road-side. There can be little doubt but that the antidote was under his own roof; chalk or lime diffused in water, taken copiously, would have saved him.

Another object which the Author has in view is to show what may be done immediately in some cases of accident and sudden attacks of illness.

In the greater number of those accidents which are the result of actual violence, much may be effected to relieve the sufferer, if a course of action is pointed out for the bystanders which they can safely follow; they cannot, it is true, administer relief equal to a man who has made such cases the study of a life, but they can be instructed how to alleviate the pain,

and perhaps preserve the life of a fellow creature under such circumstances. Many have died through loss of blood from a divided vessel, where a pocket handkerchief properly applied, would have stayed the ebbing spirit until the arrival of the surgeon.

These facts, and as such they must be admitted, prove the utility of a work of this nature, and the Author trusts that the design will in some measure, compensate for the possible deficiencies in its execution.

It will be at once seen by the medical reader that under the head of Poisons a number of the rarer kinds have been omitted, as accidents from their administration are so very unfrequent, that any notice of them it is thought would only encumber a work of this nature.

READY REMEDIES, &c.

THE first subject for consideration is Poisons and their Remedies;* in the second place, Injuries produced by external violence will be noticed, and some hints given as to the treatment of persons laboring under sudden attacks of natural disease.

Part I.

POISONS.

Orfila has defined a poison to be any substance, which taken internally in a small dose, or applied in any manner to the living body, destroys health or extinguishes life.

The fact that there are so many poisonous substances easily accessible to the evil-disposed and malicious, might cause a sense of insecurity, were it not counterbalanced by the reflection, that very many eminent men, really benefactors to the human race, have so completely investigated their nature for the double purpose of detection and relief, that it is difficult to conceive a case, where the perpetrator of a deed of this kind could escape undiscovered. Of the secret poisoning, which seems by our records to have existed some two hundred years ago, little is now to be feared.

* The Author takes this opportunity to acknowledge his obligations to the valuable works of Orfila and Christison, which are justly considered the books of the student in this branch of science.

Strange as it may seem, it appears to have been taught as a science, and to have numbered amongst its disciples some of the highest in rank of the time. There is no doubt that, wielded by the evil passions of our nature, it frequently became a frightful instrument of vengeance in the hands of the unscrupulous, though the evidence afforded by history as to the *manner* in which it was administered is to be received doubtfully, as instances are recorded of persons having been poisoned with a pair of gloves, a saddle, a peruque, and even by kissing the lips of a portrait. But the following words by an eminent writer on poisons, fully express the present state of opinion on the subject:—"With regard to the noted instances of secret poisoning, which occured towards the close of the seventeenth century in Italy and France, it is plain to every modern toxicalogist, from the only certain knowledge handed down to us of these events, that the actors in them owed their success rather to the ignorance of the age, than to their own dexterity; and as to the refined secrets believed to have been possessed by them, it is sufficient here to say, that although we are now acquainted with ten times as many, and ten times as subtle poisons as were known in those days, yet none exist which are endowed with the hidden qualities once so universally dreaded."

As it is important to avoid a hasty judgment as to whether poison has been taken, a few general rules for guidance are here given, liable, it is true, to a few exceptions, but sufficiently practicable for utility. "The chief characteristics usually ascribed to the symptoms of poisoning are, that they commence suddenly and prove rapidly fatal—that they increase steadily—that they are uniform in nature throughout their course—that they begin soon after a meal—and that they appear while the body is in a state of health." In the event of natural disease taking the appearance of poison the attack is generally gradual, the progress

comparatively slow, and an abatement of the severity of the symptoms is often observable. As the usual food is frequently the vehicle of poison, the peculiar train of symptoms generally manifests itself within an hour or two after any thing has been taken, either at a meal, or as medicine; whereas natural disease does not for the most part follow the taking of food with such rapidity, although if a person fall asleep immediately after taking any noxious substance into the stomach, the poisonous effect is much retarded. If the same effects are produced in more than one who have participated in the same repast, the evidence of poisonous matter having been taken is tolerably conclusive. IN THE EVENT OF ANY OCCURRENCE OF THIS NATURE, THE REMNANTS OF THE MEAL OR MEDICINE SHOULD ALWAYS BE PRESERVED, THE VESSELS WHICH MAY HAVE BEEN USED IN ITS PREPARATION SHOULD REMAIN UNTOUCHED, AND EVERY THING EJECTED FROM THE STOMACH CAREFULLY KEPT; AS THE INVESTIGATION OF ALL THESE WILL BE OF PRIME IMPORTANCE.

CAUTION.

Let every drug or chemical that it may be necessary to keep in a house be labelled with its name in full, and if of a deleterious nature, the word POISON ought to be marked conspicuously on the packet or bottle which contains it. All drugs ought to be kept out of the reach of children.

MINERAL POISONS.

ACIDS.

HYDROCHLORIC ACID, *Muriatic Acid, Spirits of Salt.*

NITRIC ACID, *Aqua Fortis.*

SULPHURIC ACID, *Oil of Vitriol, Vitriolic Acid, Vitriol.*

All these acids produce very similar effects when swallowed: by their powerfully corrosive quality they destroy the lining membrane of the lips, cheeks, and throat, giving those parts at first a whitish appearance, which, if produced by sulphuric acid, speedily becomes brown, if by nitric acid, yellow; as the acid passes down the throat it corrodes its lining membrane, and acting on the muscular fibres, produces a dreadful sense of tightness and burning pain, accompanied with difficulty of swallowing and breathing; arrived in the stomach it shows that its effects are still proceeding, by the agonizing pain it causes, far exceeding any effect of natural inflammation, the bowels become extremely tender on pressure, and when vomiting is produced, shreds of membrane will be observed in the matter ejected.

REMEDIES: The same treatment is applicable to all the acids. On account of the extreme rapidity of their action, no time must be lost: chalk, whiting or magnesia diffused in water, are to be given freely and frequently, or in cases of emergency the plaster of the wall or ceiling beaten into a thin paste with water, may be administered; soap dissolved in water is of great value if the other remedies are not at hand; while these are being prepared, let the patient drink copiously of water, milk, or any other mild fluid.

One part of either of the above acids may be rendered comparatively harmless, as far as its corrosive properties are concerned, by dilution with twenty

times the quantity of water; it is therefore obvious, that the most ready remedy is drinking freely of some mild fluid, and if we allow the possibility of swallowing an ounce of a concentrated acid (and it is difficult to imagine that this quantity can be exceeded) a pint and a half, to a quart or more of fluid, taken instantly, must keep the acid in check until a more efficient remedy is prepared. The quantity of fluid required may appear large, but when the stomach is distended to its utmost, vomiting occurs, which is always favorable in these circumstances, and on its cessation, drinking can be again resorted to.

ALKALIS.

POTASS, SODA, AND AMMONIA.

These are as poisonous as the acids already noticed, and in a concentrated form, act as powerful caustics upon all the soft solids of the body, with which they come in contact. The most frequent forms of the Alkalis are the following:

PURE POTASS, in the liquid state, *Solution of Potass;* in the solid state, *Caustic Potass.*
CARBONATE OF POTASS, *Salt of Tartar*, *Salt of Wormwood;* in solution, *Oil of Tartar.*
NITRATE OF POTASS, *Nitre*, *Saltpetre.*
SODA, rarely pure.
CARBONATE OF SODA.
AMMONIA, *Solution of Ammonia*, *Spirits of Hartshorn.*
CARBONATE OF AMMONIA, *Smelling Salts.*

Potass is preserved in the pure state, both solid and in solution, for chemical purposes, but soda is

more generally kept in the form of a carbonate. Ammonia in its pure state exists in the form of a vapor or gas, this also is most frequently met with in solution or as a carbonate. In the state of solution they act most powerfully, if taken in quantities exceeding a medicinal dose, producing effects closely resembling those produced by the concentrated acids, such as destruction of the lining membrane of the lips and mouth, tightness and pain in the throat, difficult swallowing and violent vomiting: the carbonates produce the same effects but in a minor degree.

Cases of poisoning by ammonia are very rare, as the pungent smell is a sufficient warning to those who are about to take it incautiously. Let it however be remembered, that in all sudden attacks as fits, spasms, or fainting, it ought never to be administered *internally*, except by a medical man; and even its application to the nostril ought to be made sparingly and with caution, as injudiciously used, it may produce the most disagreeable and even dangerous effects.

