

different neurones, but also contains centres, such as a trophic, a reflex and a vasomotor centre, situated in the H-shaped central grey matter.

Levels of Centres in Spinal Cord.—Peterson states that each separate segment of the cord has its own particular functions, as, for instance, the *reflex centres* for the bladder and rectum are situated in the fourth and fifth sacral segments; that for the ankle clonus, in the fifth lumbar segment; the centre for the knee jerk, in the third lumbar, and those for the wrist and elbow jerks in the sixth cervical, etc. *Motor and trophic functions* are distributed in the same manner, *i.e.*, segmentally, so that, the intrinsic muscles of the foot are represented in the first and second sacral segments; the knee flexors, in the fourth and fifth lumbar segments; the thigh muscles, in the second and third lumbar; the abdominal and spinal muscles, from the second to the twelfth dorsal; the thumb and finger muscles, in the eighth cervical and first dorsal; the forearm muscles, in the sixth and seventh cervical; the shoulder muscles, in the fourth and fifth, and the neck muscles, in the second and third cervical segments. The *sensory distribution* is also segmental, thus anæsthesia of the perineum, scrotum, rectum, vagina, and the posterior surface of the penis, is produced by a lesion situated in the fourth and fifth sacral segments. If the lesion be higher up the cord, say at the third sacral segment, the anæsthesia extends farther out on the buttock and downwards over the back of the thigh. If higher still, as at the fifth lumbar segment, the anæsthesia includes, in addition to the preceding areas, the outer sides of both legs. The lower part of the abdomen corresponds to the first lumbar segment; the umbilical region to the tenth dorsal segment, etc., and when the eighth cervical is affected, the anæsthesia is complete, below a girdle about the nipples,