
A manual of military surgery, by S.D. Gross, MD,
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A manual of military surgery - Chapter XIII: Medical, surgical, and dietetic formulae

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CHAPTER XIII.

MEDICAL, SURGICAL, AND DIETETIC FORMULÆ.

UNDER this head I propose to notice such formulæ, or medical, surgical, and dietetic preparations, as have been found serviceable in my own practice, or in the practice of others.

1.—*General Remedies.*

Among the more simple *purgatives* may be mentioned the following: all drastic articles should, if possible, be excluded from the prescriptions of the military surgeon:—

℞.—Massæ ex Hydrargy. gr. x;

Pulv. Ipecac. gr. i.

M. ft. pil. ii.

A mild laxative in dyspepsia and disorders of the stomach and liver.

℞.—Extr. Colocynth. c;

Massæ ex Hydrargy.

Pulv. Rhei. v. Jalapæ, āā gr. x;

Ant. et Potassæ Tart. gr. $\frac{1}{8}$.

M. ft. pil. v.

An active, antibilious purgative, from three to five being an ordinary dose. Calomel may be substituted for the blue mass, if there is much disorder of the liver and secretions.

The safest *emetics* are ipecacuanha, infusion of eupatorium perfoliatum, and mustard and common salt, an even tablespoonful of each to half a pint of tepid water, one-half to be taken at once, the remainder, if necessary, in fifteen minutes. Sulphate of copper or zinc will afford the most prompt emetic effect in case of great urgency, as in poisoning.

The following formula will be found very serviceable in the earlier stages of most inflammatory affections, especially the cutaneous, articular, and traumatic, unaccompanied by disease of the alimentary canal:—

R \bar{y} .—Ant. et Potass. Tart. gr. iss;

Magnesiæ Sulph. ℥i;

Morphiæ Sulph. gr. ss;

Sacch. Albi. ℥ii;

Aquæ Destil. ℥vi. M.

This is the antimonial and saline mixture, of which repeated mention occurs in the preceding pages, and which I am in the daily habit of prescribing in my surgical as well as

medical practice. It may be rendered depressant by the addition, to each dose,—which is half an ounce, repeated every two or three hours,—of from three to eight drops of the tincture of *veratrum viride*; anodyne, or diaphoretic, by *laudanum*, or *morphia*; anti-periodic, by *quinine*; anti-gonorrhœal, by *copaiba*, gum-arabic being used, in the latter case, as one of the ingredients; and anti-rheumatic, by *colchicum*. If *quinine* be used, the addition of aromatic sulphuric acid will be required, which is also an excellent solvent of the salts.

R_y.—Vini Colchici Sem. ℥i;
 Morphiæ Sulph. gr. ss;
 Potassæ Carbon. gr. x;
 Aquæ Destil. ℥ss. M.

In rheumatic and gouty affections, taken at bedtime, and followed by a mild aperient next morning.

The following will be found to be pleasant and efficient *diaphoretics*:—

R_y.—Spirit. Mindereri, ℥iv;
 Sp. Æther. Nitrici. ℥ii;
 Morphiæ Acet. gr. i. M. S.

Tablespoonful every two or three hours. If there be much heat of surface, we may add

to each dose the eighth, twelfth or fifteenth of a grain of tartar emetic.

Ry.—Potassæ Carbon. ℥i;
 Morphiæ Sulph. gr. i;
 Sacch. Albi. ℥ii;
 Suc. Limonis recent. ℥ii;
 Aquæ Menth. v. Destil. ℥iiiss;
 Sp. Æther. Nitrici. ℥ss. M. S.

Tablespoonful every hour or two.

The effervescing draught, so valuable in irritability of the stomach, is composed as follows:—

Ry.—Suc. Limonis recent. ℥ji;
 Sacch. Albi. ℥jiss;
 Aquæ Destil. ℥ji. M.

Ry.—Potassæ Carbon. ℥i;
 Aquæ Destil. ℥ji. M.

Put two tablespoonsful of the lemonade with one of the alkaline solution, and let the mixture be drunk while effervescing, repeating the dose at pleasure.