REMEDIES: The most serviceable remedies are almond or olive oil, or butter taken internally, in large quantities; if these, however, are not to be readily procured, vinegar or lemon juice may be used. The vomiting in all cases is to be promoted by draughts of tepid water or thin gruel.

NITRATE OF POTASS (*nitre, saltpetre.*)

Though this substance may be taken in small quantities with impunity, in an over dose its poisonous effects are evident. The symptoms it produces are violent vomiting and purging, often bringing away great quantities of blood; giddiness, shivering, nervous twitchings of the limbs, and tendency to faint. In some instances temporary loss of memory

and sight have been the result. For this substance there appears to be no specific remedy; though oil or butter might be given with some hope of benefit. Mild tepid drinks will be proper in these instances to render the vomiting easy, and thus to spare the stomach useless efforts; happily, however, the danger of an extreme dose is not uniform; as cases are on record where persons have recovered after taking two ounces.

ARSENIC.

COMMON FORMS.

ARSENIOUS ACID, *White Oxide of Arsenic*, *White Arsenic.*
ARSENITE OF COPPER, *Mineral Green.*
ARSENITE OF POTASS, *found in Fowler's solution, or tasteless Ague drops.*
SULPHURETS OF ARSENIC, REALGAR, *or red Arsenic*, ORPIMENT, *or King's Yellow*, *Fly Powder.*

On account of the want of taste of all the common forms of arsenic, it is most frequently chosen for criminal purposes, but the facility and secrecy with which it can be administered are counterbalanced by the certain means which exist for its detection. If the peculiar symptoms that follow its administration fail to point it out, chemistry furnishes us with the power of discovering its presence in the most minute quantities, even to the hundredth part of a grain; and numerous cases might be cited to prove, that it may be detected in the body after it has been in the ground several years, in sufficient quantity to form powerful evidence where poisoning by it is suspected.

The first symptoms of swallowing arsenic are sickness and faintness, sometimes occurring in a few minutes, but generally in half an hour after it has been taken; then succeeds violent vomiting, accompanied with burning pain in the stomach, increased

by pressure, dryness and heat of the throat, hickup, unquenchable thirst, anxious countenance, and palpitation of the heart; the skin is sometimes icy cold, and covered with clammy sweats, at other times burning hot, and in the latter stages covered with eruptions. In some rare instances, the above effects are so slight as to be scarcely observable, and the patient sinks within five or six hours after the poison has been taken; in these instances lethargic sleep seems to be the prominent symptom. Small doses of arsenic at intervals will produce the same symptoms, though in a milder degree, but not with less certainty followed by death. The *Aqua Toffana*, which was commonly supposed to be the instrument in many of the cases of secret poisoning before alluded to, owed its fatal properties to the presence of arsenic, it was as clear and as tasteless as water, the dose, five or six drops, was repeated at intervals, and thus it could frequently be carried on for many months at the will of the poisoner until a fatal result was obtained.*

REMEDIES: The first great object we must keep in view, is to promote the speedy evacuation of the stomach: if the poison itself has not produced vomiting, from ten to twenty grains of sulphate of zinc

* The woman who gave her name to it, confessed that she had been instrumental in the death of six hundred persons; but it is no idle boast to assert, that modern science would have paralysed the power of the monster, and that her first crime would have been her last. The account given by Behrends of its symptoms, as quoted by Christison, is interesting. "A certain indescribable change is felt in the whole body, which leads the person to complain to his physician. The physician examines and reflects, but finds no symptom either external or internal, no constipation, no vomiting, no inflammation, no fever. In short, he can only advise patience, strict regimen, and laxatives. The malady however creeps on, and the physician is again sent for. Still he cannot detect any symptom of note. Meanwhile the poison takes firmer hold of the system; langour, weariness, and loathing of food continue, the nobler organs gradually become torpid, and the lungs in particular, at length begin to suffer. In a word, the malady is from the first incurable. The unhappy victim pines away insensibly, even in the hands of the physician, and thus he is brought to a miserable end, through months and years, according to his enemy's desire."

must be given if it can be readily procured; this generally acts as a powerful emetic. If this, however, cannot be obtained, a mustard emetic* should be administered, and the vomiting promoted by drinking large quantities of barley water, linseed tea, milk or tepid water: the two first being of a mucilaginous nature are to be preferred; tickling the back of the throat with a feather will often cause the stomach to reject its contents. It frequently happens that this treatment alone is sufficient for relief in accidents of this nature.

After the stomach has been cleansed by the emetic, &c., as described above, lime water, or chalk diffused in water, if it can be procured, may be given in large quantities. Hahnemann has recommended soap to be dissolved in water, in the proportion of a pound to four pints, and a tea-cupful to be given every five or six minutes; this undoubtedly is the best treatment if lime water is not at hand. Powdered charcoal may also be administered with advantage if the other remedies are not immediately attainable. The above remedies may be used with some degree of confidence, although their good effects are not sufficiently certain to establish them as ANTIDOTES.

ANTIMONY.

COMMON FORM.

TARTARIZED ANTIMONY, *Tartar Emetic.*

This metal and its compounds are not very poisonous. The preparation which has the most powerful effect on the system is the tartar emetic. The instances of its administration in large doses generally occur where it has been given intentionally, mixed

* Flour of mustard, in the proportion of a dessert-spoonful diffused in a tea-cupful of tepid water, furnishes a useful domestic emetic where immediate vomiting is required, but it cannot always be depended on.

with some prohibited article of diet, for the purpose of detecting, by the vomiting it produced, the culprit who may have made free with the forbidden thing. It is, however, a practice much to be reprehended, as in many instances very dangerous results have been produced. The general effects of tartar emetic are violent vomiting and sweating, and in this manner it is removed from the system. If, however, it is retained, or a large dose has been taken, a burning pain in the pit of the stomach succeeds, followed by colic pains and purging, and the vomiting becomes frequent and painful.

REMEDIES: Vomiting must be excited, if it has not already occurred, by copious draughts of tepid water, and tickling the back of the throat with a feather; but if we have reason to suspect that the stomach still retains some of the poison, a decoction of Peruvian bark may be given in wine-glassful doses, or the powder itself may be administered. Oak bark in decoction may be used if the previous remedy is not attainable. Failing these remedies, a strong decoction of black tea will be serviceable.

COPPER.

COMMON FORMS.

ARSENIATE OF COPPER, *Mineral Green.*
SULPHATE OF COPPER, *Blue Vitriol, Blue Copperas, Blue Stone.*
SUBACETATE OF COPPER, *Verdigris.*

The most frequent instances of poisoning by the salts of copper, occur where food has been prepared in uncleansed copper vessels, or where it has been allowed to stand some time in copper vessels before use; in these instances both the acetate and the carbonate are formed, and become dissolved in the liquid, in quantities sufficient to produce highly poisonous effects. But if copper utensils are kept perfectly

clean, and the articles prepared not allowed to become cold in them, they may be used with safety; the sulphate of copper or blue stone can rarely be taken accidently, as its strong metallic nauseous taste must, in all instances, detect it.

THE SYMTOMS produced by any of the preparations of salts of copper are, speedy vomiting, violent colic pains, metallic taste in the mouth, cramps in the legs, pains in the thighs, and ultimately convulsions; in some instances, a yellowness of the skin like jaundice is observable, this symptom is peculiar to poisoning by copper.

REMEDIES: The vomiting produced by the poison is to be encouraged by draughts of tepid water, in which a large quantity of sugar has been dissolved; after which the whites of eggs diffused in water, in the proportion of six to the half-pint, may be given freely. Experiments have proved the merits of both as antidotes for all the compounds of this metal, but more especially verdigris.

MERCURY.

COMMON FORMS.

BISULPHURET OF MERCURY, *Vermilion, Cinnabar.*
CHLORIDE OF MERCURY, *Calomel.*
BICHLORIDE OF MERCURY, *Corrosive Sublimate.*

The bichloride of mercury, or corrosive sublimate, is the preparation which most frequently comes under our notice as a poison, as the other forms mentioned are comparatively innocuous. Its taste is sharp, pungent, and metallic, and very difficult to get rid of. In common with all the other forms of mercury, if administered for a length of time or in large doses, it deteriorates the health, and produces that peculiar increase of the secretion of the mouth called salivation.

