

fibro-blasts. The exuded lymph and fibrin form a temporary means of union, but, in forty-eight hours, or so, they soften and liquefy; the corpuscles grow fatty and granular, and disintegrate, and the whole is absorbed by the lymphatics of the part. Keeping sight of the real process of healing, which is set up in forty-eight hours, or so, we see two preliminary stages: (a) Lymph and plasma exuded, perhaps in quantity sufficient to soak bandages, giving surfaces a glossy, sticky look; (b) In 24-36 hours, surface has a dull, grayish film covering it, consisting of lymph-corpuscles imbedded in a granular nidus of precipitated fibrin and albumin. Then (c), in forty-eight hours, or so, the real process of healing is set up. The connective tissue surrounding the fatty, or sarcoous elements in the wound is found to be soft, swollen and homogeneous, while the nuclei are actively dividing and giving origin to fibro-blasts, which a little later are found wandering in the adjacent healthy tissues, and into the blood and lymph, clot of the wound, along with the leucocytes which have escaped by diapedesis. The exuded matter in the wound is a foreign body, does not organize, and must be got rid of before true organization and permanent union can go on. "The union of the wound, therefore, in healing of the first intention, is brought about by the reproduction of new connective tissue and epithelium from the old tissues of the like kind."

2. *Healing by Granulation*—In this variety, the cause of the delay in healing as compared with either of the preceding, is the presence of a still larger mass of tissue which must be removed before the healing agents, the fibro-blasts, can fix themselves in place and proceed to maturity. Hamilton teaches that the granulation is not nature's best method of healing, but a necessary evil, delaying healing and causing great waste of albumin and leucocytes, as well as the death and casting off of far more new tissue cells in the pus than would otherwise be necessary. He holds that the granulating tuft since it contains no fibro-blasts, contains no organizable matter and must be wholly removed before healing can begin. This is a necessary corollary from his view that the capillary tuft in granulation tissue is a morbid dilatation of pre-existing vessels from lack of natural support by the injured tissues. Healthy granulations approach most nearly to the natural

undilated state of the capillaries and are therefore small. Even an open wound may be made to heal without granulations and therefore much more rapidly by pressure and strict antisepsis; the pressure preventing the bulging of the capillary loops by resisting the heart's expulsive action.

3. *In healing by union of two granulating surfaces* as seen in union of flaps in amputation, the coapting of the flaps causes pressure sufficient to limit the growth of granulations, so that from pressure of the growing layer of fibro-blasts underneath they atrophy and allow the fibro-blastic layer on each side to come into contact. These layers soon cohere by the interlacing of their spindling fibro-blasts, just as healing by the first intention.

4. *In Healing by Scabbing*—The only departure from type, is that the scab, consisting of desiccated exudation, fat, blood, and epithelial cells, forms a natural shield, preventing access of external irritants such as micro-organisms, and therefore suppuration; preventing also by its pressure the formation of granulations, so that the epidermis is free to extend laterally beneath the scab more rapidly than if granulations had been allowed to form.

LIGHT IN THE SICK ROOM.

Most of us can remember the days when it was the almost universal custom to shut patients up in dark, close, stuffy rooms, irrespective of the disease from which they were suffering. I call to mind the funereal aspect of sick rooms I visited as a child, and the impression produced was not an agreeable one. There are, of course, some maladies, in which the admission of light is prejudicial to the patient, but even oculists are now taking their patients out of the dark chamber at the earliest possible moment, fully appreciating the benefit upon the system generally, and, therefore, upon their special territory of the sun-light. Of the Weir-Mitchell treatment nothing need be said. It is a special form of treatment for special purposes, and when intelligently carried out, is undoubtedly potent for good. But it is just possible that many of us practising physicians are not careful enough about the arrangement of the sick-room. In the houses of our more wealthy patients the trained nurse, that inestimable boon to the