As *antiperiodics* quinine and arsenic are the main reliance of the modern practitioner. The former may be given by itself, in pill or solution, in doses varying from two to ten grains, according to the urgency of the case

or the state of the system. My usual dose is ten grains every eight, ten, or twelve hours, until the paroxysm is arrested. If the symptoms are unusually violent, we need not hesitate to administer fifteen or even twenty grains at a dose, being of course careful to watch the effects, which will generally be more pleasant if a little morphia be combined with the quinine.

In chronic, or frequently-recurring intermittent and neuralgic affections, arsenic forms a valuable, and, indeed, in many cases, an indispensable addition; also iron, if there be evidences of anæmia. I prefer myself the arsenious acid to Fowler's solution, convinced that it is much more efficacious and at the same time less apt to cause nausea and anasarca. The following formula will be found advantageous:—

Ry.—Acid. Arseniosi, gr. iss;

Quiniæ Sulph.

Ferri Sulph. āā ʒi;

Morphiæ Sulph. gr. i;

Extr. Nucis Vomicae, ʒi.

M. ft. pil. xxx.

S. One every five, six, or eight hours.

Quinine is also one of the best *tonics*, and it may always be beneficially combined with other articles, as iron, gentian, quassia, nuxvomica, and capsicum. The fluid extracts and aromatic tinctures of bark and gentian will also be found useful. One of the best chalybeate preparations is the tincture of the chloride of iron, in doses of from twenty to twenty-five drops three or four times daily.

Expectorants constitute a large class of remedial agents, but they nearly all derive their active principles from the admixture of tartar emetic, ipecacuanha, or squills. They may generally be usefully combined with potassa and anodynes, being rendered palatable by syrup or sugar.

Nurses should be familiar with the manner of administering *enemata* or injections, as frequent occasions arise for their employment. They may be cathartic, as when they are designed to empty the lower bowel, or to promote the action of other remedies; stimulant, as in case of excessive exhaustion; nutritive, as when food cannot be taken by the mouth; anodyne, when it is wished to allay pain and induce sleep.

A *cathartic* effect may readily be induced by an injection of a pint and a half of cold water, or water in which a little ground mustard or common salt has been stirred, a mixture of warm water and castor oil; or an infusion of senna, or senna and Epsom salts. Turpentine is particularly indicated when the bowels are distended with flatus.

Stimulating injections may be made of brandy, alcohol, mustard, salt, or spirits of camphor or turpentine, mixed with more or less water; and they are often extremely serviceable in promoting reaction.

Nutritive enemata may be necessary in the low stages of fever, and in gunshot and other injuries attended with lesion of the gullet. The best ingredients are essence of beef, strong beef-tea, brandy, or brandy and milk, introduced in small quantity so as not to oppress and irritate the rectum.

Anodyne injections may consist of laudanum, black drop, morphia, hyoscyamus, or belladonna, either alone, or variously combined, and administered with about two ounces of tepid water, or some demulcent fluid.

The best *syringe* now in use is the gutta-

percha, which is not liable to be deranged, and which has the additional advantage of durability. It should be of various capacities, from eight to sixteen ounces, according to the intention to be fulfilled by it. The nozzle must be well oiled previously to its introduction, and care taken that no air be pushed into the bowel.

2.—*Topical Remedies.*

R_y.—Tinct. Iodinæ,

Sp. Vini Rectific. āā ℥j. M.

To be applied with a large camel-hair pencil, or cloth mop. I hardly ever use the pure tincture of iodine for local purposes.

R_y.—Plumbi Subacet. ℥j;

Pulv. Opii, ℥j. M.

To be put in half a gallon of *hot* water, and the solution to be used warm or cold, as may be deemed best. Laudanum may be substituted for the opium.

R_y.—Pulv. Ammoniz Hydrochlor. ℥j;

“ Potassæ Nitrat. ℥ij;

“ Opii, ℥j. M.

To be used as the preceding; being particu-

larly valuable in inflammation of the joints, on unbroken surfaces.

