

Localized Electrization.

The object of localized electrization is to confine the direct action of the current, so far as possible, to some particular part of the body. This is accomplished by placing electrodes so that the current in passing from one to the other shall chiefly traverse only that particular part that is to be affected.

There are two general methods of localized electrization—*direct* and *indirect*: Direct where the application is made over the muscle to be excited; indirect where the application is made to the nerves supplying the muscles. In the former, large electrodes are used; in the latter, small pointed ones. The faradic is best for direct; the galvanic, for indirect. In stable applications the electrodes are kept stationary, in labile, one or both electrodes are moved over the surface.

General Faradization.

The object is to bring every portion of the body under the influence of the faradic current, so far as is possible, by external electrization. This is best accomplished by placing one pole (usually the negative) at the feet or the coccyx, while the other is applied over the surface of the body.

Central Galvanization.

The object here is to bring the whole central nervous system, the brain, sympathetic and spinal cord, as well as the pneumogastric and depressor nerves under the influence of the galvanic current. One pole, usually the negative, is placed at the epigastrium, while the other is passed over the forehead and top of the head, by the inner border of the sternocleido mastoid muscles, from the mastoid fossa to the sternum, at the nape of the neck and down the entire length of the spine.

I will now say a few words about the electric bath, as introduced and perfected by Dr. Schweig, which combines all the advantages and benefits to be derived from the various methods of applying electricity, and, in addition, gives the patient the benefit of the warm bath. The good results following the use of the electric bath have, in my experience, far surpassed those of any other mode of application. The bath is made in the form of the ordinary zinc washing baths found in most houses. It

is, however, made of wood, slate, marble, or hard rubber; wood is, of course, the cheapest. At the head and foot of the bath carbon plates are let into the wood; these plates are connected by means of a copper wire, which runs along a groove let in the head and foot pieces of the bath to the coping where it communicates with two binding screws, one at the head and the other at the foot of the bath. When a bath is given, a wire is connected from either pole of the battery to the binding screws. If the conductor from the positive pole is connected with the binding screw at the head board, and the negative with that at the foot, we get a descending current. Where an ascending current is required, the reverse of this must be carried out. If we require to localize the current in special parts of the body from one of the poles, what is termed a surface board is used; this is a piece of board about 14 inches long, 5 broad and $\frac{3}{4}$ thick, having a bed cut in it large enough to receive a carbon plate, 5 inches long, 2 wide and $\frac{1}{4}$ thick; through the centre of this board a metallic binding screw is introduced and brought into connection with the carbon, and to this binding screw is attached a piece of insulated wire, which may, as required, be attached to either conducting wire from the battery. The current is said to be centripetal when the surface board is connected with the negative, and centrifugal when connected with the positive pole. The average duration of the bath is about twenty minutes, though the time may range from ten minutes to an hour and a-half. The temperature of the bath may range from 85° to 100° or 105° Fahr. Certain chemicals may be introduced into the bath, which will, under certain conditions, enhance its effect. Iron (tart. of iron and ammonia) is useful in anæmia, chlorosis, etc. Iodine, either as tincture, or in the form of iodide of potassium, is very useful in the absorption of plastic exudations, articular deposits following rheumatism and gout, also in the elimination of lead, in cases of lead poisoning: in these cases about an ounce of iodide of potassium is added to each bath. Extract of malt alone, or in conjunction with iron, has been found very useful in cases of malnutrition and debility. If we wish to obtain counter-irritant effects, mustard or common salt may be added. To render the bath alkaline in some cases of skin diseases add bi-carbonate of