Corrosive sublimate is a frequent ingredient in quack remedies for cutaneous eruptions, but its presence may readily be detected by placing a drop or

two of the suspected fluid on a clean gold surface, as a sovereign; if this is touched with a piece of steel, like a key or wire, through the liquid, a silvery spot of the metal is discernable on the gold in a few seconds.

THE SYMPTOMS produced by corrosive sublimate are very similar to those of arsenic, differing however in their coming on more rapidly after the poison has been swallowed; vomiting, violent pain in the pit of the stomach, and tenderness over the whole of the bowels, are the general effects it produces: the constriction of the throat caused by it, is often so great as to produce great difficulty even in the act of swallowing, this, joined to its horrible taste, even when largely diluted, leaves no doubt as to its nature, and frequently warns a person taking it inadvertently, in time to desist with safety. If salivation should occur in this instance, it rarely makes its appearance before the second day, if the patient should survive so long.

REMEDIES: In these instances, the white of eggs in the proportion of six diffused in half a pint of water, may be administered as an antidote, whether vomiting has or has not occurred; and, if given before the symptoms are very violent, it may be considered as a tolerably certain remedy. It is right to mention that, if eggs cannot be procured, wheaten flour diffused in water and given freely is of great service, though not to be depended on equally with the first remedy mentioned.

LEAD.

COMMON FORMS.

PROTOXIDE OF LEAD, *Litharge.*
DEUTOXIDE OF LEAD, *Red Lead.*
CARBONATE OF LEAD, *White Lead.*
ACETATE OF LEAD, *Sugar of Lead*, in solution, *Goulard's Extract.*

The instances of poisoning by lead generally occur where it has been gradually received into the system of that class of artizans whose occupation brings

them into contact with the metal. Any of the preparations of lead, swallowed in large quantities, equally produce the same symptoms; but there is rarely that imminent danger which renders the immediate administration of remedies necessary: ample time is therefore allowed for obtaining the assistance of the medical practitioner.

All kinds of water, but especially spring water, act powerfully on lead, but this in time, generally works its own remedy; for the lead becoming at last incrusted with the product formed by the corrosion, the metal is at length shielded from any further action of the water; but where all the members of a family are continually complaining of colic and indigestion, it would be prudent to examine with great care, the sources and reservoirs by which the water in use is obtained and preserved.

Red earthenware, which is generally glazed with lead, should always be avoided as a receptacle for everything of an acid nature, as instances of poisoning by these means are of frequent occurrence. Lead has been used extensively to correct acid wines and cider, but it is to be hoped, for the credit of human nature, that such a practice no longer exists.

THE SYMPTOMS produced by lead, where its reception into the system has been going on for a long time, are indigestion, violent colic pains, and constipation; but the pain is relieved by pressure instead of being increased, as in the other poisons; vomiting and cramps in the stomach are frequently present. Palsy, especially of the upper extremities, is constantly observable, and amongst the class of artizans before alluded to, the right hand is generally affected, the fingers and thumb are drawn together, and the hand falls forward on the arm, or, as it is commonly designated, "drops." Plumbers, painters, glass workers, and potters, are especially subject to this affection; it is even noticed amongst compositors, who are in the habit of composing type, which has been dried by the fire, before it has cooled.

REMEDIES: As lead is gradual in its action as a poison, for the most part, time is allowed to make available the judgment of the medical man; but as a general remedy, much benefit is derivable from repeated doses of Epsom salts or castor oil. Those whose business causes them to handle the metal in any form, cannot be too cautious in washing their hands and bodies frequently, and changing their clothes, when they have concluded their work; woollen articles of dress ought to be avoided by them, and a close material chosen which can be washed frequently; the head should always be covered with a cap of similar texture. It has been asserted, and with some degree of truth, that a free use of fat or fatty matter in the usual diet, acts as a preservative against the effects of lead.

SILVER.

COMMON FORM.

NITRATE OF SILVER, *Lunar Caustic.*

This preparation of silver appears to be the only form which has a poisonous action on the human frame. Externally applied, it acts as a powerful caustic, and, taken internally, which may accidentally occur, it produces the same effects as the other corrosive poisons.

REMEDIES: The most certain antidote for lunar caustic, is common salt, which is best administered in mutton broth or beef tea, if such are readily procurable, as all fluids containing animal matter diminish the power of the poison.

ZINC.

COMMON FORM.

SULPHATE OF ZINC, *White Vitriol.*

This preparation in the purified state so closely resembles Epsom salts, that cases have occurred

where it has been administered in mistake for that drug.

THE SYMPTOMS it produces are, violent vomiting and burning pain in the stomach; but in doses not exceeding thirty grains, it is a valuable emetic in all cases of poisoning, but more especially by vegetable preparations.

REMEDIES: White of eggs, given as described for the salts of copper, and milk, are certain antidotes, but the vomiting generally removes the poison from the stomach.

VEGETABLE POISONS.

Section I.

POISONOUS PLANTS.

THE first four plants which are about to be noticed, belong to the natural family *Umbelliferæ*, of which order, carrots, parsley, celery, and parsnips, may be taken as examples, although these possess no hurtful properties. But where plants growing wild are met with, resembling in any degree the vegetables above enumerated, they ought uniformly to be left untouched; and no fancied resemblance either of root or leaf to any production of the kitchen garden should induce any one to believe they may be eaten with safety. Nearly all the instances of poisoning with the *Umbelliferæ*, have occurred where they have been mistaken for cultivated plants of a wholesome nature.

COMMON HEMLOCK.

Conium Maculatum.

This plant in its growth bears some resemblance in its different parts to parsley or the parsnip, it may, however, be readily distinguished from all others by

its spotted stem. It was with the expressed juice of this plant that the ancient Greeks are supposed to have despatched their criminals.

In those cases where it has been taken incautiously, the effects produced, are confusion of ideas, terminating either in stupor or delirium, anxiety, coldness of the extremities and sometimes vomiting.

As the remedial treatment is the same for all this class of poison, its consideration is postponed until the end of the section.

WATER HEMLOCK.

Cicuta Virosa.

This only differs from the preceding in causing more violent symptoms.

HEMLOCK DROPWORT.

Ænanthe Crocata.

This is the most violent of the poisons of this class, frequently producing convulsions as a first symptom, without any previous warning.

FOOL'S PARSLEY.

Æthusa Cynapium.

Has often been eaten in mistake for common parsley; but from which it may be distinguished, by the under surface of the leaves being black and glistening, and by their nauseous smell when rubbed. The effects it produces are similar to those already described.

MONKSHOOD.

Aconitum Napellus.

This plant, which is cultivated in our gardens, is known by its dark blue cap-shaped flowers, growing in clusters on a long stem; the leaves are deeply divided, of a dark shining green on the upper surface, and a pale green on the under.

THE SYMPTOMS it produces are, vomiting, delirium, convulsions, and stupor, generally accompanied with swelling of the tongue and face, and tenderness of the stomach. It seems in some instances to have been mistaken for lovage, a plant in request for some domestic cordial. It is almost needless to say, that where such error has occurred, the consequences have been fatal.

BLACK HELLEBORE, CHRISTMAS ROSE.

Helleborus Niger.

A dwarf plant, also cultivated for ornament; the leaves, which are deep green, spring directly from the root, and the flowers, which appear in the winter months, resemble the dog-rose, in the number and shape of their petals; their colour is at first white, but afterwards becomes greenish.

THE SYMPTOMS it produces are, vomiting, tenderness of the stomach, giddiness, cramps and convulsions.

FOXGLOVE.

Digitalis.

This plant, which grows wild in this country, often obtains a place in our gardens for its beauty; it is

known by its tall flower stems and purple flowers, shaped like a glove-finger, whence its German name *fingerhut;* the leaves are dark green in colour, and rough on the surface.

THE SYMPTOMS it produces are, depression and intermission of the pulse, giddiness, fainting, cold sweats, hickup, and convulsions. The instances of poisoning by it, have generally occurred, where it has been administered as a remedy by quacks, and others, totally unacquainted with its properties.

BUCKBEAN.

Menyanthes Trifoliata.

This plant is frequently gathered with the common water cress, but it may be readily distinguished by its leaves, which are divided into three segments, whereas the water cress has always five, and frequently seven. It is not, however, of a very poisonous nature; the worst symptoms produced by eating it would be, colic pains and vomiting.

COCCULUS INDICUS.

Menispermum Cocculus.

