

When blood is effused in healthy tissues, it is generally absorbed, exciting no inflammation, suppuration, or fever. If, however, the skin is broken, so that the wound communicates with the air, the effused blood quickly decomposes, exciting both inflammation and suppuration. These phenomena are not excited by the air itself, but by the organic germs floating in it, so that if the air coming in contact with the wound can be freed from them, neither putrefaction of the blood, nor consequent inflammation and suppuration, can take place. Moreover, experiments show that, if these germs can be kept away from wounds or abscesses, their granulations and walls will not form pus, but only a little serum. It is to prevent this that carbolic acid was introduced by him. Lister also says, concerning contused wounds: "All the local inflammatory mischief and general febrile disturbances which follow severe injuries are due to the irritating and poisoning influence of decomposing blood and sloughs. By the antiseptic treatment these evils are all avoided, so that limbs, which would otherwise unhesitatingly be condemned to amputation, may be retained with confidence of the best results."

This system of Professor Lister is coming more and more into use in North America. In this city we are indebted to Dr. Roddick for its permanent introduction, he being an enthusiastic supporter of Antiseptic Surgery. I have, during a summer's dressing in his wards at the Montreal General Hospital, had the pleasure of seeing his extraordinary success, all with the happiest results. Let us hope that the time is not distant when all the Hospitals in Canada will follow in the footsteps of that noble institution, the Montreal General Hospital, and adopt the antiseptic treatment. I will now describe to you the things that are used in the antiseptic treatment of wounds, and show their application. I require first a spray-producer, which, as you see, consists of a small boiler, heated by a spirit-lamp. The boiler is partly filled with pure water; the tube leading from the boiler meets with the nozzle of the tube leading from the bottle attached to the side of the boiler. The bottle contains a solution of carbolic acid (pure) 1 to 20 of water; the escaping steam from the boiler rushes over the orifice of the tube coming from the bottle, and draws up an equal part of the 1 to 20 solution,

so that a fine cloud of carbolic spray is got of 1 to 40. This plays freely over the wound or surface being dressed. The assistant who has charge of the spray should follow every movement of the operator, and not allow the wound to be exposed to the air for a second. All the blood vessels are ligated with carbolized catgut. They are prepared in a mixture of olive oil and carbolic acid. The ligatures are cut off short, and left in the wound. The sutures need are of the same material. Catgut has the advantage of being absorbed after the wound is closed. In operations of sufficient magnitude two drainage tubes are introduced, and hang from the angles of the wound, to allow of free drainage. You next use the gauze, antiseptic gauze. It is prepared as follows:—rosin, five parts; paraffine, seven parts; carbolic acid, one part. The gauze is placed in a waterbath, and, when the mixture has boiled, a syringe with perforations in the end is filled, and sprinkled over the gauze. A heavy lead cover is placed over it, all being placed in a water bath; heat is applied until the mixture is equally diffused through the gauze, when it is taken out and sealed up in tins. The material placed between the wound and the carbolized gauze Professor Lister terms "the protective," which is ordinary oil silk, varnished over with a coat of copal varnish, and then with a coat of paraffine. This prepared oil silk will hold some of the carbolic lotion on its surface, while on the ordinary kind it would run off. This oil silk is dipped in salicylic acid cream, made of salicylic acid and carbolic acid lotion, a saturated solution 1 to 40, which acts as a soothing application to the wound, preventing the irritating action of the carbolic acid. The protective is applied over the wound. The deep dressings are next applied, they are made with the gauze. Two pieces of gauze, that will cover the wound, are soaked in a solution of 1 to 40 to rid them of any bacteriæ; over this are applied two or three dry pieces of the gauze, well fitted to the part. The spray can now be discontinued, as no bacteriæ can reach the wound. Over these the eight layers of dressing are placed. It is formed of eight layers of gauze with a layer of mactintosh between the seventh and eighth. This dressing cover is then pulled over, seven layers next to the wound, then the smooth side of the mactintosh is cut an inch