The *warm water-dressing* consists of warm water, simple or medicated with laudanum, acetate of lead, or any other ingredient that may be desired, applied upon flannel or muslin cloths, properly folded, and covered with oiled silk, to confine heat and moisture.

The *cold water-dressing* is composed of cold water, also simple or medicated, applied with cloths, the parts being constantly exposed to the air to promote evaporation. The cloths are wet whenever they become heated or dryish, the water being pressed upon them from a sponge.

Water-dressings, if long continued, will occasionally cause irritation, itching, and pustulation of the skin, rendering it necessary to replace them with cataplasms, or other soothing remedies.

Among *poultices* decidedly the best, for ordinary purposes, are the flaxseed and slippery elm. The former is made by mixing a suitable quantity of linseed meal with hot, or, what is still better, boiling water, and rapidly stirring it into a thick mush-like con-

sistence. The mixture is then spread upon a fold of cloth, in a layer a third of an inch thick, when it is covered with bobinet or gauze to prevent it from adhering to the parts. A piece of oiled silk, larger than the poultice, is placed upon its outer surface, to retain heat and moisture.

The elm, and, in fact, all other cataplasms, are prepared and used upon the same principles as the linseed. Like water-dressings, poultices may be simple or medicated, according to the object proposed. They should be changed at least twice, or, in warm weather, even three or four times in the twenty-four hours.

Adhesive plaster is cut, in the direction of its length, into strips of suitable length and breadth, warmed by holding the back against a smooth vessel, as a pitcher or tin case, and applied in such a manner as to bring the middle of each piece over the wound, the edges of which are, meanwhile, carefully supported by an assistant. A suitable space is left between the strips for drainage. If things progress favorably, substitution need not be made under three or four days. If the wound be large,

only a few of the strips are taken off at a time, lest, all support being lost, the edges should be forcibly separated.

Before the soiled dressings are removed, everything intended for the new should be prepared, or put in its proper place. The strips of plaster must be removed with great gentleness.

If the injured parts are covered with hair, the surface must always be shaved before the application of the dressings.

Proper material for *sutures* should always be kept on hand, ready for use. The silver wire is the best, as it is less irritating than any other. Silk, however, answers exceedingly well; the thread should be rather thin, and be well waxed. Saddler's silk is the article used for the ligation of large arteries.

Among the more common and useful *un-
guents* for dressing wounds, burns, abraded surfaces, or fissures, are the following:—

Ry.—Pulv. Opii, ℥ss;

Pulv. Rhei, ℥i;

Ung. Cetacei, ℥i. M.

To these ingredients may advantageously be added, in many cases of healing sores, or erup-

tions, requiring a mild stimulus, a drachm of the ointment of the nitrate of mercury, a few drops of nitric acid, two drachms of ointment of acetate of lead, a small quantity of myrrh, or of balsam of Peru, or from six to eight grains of sulphate of quinine.

R_y.—Ung. Cetacei, ℥i;

Bismuth. Subnitr. ℥ij. M.

Extremely soothing and valuable in superficial excoriations, slight burns, and eczematous affections. Turner's cerate may be employed for similar purposes, but should always be considerably diluted.

The best *disinfectants* are the chloride of soda, chloride of lime, Labarraque's solution, and the hypermanganate of potassa, of which an abundant supply should always be on hand in every hospital, free use of it being made, by sprinkling and otherwise, upon the dressings, as well as upon the bedding and the rooms.

The *sponges* about a hospital should be of the softest kind, perfectly clean, and always ready for use. The same articles should never be employed upon different persons,

especially where there are foul or specific sores, as contagion might thus be communicated by direct inoculation, as has, for example, so often happened during the prevalence of hospital gangrene.