The plant which produces this poison, grows in Ceylon and the East Indies. The berry, which is brought into this country, is black, rough, and about the size of a pea: beer is frequently adulterated with it, on account of its bitter taste, which makes it a substitute for hops; it is also used to intoxicate fish, that they may be taken more easily; but, Goupil asserts, that its poisonous property is communicated to the flesh of animals, which, if true, must render unfit for eating, the fish taken by its means.

DEADLY NIGHTSHADE.

Atropa Belladonna.

This plant, which is indigenous to this country, is well known in our hedges, by the clusters of dark purple berries it produces in the autumn; the appearance of these and their sweetish taste, have often induced children to gather and eat them; though the poisonous properties of the plant are not restricted to the berries, as all parts of it are equally dangerous.

THE SYMPTOMS produced by it, will be better understood by quoting a case described by Orfila: "one child ate four ripe berries of the Belladonna, and another six: an hour after, both committed such extravagant actions, that their mother was astonished; the pupils of their eyes were dilated, their looks were altered, and they appeared laboring under a cheerful delirium, accompanied by fever. The medical man called in, found them in a state of great excitement, talking at random, running, jumping and laughing convulsively, with purple countenances and accelerated pluse." Dryness of the throat seems a symptom peculiar to these cases, and dilation of the pupils is always present. To produce this effect, and thus increase the darkness of the eyes, the ladies of Spain are in the habit of applying an ointment composed of it to the eyelids, from which practice it derives the name Belladonna.

HENBANE.

Hyoscyamus Niger.

This, like the last, is a common plant in our hedges and road-sides. It offers, however, nothing tempting to the sight or smell, yet its young shoots have occasionally been dressed and eaten as a salad,

and its roots gathered in mistake for wild parsnips.

THE SYMPTOMS it produces are, dilation of the pupils, giddiness, vomiting, purging, furious delirium, and, in some instances, profound sleep.

THORN APPLE.

Datura Stramonium.

This plant is cultivated for ornament in our gardens, and is well known by its white bell-shaped flower and prickly berry. All parts of the plant are believed to be poisonous, producing dilation of the pupils, delirium, and profound sleep, like the preceding.*

TOBACCO.

Nicotiana Tabacum.

This plant, although in common used as a luxury, is capable, either in substance or infusion, of producing the most dangerous effects. The celebrated poet Santeuil, according to Orfila, having taken some Spanish snuff in a glass of wine, expired in the midst of violent vomitings and excruciating pains. In the face of these facts, it has become an article not only

* It appears to be used in the East to facilitate theft. "The poisoning is systematically carried on by a gang of thieves, who reduce their victims to a state of insensibility, and then rob them. The poison chiefly used is the *datura stramonium:* the seeds are powdered and given in sweetmeats, or in the curry of the natives. The patients after recovery, generally give the following account: 'that they had been invited to partake of sweetmeats by a stranger in the streets, which, after they had eaten, insensibility followed, when they believe they were plundered.'"—*Transactions of the Medical and Physical Society, Bombay.*

of luxury, but necessity amongst us, either prepared as snuff or for smoking. Arguments for and against its use have been written, but its opponents have, to a certain degree, failed to prove its injurious effects. There is no doubt, that if used to excess in either form, it lays the foundation for indigestion, but all other stimulants are liable to the same objection. When resorted to in moderation, the health is not impaired by it, except in peculiar constitutions; nor does the smoker or snuff taker, in any degree, forfeit his prospect of living as long as those who exercise self-denial in this respect.

Instances certainly have occured, where disease and death have been the consequences of these habits, but, in reviewing the question impartially, let us remember the far greater proportion of cases of disease and danger resulting from a continued or immoderate use of wine, or other alcoholic fluids, without bringing forward the immense amount of human misery and crime produced by them, so that if we fail to prove our case as regards the *utility* of tobacco, it will be a task of no great difficulty to shew, that its use is less injurious in a moral and social point of view, than its more tolerated antagonists, wine or spirits. As a habit, it is certainly a bad one, being unnecessary, and as such, should be avoided.

When the smoke of tobacco is inhaled by a person unaccustomed to its use, it produces general depression of the system, the pulse is at first excited, but afterwards becomes depressed and faltering; nausea and vomiting are present, and the skin is covered with a cold clammy perspiration; the breathing is laborious, and headache is frequently a symptom; to these effects, profound sleep often succeeds. Gmelin quotes two cases where death followed immoderate smoking; in one case seventeen, and in the other eighteen pipes were smoked at one sitting.

The Symptoms produced by taking the plant, or its

preparations, internally, only differ from the above in being more violent.

MUSHROOMS.

Although some varieties of this tribe of vegetables are wholesome and fitted for food, yet the greater portion are of an extremely poisonous nature; experience can alone point out with certainty the difference between the two varieties, but, if any doubt exist as to the genuineness of them, the safer plan will be to reject them at once.

A great number of mushrooms are pronounced wholesome in France, but in this country we seldom venture beyond one variety, the *agaricus campestris*. This mushroom, as it first emerges from the earth, appears in the form of a round white ball or button, deriving its spherical form from the edges of the circular portion or cap being bound down to the stem; as its growth progresses, the cap becomes more distinct and flatter, the substance which confined it breaks, and discloses the rays or divisions on the under surface of the cap; these at first are of a delicate pink colour, but as the fungus matures, they become by degrees of a deep chesnut brown; the odour is peculiar and agreeable, and the whole of the plant is perfectly free from any viscidity. The cortical part of the cap of the wholesome mushroom can be easily peeled off; this peculiarity may *possibly* exist in some of the poisonous kinds, but it is a property which is *never* wanting in the edible variety.

All fungi which in any degree vary from the above description—all growing in shaded places or from the roots of trees, all of an unpleasant odour, or with warty knots on the cap, or covered with a slimy moisture, or with the under surface or rays of any other colour than pink merging into chesnut brown—

must be rejected. "Those whose substance becomes blue soon after being cut, are invariably poisonous."—*Christison.*

THE SYMPTOMS produced by the dangerous varieties, are vomiting, faintness, anxiety, a sense of suffocation, diarrhœa, convulsions, and stupor; on account of the indigestible nature of these vegetables, some time may elapse before dangerous symptoms manifest themselves. Gmelin has quoted seventeen cases where the interval between taking the mushrooms and the appearance of their effects, was a day and a half. Mushroom ketchup ought to be bought with caution, as those who gather the fungi for this purpose, are not over particular in the kinds they select.

REMEDIES: The same treatment is adapted for the poisonous effects produced by all the plants enumerated. The stomach should be evacuated by an emetic of sulphate of zinc, if procurable, if not mustard and water, as before mentioned; the back of the throat tickled with a feather, and copious draughts of tepid water should be swallowed to excite and promote vomiting. When the poisonous substance is brought away by these means, one part of vinegar and two of water may be given in wine-glassful doses, from every half hour to every two hours, according to the severity of the case; but if given before the offending matter is removed, it is more than probable, that the injurious effects will be increased. If the stupor be very great, cold water may be dashed over the head, face and chest, and the patient kept in exercise, as directed in the remedies for opium-poisoning; strong coffee may often be used with advantage in this state. As this course is only to be adopted until proper assistance is obtained, it is needless to describe any further treatment, as that is exclusively the province of the medical man, and must depend on his judgment and the circumstances of the case.

POISONOUS VEGETABLE PRODUCTS.

Section II.

ALCOHOL.

ALCHOHOL, or, as it is commonly called, spirits of wine, is a product of the vinous fermentation, and the chief principle of all the spirits in common use. It acquires different names according to the sources whence it is extracted. The spirit obtained from grapes, figs, &c., is called brandy; gin and whiskey are procured from malted barley, rye, and potatoes; and rum is the product of sugar or treacle. According to the table drawn up by Dr. A. T. Thompson, wines yield from 8 to 23 per cent. of pure alcohol; it is also found in all varieties of malt liquors.

Wine or spirits taken in moderate quantities, cause a temporary excitement, exhilarate the spirits, and increase all the powers of the intellect; carried beyond this, they produce intoxication, with all its attendant evils, and, by abuse, instead of a benefit and blessing, become a poison. On account of the diluted state in which alcohol is found in wine, it can rarely be taken in this form to an extent sufficient to produce any *serious danger;* the consequences of an excess in wine-drinking are never immediately fatal, and seldom extend beyond two days; but cases are numerous, in which death has been the direct result of drinking ardent spirits: this, however, may be caused in two ways, first, by the spirit acting immediately on the brain; and secondly, by the occurrence of a trivial accident to an intoxicated person, from which the helpless and insensible state of the individual renders him incapable of using proper means of extrication. For instance, persons have been frequently found drowned in very shallow water, who, in a state of inebriety, have fallen in with their face downwards,

or they may have laid themselves in such a posture, that their neckcloth may have choked them.

