

involved—an example of combined chemical and physiological action.

3. **Physical.**—The physical effects of electrical treatment are chiefly dependent upon the production of heat in the body. This may be confined almost entirely to the surface, as in exposure to radiant heat (electric light bulbs arranged under a suitable reflector), or be produced fairly uniformly throughout the tissues under treatment. The latter conditions are attained by the use of high-frequency and diathermy currents; these currents are of an oscillating character, the oscillations being of such enormous rapidity that no ionic movement can take place. The warming of the tissues is due to the resistance which they impose to the passage of the current, and is not accompanied by any muscular contraction or sensation other than that of heat, owing to the absence of ionic movement mentioned above.

These physical effects of electricity are always accompanied by physiological changes—*e.g.*, vasodilatation, increased metabolism, acceleration in removal of waste products.

4. **Psychic Effect.**—It is of the greatest importance to form a correct estimate of the value of this factor in electrical treatment, and to discriminate carefully those cases where it should be introduced. It is quite unnecessary to seek to affect the mental attitude of a patient suffering from an ulcer of the leg by means of imposing apparatus and the production of adventitious noises. Such ruses do not influence the healing of the ulcer, nor do they add to the dignity of the medical profession. On the other hand, many cases present either a pure neurosis or else a definite pathological lesion combined with a neurosis; in these it is desirable to make as profound a mental impression on the patient as is compatible with the adoption of a rational line of electrical treatment.