3.—*Dietetic Preparations.*

The diet of the sick-room has slain its thousands and tens of thousands. Broths, and slops, and jellies, and custards, and ptisans are usually as disgusting as they are pernicious. Men worn out by disease and injury must have nutritious and concentrated food. The ordinary preparations for the sick are, in general, not only not nutritious, but insipid and flatulent. Nitrogenous food is what is needed, even if the quantity taken be very small. Animal soups are among the most efficient supporters of the exhausted system, and every medical man should know how to give directions for their preparation. The life of a man is his food. Solid articles are of course withheld in acute diseases, in their earlier stages, but when the patient begins to convalesce they are frequently borne

with impunity, and greatly promote recovery. All animal soups should be made of lean meat; and their nutritious properties, as well as their flavor, may be much increased by the addition of some vegetable substance, as rice or barley. If the stomach is very weak, they may be diluted, or seasoned with pepper.

Essence of beef, so frequently given in the low stages of fever, and in the exhaustion consequent upon severe injuries and operations, is prepared by cutting from a quarter to half a pound of lean beef into thin pieces, and putting it into a wide-mouthed porter bottle, corked tightly, and placed in a kettle of cold water, which is then heated till it boils. After it has been digested in this way for a few hours, the juice is decanted, and seasoned with salt and pepper, wine or brandy.

Beef tea, much less nourishing than beef essence, is made by putting a quarter of a pound of lean beef in a pint and a half of water, and boiling it for fifteen minutes, a few blades of mace being added during the process, and the fluid well skimmed.

To make *chicken broth* requires half a

young chicken and a quart of cold water, with a teaspoonful of rice or barley, the whole being slowly boiled for two hours under cover, with proper skimming.

Chicken jelly is prepared by putting a chicken, cut up and all the bones broken, in a stone jar, closely covered, and retained in boiling water for three hours and a half. The liquor is then strained, and seasoned with salt and mace.

Vegetable soup is composed of two Irish potatoes, one onion, and a piece of bread, with a quart of water, boiled down to a pint in a closely-covered vessel, a little celery or parsley being introduced near the close of the operation. Salt and pepper are added at pleasure.

To form *rice jelly* a quarter of a pound of rice flour and twice that quantity of loaf sugar are boiled in a quart of water, until the whole becomes a glutinous mass, when the jelly is strained off and flavored.

Sago jelly is composed of four tablespoonsful of sago, one quart of water, juice and rind of one lemon, and enough sugar to render it

agreeable. After the mixture has stood half an hour, it is boiled until all the particles are entirely dissolved, the mass being constantly stirred.

Oatmeal gruel is composed of two large spoonfuls of oatmeal and half a pint of milk, stirred into one pint of boiling water, and allowed to simmer for thirty minutes, when it is strained through a hair sieve. *Cornmeal gruel* is prepared in a similar manner.

Arrow-root pap consists of a large table-spoonful of this substance made into a paste with a little cold water, which is then stirred into a pint of boiling water, and kept on the fire for five minutes. The nourishing properties of arrow-root pap may be heightened by using milk instead of water in its preparation.

Milk toast is often much relished by the sick; and there is a very excellent jelly for invalids made of a thinly sliced and slightly toasted penny roll, boiled in a quart of water until it becomes a glutinous mass, when it should be strained upon a few shavings of lemon-peel.

The flavor and efficacy of the various

dietetic preparations here described may be greatly increased by the addition of mace, lemon, wine, or brandy. When salt, or salt and pepper are used, the patient's own taste should be consulted. Great care should be employed in making these compounds that they are not scorched. To prevent this a double boiler should be used.

Milk-punch, an excellent article when a stimulant is required in conjunction with a nutrient, is made by mixing good brandy with cold, fresh milk, in the proportion of about one ounce of the former to half a pint of the latter. Sugar and nutmeg may be added to make the mixture palatable.

Wine-whey, well made, may be rendered of great service to the sick. It is prepared by adding to a pint of fresh milk, as soon as it reaches the boiling point, as much good Madeira or sherry as will coagulate it. The mixture is then strained, and sweetened or flavored for use.

The best *wines* for the sick are Madeira, port, and sherry. In cases of gastric irritation, champagne sometimes produces an ex-

cellent effect, quieting the stomach as well as the system at large.

Egg-nog consists of an egg, the white and yolk of which are beaten up separately; half a pint of cold water with a little loaf-sugar is then added, together with two table-spoonsful of brandy.