THE SYMPTOMS of intoxication produced by an excess in wine or spirits, must have come under the observation of all. When alcohol has been taken in immoderate quantities, it gives rise to furious delirium or profound stupor. Instances are far from uncommon where, generally for a wager, sufficient has been taken to produce immediate insensibility, followed by death in twelve or eighteen hours.

Though the habitual dram-drinker may avoid being the victim of an over-dose, yet his degrading custom as surely though more slowly saps at the root of life; the liver being over stimulated becomes diseased, the other vital organs are affected, the increasing irritability of the stomach renders proper nourishment unavailing, the body emaciates, and death follows; or, if these do not carry off the individual, a fearful affection of the brain called *delirium tremens* closes the scene.

REMEDIES: The first thing to be done with an intoxicated person, is to place him on a bed with the head and chest slightly elevated, and let all those parts of dress which confine the body be loosened or removed. If vomiting has not occurred, an emetic ought to be administered, but it must be remembered, that in cases of intoxication, the insensibility is so great, that the stomach is not readily influenced by a remedy of this kind; cold water should therefore be dashed over the face to produce a temporary consciousness, and thus aid its operation; in extreme cases, especially where the skin is cold, let bottles of hot water, or hot bricks be applied to the calves of the legs and to the feet. In the hands of the medical man, the stomach pump is a remedial means of great importance.

Sleep generally follows the evacuation of the stomach, by means of which the oppressed brain regains

its powers, and the patient awakes after a time, more or less recovered from his debauch, but the head-ache and derangement of the digestive organs which generally ensue, prove that the system does not undergo such trials with impunity. Mr. Bedingfield, who had ample opportunities of witnessing many cases of poisoning with rum at Liverpool, has left it on record, that where the pupil of the eye was sensible, there were hopes of the patient, but where it remained dilated and immoveable on the application of a light, recovery was very improbable.

OPIUM.

Opium is obtained from the seed vessels of the white poppy, and is met with either in the form of a blackish brown tenacious mass, or as laudanum, which is a liquid produced by dissolving opium in proof spirit. Another preparation, named "Godfrey's Cordial," is met with at the shop of the chemist; it is a compound of treacle, water, and laudanum, flavored with some aromatic oil. It is not recognised by the medical practitioner, but is resorted to by some mothers and nurses, who, regardless of the ultimate consequences to the child, avail themselves of this baneful compound, to quiet by stupefaction the crying and wailing of their charge. Fractiousness in young children always depends on some cause which can be removed or alleviated; very often little else is required but careful nursing, or some trivial attention, but many mothers and nurses, too impatient or too indolent to perform their duties, resort to this preparation to save the trouble which the proper course for relief would exact. By these means the foundation of future disease is laid, unless death happily intervenes to save the helpless being from an existence of continued suffering.

Neither opium, syrup of poppies, or any "compos-

ing" medicines ought to be given to children without the direct sanction of the medical man, as cases are on record where so small a portion as three drops of laudanum have produced death. By long use, and gradually increasing the quantity, immense doses may at last be taken with impunity; but the drug at last asserts its power, and the opium-eater generally sinks into a premature grave, or, if spared that, he drags on a miserable existence, the powers of the constitution destroyed by his fatal habit, and enduring unspeakable agonies of mind and body, from which death itself would be a refuge, if circumstances should deprive him of his accustomed dose. In some instances of this kind, where the person has the moral courage to submit to its privation to obtain relief, it may be necessary to reduce the quantity taken by degrees, but if the constitution will bear it, the better plan is to give it up at once and for ever; if the depression is extreme, some stimulant, as brandy, may be permitted, but this must ultimately be relinquished, or one evil habit would be superseded by another.

Opium, in small doses, produces exhilaration of the spirits, and a comfortable sense of warmth of the body; the symptoms are sooner or later followed by sleep. The larger the quantity, the shorter is the previous stage of excitement, so that when taken in poisonous doses, the exciting effects are rarely visible. Giddiness is the first symptom in these cases, followed by deep sleep; the body becomes insensible to external impressions, the attitude is unchanged, and the respiration slow; if the eye-lid is raised the pupil will be found contracted to the size of a pin's head; as the poisonous effects proceed, the countenance becomes ghastly, the pulse imperceptible, and death ensues. In some instances the poison is rejected by the stomach before it has time to act on the brain.

Remedies: The first object to be accomplished in cases of poisoning by opium, is the evacuation of

the stomach. If sulphate of zinc can be procured, from twenty to thirty grains dissolved in water is to be given immediately, or, failing this, a *mustard emetic*, as described at page 14, must be administered, and the back of the throat tickled with a feather. Vomiting must be encouraged by draughts of tepid water; during this time, let the patient be walked up and down between two persons, *and no attention ought to be paid to the entreaties of the sufferer to be allowed to rest.* This constant exercise is essential to the action of the emetic, for it is found that vomiting cannot be excited unless the patient be kept awake. Cold water dashed suddenly on the face, will often produce a temporary consciousness. There is no antidote for opium, though vinegar has been strongly recommended; it may be used with advantage after *all the poison has been removed from the stomach*, but if given before, it will only increase the bad symptoms; strong coffee is useful under the same circumstances.

OXALIC ACID.

This acid, which is a most active poison, exists in many vegetables. The common sorel, a plant well known by its strong acid taste, contains it in a large proportion, combined with potass; a great quantity is obtained from sugar, by acting on it with nitric acid. Its resemblance to Epsom salts has frequently led to fatal mistakes, but no safer precaution can be taken, than to taste the dose before swallowing, as the sharp acidity of the one, and the bitterness of the other, will at once point out the difference.

It certainly requires a practised eye to detect it in the undissolved state, but it will be found that the crystals of oxalic acid are larger, flatter, and not so bright as Epsom salts; the crystals of the acid, if pressed firmly together between the fingers, afford a

crackling sound, which is not the case with the other preparation.

Oxalic acid may be taken not only with impunity, but with some degree of benefit in small doses, as a refrigerant in fevers; but it appears at present to be nearly discarded from modern practice.

When taken in larger quantities, the symptoms it produces are burning pain in the stomach, followed by violent and incessant vomiting, though this is a symptom which is not always present. The matter ejected is dark colored, and often bloody; one unfailing effect is the sinking of the pulse, indicating the depression of the circulation; the hands and feet become cold, and the nails of the fingers and toes livid, and when death follows it is frequently preceded by convulsions. In extreme doses the heart is immediately affected, and death may ensue within the hour.

REMEDIES: In these cases, no time should be wasted in administering emetics; *nor ought warm water to be given with a view to promote vomiting*, as by diluting the poison, its effects on the system are increased. The best antidote is, chalk or whiting diffused in water to the thickness of cream, and taken copiously, magnesia may be used for the same purpose, and if these are not at hand, the plaster of the walls or ceiling may be beaten into a thin paste with water, and given as a substitute for the other remedies.

PRUSSIC ACID.

Hydrocyanic, or prussic acid, is met with as a principle in certain plants; it is also obtained artificially by chemical processes. In its pure state, it is a clear, colorless fluid, with a pungent taste, its odour is strong and peculiar, affecting the nostrils

and throat, and when diffused through the air, has some resemblance to the smell of bitter almonds. It can be procured from bitter almonds, the blossoms and kernels of the peach, the leaves of the cherry-laurel, and the mountain ash. The acid is generally kept at the shops, diluted for medical purposes, but in this state, as well as in its state of combination in plants, it acts as a deadly and rapid poison. Laurel and bay leaves, the oil of bitter almonds, peach water, and all similar preparations which are in constant request for culinary purposes, as their flavour depends on the presence of prussic acid, should be used with extreme caution, for obvious reasons.

Large doses of prussic acid will cause death in a few seconds; but if the patient survives forty or fifty minutes, strong hopes may be entertained of recovery. As far as can be gathered from experiments on the lower animals, the first symptoms produced by the acid, is total loss of power over the voluntary muscles; this is immediately succeeded by the most frightful spasms; the respiration becomes irregular and convulsive, frequently accompanied with cries and screams; the body is contorted and drawn backward, and the limbs are strongly extended; a sudden relaxation of the spasms ensues, and death instantly follows. The vegetable forms of the poison before enumerated produce giddiness, a sense of anxiety, violent nausea and purging, frequently followed by convulsions.

