

found the dog perfectly recovered, expressing by his deep groans, the severity of his sufferings. In this state, I cut off one portion of the remaining ear, but the result was far different; his violent efforts and cries giving every one present to understand, that he was no more sleeping. To put an end to his sufferings, he was instantly strangled.

A few days after, I instituted another series of experiments, when I carried my operations to a still greater extent, to prove conclusively, if full confidence could be placed on the effects of the inhalation. The dog was once more the subject. In three minutes and a half, he was under the full influence of the ether. The skin being removed from the whole of the body, I passed over the quivering flesh a poker heated to whiteness. Several deep incisions were made in the muscles of the back, the right leg was entirely separated from the body, excepting the vessels and nerves, and I once more applied the poker to staunch the bleeding of several small arteries; not a moan was heard, not the least starting of a nerve was perceptible; the flesh smoked and the iron hissed. By means of a crucial incision, I laid open the abdominal cavity, and took out upon the table the mass of intestines; my students had then the advantage of a demonstration of the peristaltic motion of those organs, and could observe the rising and falling of the diaphragm, assisting most powerfully the respiratory act. The intestines were cut through in different places, the liver and spleen torn and wounded, every step followed by the application of the heated poker. Finally, the thorax was laid open, several of the ribs forcibly fractured, and the intercostal muscles lacerated.

The time occupied in performing this long and severe series of experiments, was nearly three quarters of an hour, during which the breathing tube was applied to the dog's mouth once every eight or ten minutes, on an average. By the aid of a little ice cold water poured down his throat, in a few moments he perfectly recovered, turned on his side, and endeavoured to lick his numerous wounds, and tried to rise, but was so much exhausted by the profuse loss of blood, that he fell back on the table. When the gentlemen present were perfectly satisfied with the happy results of these cruel and lengthy experiments, the dog was strangled.

In these different experiments, I was ably assisted by Dr. Regnier, demonstrator in the School of Medicine, in the presence of Dr. Munro, Messrs. Kreighoff, Webster, Jones, and Molloy, my office pupil, and several other students of medicine. I was now fully convinced of the deadening properties of ether on the animal, and it was but reasonable to conclude, that its action would manifest itself in the same manner on the human sub-

ject. Some weeks since, I had the pleasure of seeing my conclusions verified, on the occasion of the extirpation of a large growth from the upper part of the thigh. I assisted my father, Dr. Wolfred Nelson, in removing a tumour of two pounds weight, from a weak and debilitated woman. The ether was administered by Mr. Webster. In four minutes insensibility supervened; the tumour was quickly removed; the wound allowed to be exposed to the action of the air, to discover whether there might be bleeding from small arterial trunks; the ligatures, plasters, and bandages were applied; the patient meanwhile having no consciousness of our proceedings. During the last stages of applying the dressings, reaction slowly manifested itself; she seemed most happy, judging from her loud peals of laughter, but they were soon succeeded by sighs and tears, calling frequently for one of her daughters living in the country. The wound healed by the first intention, and in the course of one week, she was enabled to attend to her usual avocations.

I have extracted several teeth from old and young persons, and always with the same happy success. I have now reported experiments extraordinary by their severity, and much more so by their striking and conclusive results, and have not the least doubt, nor have any of my friends, and I trust my readers will coincide with me, that the action of this almost marvellous agent, by thus essentially destroying sensibility, is the greatest achievement which has ever taken place in surgical science. Before applying the remedy to the human subject, to determine as much as possible its mode of action on the system, I inhaled the vapour of ether over one hundred times, and as much as possible have carefully noted the symptoms it produced, and which were invariably the same in almost every trial.

The first or second inspiration generally produces a tickling of the throat, with hacking cough, and sensation of warmth in the chest, continuing for one or two more inspirations. A slight tremor of the whole body, something like a very mild electrical shock is felt, succeeded by numbness, cold and formication of the feet, with gradual loss of sensibility. What may be considered as a strange circumstance, is, that I am enabled, as was fully tested in the presence of the above named gentlemen, to follow the gradual subsidence of sensibility at each inspiration, and which is continued as far as the gluteal and femoral regions; consequently at those points where the sacral lumbar plexuses pass out of the trunk to be distributed to the anterior and posterior parts of the lower extremities. Though sensation is destroyed, voluntary motion still exists; there is an instinctive desire of stretching the legs, flexion and extension is performed, and when the foot is