Remedies: The most serviceable remedy, where time is allowed for its use, is the vapour of ammonia assiduously applied to the nostrils; smelling salts and hartshorn are the common forms of this remedy. If it is possible to obtain chlorine gas, it will be found a powerful remedy, given internally, mixed with water. Great benefit is derived from dashing cold water repeatedly on the back, spine, and chest.

ANIMAL POISONS.

Fortunately, in this country, there is but one snake, the viper, whose bite produces poisonous effects, which, however, is very rarely attended with danger. Dr. Wagner has observed, that the consequences of the bite of a viper are more to be feared where the small joints, as the fingers and toes, have been seized, because the larger parts cannot be included between the animal's jaws, and are therefore less likely to be pierced with its fangs.

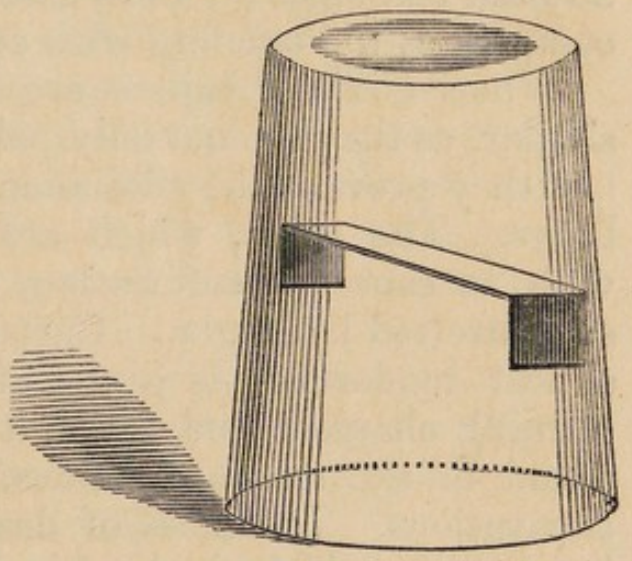
THE SYMPTOMS produced by the bite of a viper, are, acute pains, extending from the wounded part up the limb—swelling—at first white or mottled, afterwards red, livid, and hard—vomiting—convulsions—quick and imperfect pulse—oppressed breathing—and cold perspirations.

Under this head must be considered, that most frightful of diseases, hydrophobia. This horrible affection is the result of the bite of a rabid animal, generally a dog, but in France, where wolves are common, they are frequently the means of spreading the disease. M. Trolliet, of Lyons, gives an account of a ravage committed by one of these animals on twenty-three persons, besides cattle and dogs, in the department of the Isére, in 1807.

Hydrophobia is not the immediate result of the injury, as is the case of a viper bite, but generally occurs some days or weeks afterwards. It may be some satisfaction to know, that if six months elapse without any bad symptom, no further consequences are to be apprehended; also, that if the bite has been inflicted on a part of the body covered with any article of dress, particularly leather, the fact of the teeth of the animal having been wiped dry before entering the skin, renders the probability of an attack less; and lastly, it does not follow, that all who are

bitten are liable to the disease. Mr. Hunter gives an instance in which, out of twenty persons bitten by the same dog, only one was affected.

REMEDIES: The main object in the treatment of the bites both of the viper and the rabid dog, are essentially the same; it is to prevent the poison being absorbed or entering into the system. This is best effected, by applying, without delay, if the position of the injury will admit it, an exhausted cupping-glass over the wound; but, as this will probably not be at hand, a wine-glass or tumbler may be used as a substitute, taking care to select that which has the thickest edge. The air can be exhausted by the following method: let a strip of blotting paper be folded three or four times, and then bent to this shape ⌐¬, so that the centre portion be rather longer than the diameter of the glass, if it be then introduced into the vessel so that the two bent ends press against the sides, it is obvious that it will not fall out when the glass is inverted: the paper should then be wetted with some spirit, as gin or brandy, and lighted; while burning, let the mouth of the glass be applied firmly over the wound, taking care that all is included within its circumference. In a few seconds the flesh will be drawn up into the glass, which will remain firmly attached for some time. Its application ought to be renewed as frequently as it becomes loose, until the arrival of the surgeon.



If, from the situation of the wound, or any other cause, this method cannot be adopted, a ligature is to be tightly applied a short distance from the bitten part, *between the bitten part and the body.*

Part II.

ACCIDENTS, &c.

SUFFOCATION.

ANY obstruction which prevents the ingress of atmospheric air to the lungs, will cause death by suffocation. It was formerly supposed, that life was destroyed in drowned persons by the rush of water into the lungs; and that the criminal executed by hanging was killed by the ligature obstructing the vessels of the head, and thereby producing apoplexy.

In both of these instances, however, death is produced by suffocation. The entrance of the windpipe or glottis, is so sensitive, that the approach of the water closes it at once with great force, so that no fluid can enter; and in cases of hanging, the rope compresses the opening with equal certainty.

When noxious vapors are inhaled, the result is similar, as they are not only poisonous when respired, but they prevent the admission of proper air into the lungs. The gases, which are most commonly met with as causes of suffocation, are carbonic acid, and sulphuretted hydrogen. Carbonic acid gas, which is almost inodorous, is given off in abundance from burning charcoal and fermenting liquids; it is also found in the shafts of mines, old wells, and other excavations. Instances of death caused by sleeping in rooms in which charcoal is burning, without any outlet for its noxious vapor, are very frequent; nor are examples wanting, where life has been immediately destroyed by incautiously entering a beer vat or well. The purity of the air as regards this gas, is proved by a candle continuing to burn when lowered into it, for the gas which extinguishes flame, is fatal to animal life. This, however, does not afford a certain rule for any other gas but carbonic acid; as there are many other vapors of an extremely dangerous nature, in which a light will burn with undiminished brilliancy.

Sulphuretted hydrogen gas is the result of the decomposition of animal matter, and its effects are most frequently seen amongst those employed to cleanse cesspools and open graves; it is extremely fetid, resembling rotten eggs, and, unlike the former, it does not extinguish flames, so that it may be fatal to life, although it supports combustion. If suffocation is not the immediate result of inhaling these vapors, the symptoms produced are, difficulty of breathing, a feeling of tightness about the head, with an intolerable sense of anxiety and confusion of the ideas, ending in perfect insensibility. No circumstances can warrant persons remaining in a room with burning charcoal, without sufficient outlet for its fumes; and in the event of a well or cesspool being required to be entered or cleansed, it should never be done singly; the party undertaking the work ought to have a rope secured round his body, and held fast by his companions, that he may be immediately withdrawn in case of accident; and in the event of opening any place of the kind which has long been closed, some time should be suffered to elapse before attempting to enter, that the noxious vapor may be, to a certain extent, rendered harmless by mixing with the pure air.

As the rules for the recovery of persons apparently drowned or suffocated, as recommended by the Royal Humane Society, are obviously the most concise and useful, they are here given verbatim.

Cautions.

Send quickly for Medical Assistance.

1. Lose no time.—2. Avoid all rough usuage.—3. Never hold the body up by the feet.—4. Nor roll the body on casks.—5. Nor rub the body with salt or spirits.—6. Nor inject tobacco-smoke or infusion of tobacco.

To restore the apparently Drowned.

I. Convey the body carefully, with the head and shoulders supported in a raised position, to the nearest house.

II. Strip the body, and rub it dry; then wrap it in hot blankets, and place it in a warm bed in a warm chamber free from smoke.

III.—Wipe and cleanse the mouth and nostrils.

IV.—In order to restore the natural warmth of the body—

— Move a heated covered warming-pan over the back and spine.

— Put bladders or bottles of hot water or heated bricks to the pit of the stomach, the armpits, between the thighs, and to the soles of the feet.

— Foment the body with hot flannels; but, if possible,

— Immerse the body in a warm bath, as hot as the hand can bear without pain, as this is preferable to the other means for restoring warmth.

— Rub the body briskly with the hand; do not, however, suspend the use of the other means at the same time.

V. Volatile salts or hartshorn to be passed occasionally to and fro under the nostrils.

VI. No more persons to be admitted into the room than are absolutely necessary.

To restore the apparently Dead from Hanging.

In addition to the means recommended for the apparently drowned, bleeding should early be employed by a medical assistant.

To restore the apparently Dead from noxious Vapours, &c.

1. Remove the body into cool fresh air.—2.

Dash cold water on the neck, face, and breast frequently.—3. If the body be cold, apply warmth, as recommended for the apparently drowned.

General Observations.

On the restoration of life, a tea-spoonful of warm water should be given; and then, if the power of swallowing be returned, small quantities of warm wine, or weak brandy and water, warm: the patient should be kept in bed, and a disposition to sleep encouraged, except in cases of apoplexy, intoxication, and coup-de-soleil. Great care is requisite to maintain the restored vital actions, and at the same time to prevent undue excitement.

The treatment recommended by the Society is to be persevered in for three or four hours. It is an erroneous opinion, that persons are irrecoverable because life does not soon make its appearance; and it is absurd to suppose that a body must not be meddled with or removed without the permission of a coroner.

WOUNDS.

In the event of wounds penetrating the cavities of the body, we are not aware that anything can be done for their alleviation by non-professional persons; we shall, therefore, restrict our remarks to wounds of the extremities, where the chief danger to be apprehended is from the loss of blood.

The blood circulates through all parts of the body, by means of two sets of vessels called respectively, arteries and veins. The arteries serve to convey the blood from the heart to all parts of the body, which it is the duty of the veins to collect and return to the centre of circulation. As the coats of the arteries are more elastic than those of the veins, and the

blood is propelled through them with greater force, wounds of these vessels are more dangerous than similar injuries to the veins.

If an artery be wounded, the blood, which is of a bright red color, is emitted by successive jets, corresponding to the pulsations of the heart. In wounded veins, on the contrary, the blood is of a darker red, and the flow is continuous and sluggish. Bleeding from a wounded vein is rarely sufficiently copious to excite apprehension, it will generally yield to the application of a piece of linen rolled up into a small pad, placed over the wound, and kept in its place by a bandage, applied moderately tight. This bandage should not be passed more than five or six times round the limb, as this is sufficient to give the requisite degree of pressure, at the same time that it permits the effects of the application to be seen without difficulty.

Nothing is more unsafe than the dangerous practice of applying bandage over bandage to a bleeding wound, as if to hide the blood were sufficient to stop its flow. One bandage, as described above, will always suffice if properly applied, and will be much more serviceable than covering the wound with a superabundance of useless linen. This treatment will also suffice, where from the bright red color and rapid flow of the blood, we have reason to believe that a small artery has been injured. In cases where this method will not check the bleeding, or from the size or depth of the wound, we have reasons to believe that some large vessel is wounded, we must endeavour to arrest the flow of blood, by arresting the circulation through the limb. This is done by applying a ligature *between* the wound and the heart, or, in other words, above the wound.

In the arm and leg, the two trunk arteries, from which the limbs derive their supply, are very near the surface in the first part of their course. The accompanying diagrams will show their position, before they dip into the substance of the limb.

In figure 1, the position of the artery in the upper arm is represented; it will be seen that it lies to the inner or body side of the fleshy substance, which extends from the top of the shoulder, inside the arm to the elbow joint.

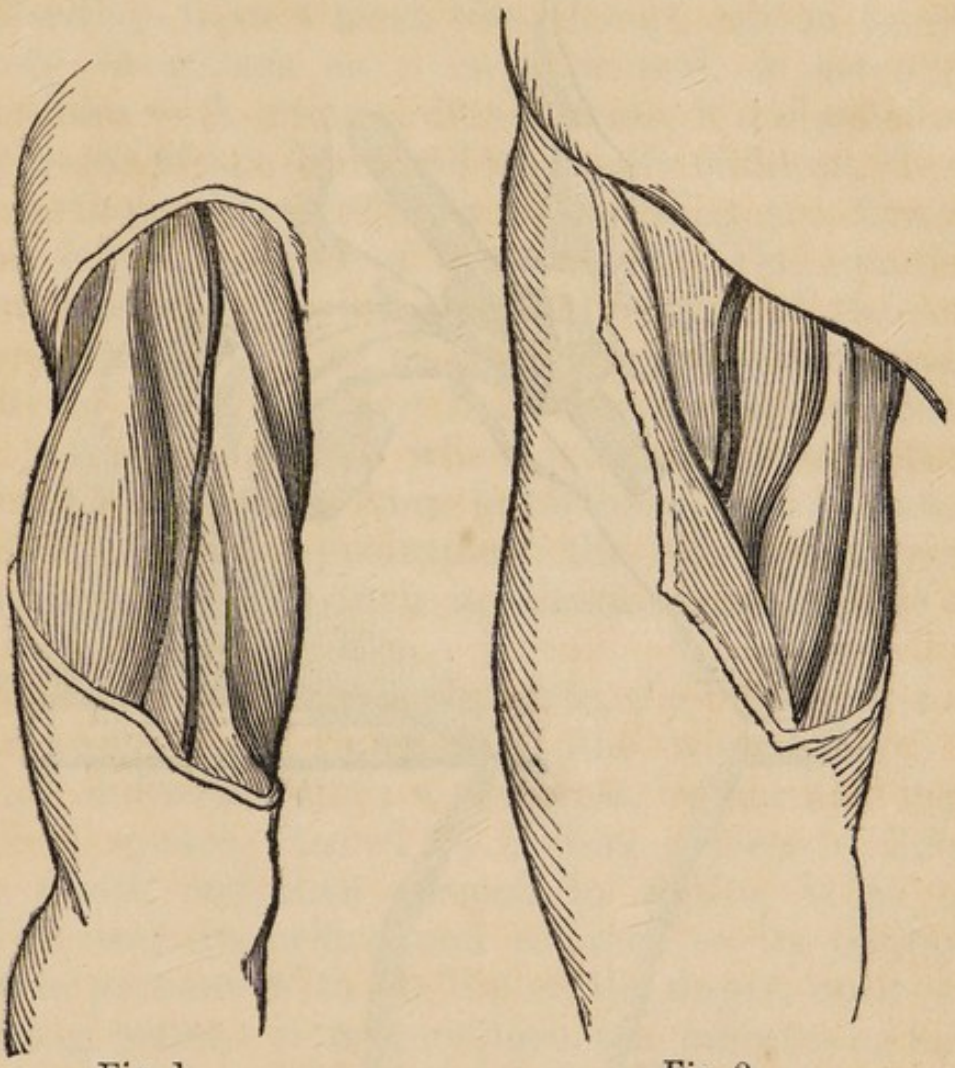


Fig. 1. Fig. 2.

In figure 2, which represents the upper part of the thigh, it will be observed commencing its course midway between the point of the hip and the inner edge of the limb; and in both cases the vessels are sufficiently near the surface to admit of being easily compressed. It is true that a pressure applied equally round the limb would, if sufficiently powerful, arrest the flow of blood from an artery; but a knowledge of the position of the vessel enables us, by a pad, to direct our pressure to that part, without constricting the remainder of the circumference of the limb, to the same extent.

The method is as follows:—a handkerchief should be tied, with a firm knot, loosely round the limb, immediately over the course of the vessel, as pointed out in the diagram (fig. 3); between this and the

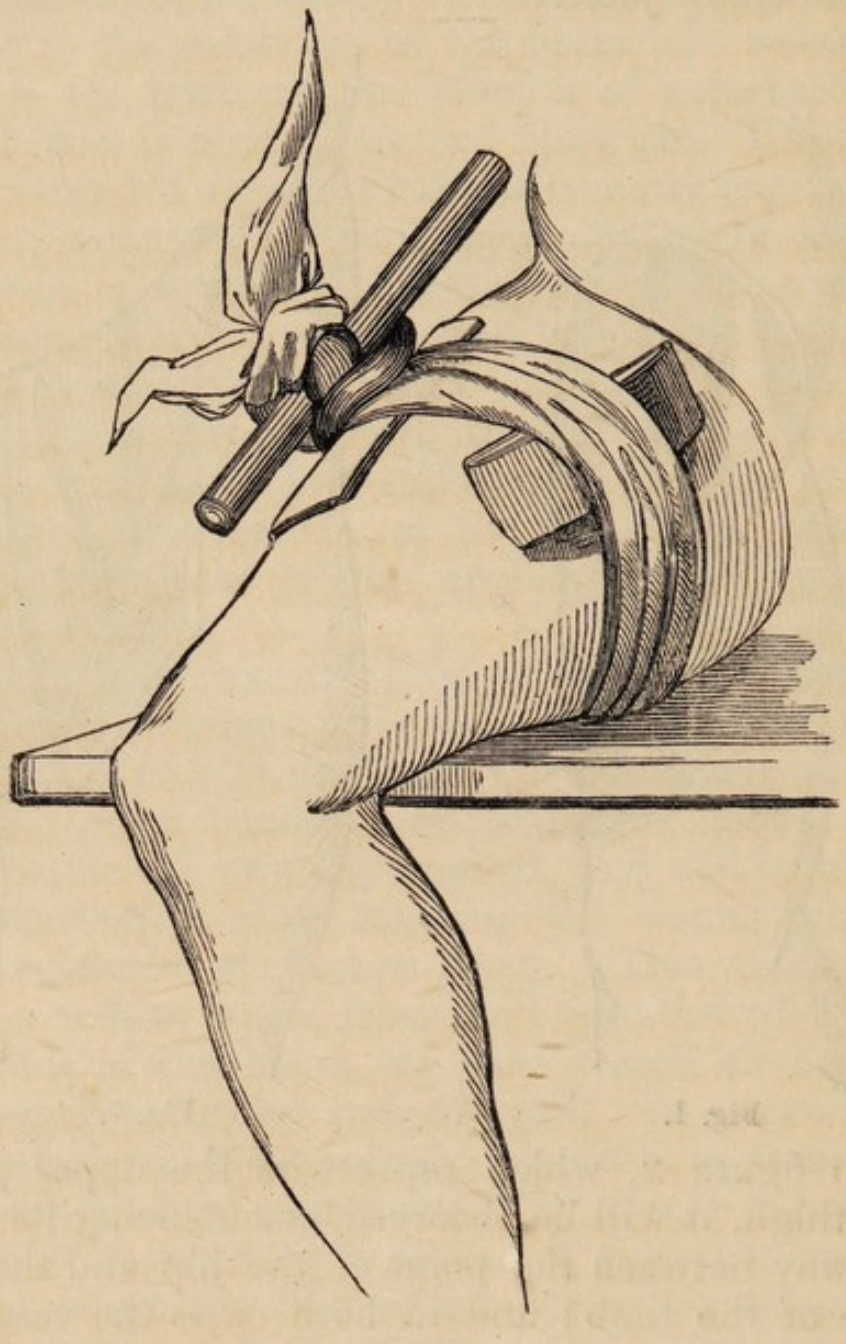


Fig. 3.

position of the artery, a firm pad should be introduced, in a direction transverse to the handkerchief (The best and most ready pad is formed by two stockings rolled together *very tightly*). If, then, a short strong stick, like a round ruler, be passed under the bandage, opposite to the pad, by twisting the stick, a steady pressure can be exerted until the

bleeding is checked; and this can be maintained until efficient assistance is procured. If necessary, a small thin book may be placed underneath the twisted part of the bandage, to prevent the skin being drawn up in the folds.

Bleeding from a leech bite, though not so immediately dangerous as a large wound, is attended sometimes with serious consequences, if not arrested. In persons of lax fibre, and especially children, there is sometimes great difficulty in checking the flow of blood from a wound of this nature. The common practice to effect it is but a modification of the one before alluded to, viz., to cover the orifice with fragments of burnt rag, hat beaver, cobweb, &c., &c.; and there are but few who have ever attempted to staunch the bleeding from leech bites, who have not witnessed with disappointment the blood continuing to ooze through all their applications, in defiance of their efforts to stay it.

When the bleeding is obstinate, the best plan is to clear away every thing from the wound, with a sponge and cold water; a compress, rather less than an inch square, formed by folding a piece of linen four times, and then steeped in spirits, is to be applied over the orifice, and retained in its position by firm pressure with the top of the finger, until the bleeding ceases; it may require ten minutes or half an hour to accomplish the object. When it has quite ceased, the finger may be cautiously removed, and, it practicable, a bandage applied, or a strip of adhesive plaister, to retain the compress in its position.

In all cases after leeches have been applied, a patient (and more especially if it be a child) ought not to be left until it has been ascertained, beyond a doubt, that every wound has ceased to bleed.

BURNS AND SCALDS.

These injuries are the result of the application of an undue degree of heat to the body—a burn being

produced by bringing the part into contact with dry heat, whereas a scald is the consequence of exposure to a heated liquid. In both cases the nature of the injury is the same, the elevated temperature producing the destruction or death of the parts. After an accident of this nature, a vesicle or blister generally rises over the injured part, which, as it protects the raw surface underneath, is better left untouched for the first few days after the accident, unless the superabundance of fluid within the vesicle produces great pain. In this case, careful punctures made with a needle will give immediate relief. Burns and scalds, like all other accidents, occasion a sudden and violent shock to the system, and, if the injury be severe, or much of the surface involved, will bring on a state of insensibility, accompanied with feeble pulse and cold extremities. Children, of course, exhibit these symptoms more frequently than adults. In cases like this, warmth ought to be applied to the feet and legs, and a little hot spirit and water given, proportionate, of course, to the age of the patient. This treatment must be stopped the instant the patient begins to rally. The best remedy for the injured part is to cover it with flour, dredged on to it from the common flour dredger; and this is to be repeated whenever the surface of the flour becomes moist from the exudation of the wound beneath. Cold applications, where the injury is extensive, especially in children, are often productive of great danger by bringing on the state of insensibility before alluded to.

FITS OR CONVULSIONS.

These are popular terms, applied to those sudden seizures attendant on peculiar states of the constitution; and which have, as an unvarying symptom, a total or partial loss of sensibility and power of voluntary motion.

The four varieties most frequently observed are,

apoplexy, epilepsy, fainting, and the convulsions of children.

APOPLEXY is distinguished from the others by the purple hue and swelling of the face, the snoring sound produced by the breathing, and the relaxed and motionless state of the limbs. *These attacks are highly dangerous and require prompt medical assistance.*

In EPILEPSY the hands are firmly clenched, the teeth set, and the limbs and body are violently contorted by the spasmodic struggles, often exhibiting far more muscular power than the patient possesses in a state of consciousness. These attacks are not so dangerous as apoplexy, as many persons are subject to them at intervals throughout their lives.

The chief characteristic of FAINTING is insensibility, the face is generally pale, the lips bloodless, the muscles relaxed, the breathing slow, and the surface covered with cold clammy perspiration.

The CONVULSIONS OF INFANTS closely resemble epilepsy; they generally arise from some irritation, consequent on teething or derangement of the bowels. In these cases, the thumbs are observed drawn inwards towards the palms of the hands; this symptom is indicative of irritation, long before convulsions make their appearance.

In the three first varieties mentioned, namely—apoplexy, epilepsy and fainting, the first care must be to loosen the tight parts of the dress, more especially about the chest and throat, in order that all the muscles and passages connected with the breathing may have the freest possible exercise.

In apoplexy, the head and neck may be slightly raised; but care must be taken to avoid bending the head forward on the chest, which will inevitably be the case if the trunk be not slightly elevated at the same time. In this disease, and in epilepsy, cloths wrung out of cold water may be applied to the head.

In epilepsy, the attention ought to be chiefly directed to prevent the patient from injuring himself in his violent struggles. These attacks are rarely of

long duration, and are frequently followed by long and profound sleep.

In fainting, patients should be laid perfectly flat, with the head low. Cold water may be dashed on the face, and smelling salts, or something equally pungent, applied to the nostrils.

The convulsions of children are frequently cut short by placing them in a warm bath, of a temperature in which the upper part of the arm of an adult can be borne without pain. If the attack be very strong, or lasting, cold water may be applied to the head of the patient while in the warm bath.

CHOLERA.

This is a disease which is much dreaded, on account of the suddenness of the attack, nor can much be done for it unprofessionally, since the remedies which its varieties and degree of intensity require, can only be judged of properly by a medical man. Much apprehension may be calmed by knowing, that the more dangerous variety, or Asiatic cholera, as it is termed, is excessively rare, and that which is called English cholera, will almost always yield to the proper remedies. That there exists anything like a universal remedy for this disease, must for the reasons given above be very improbable. The following mixture however, which has been tried most successfully, and was first noticed by Mr. Hope, of Chatham, is of great utility; at all events no harm can arise from its use, and this fact has caused its introduction in a popular form into this work.

Take of nitric acid, one drachm, water, or camphor julep, half a pint; mix them and then add tincture of opium, forty drops.

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