

thetized). This ethylene, as it was not present in the absolute ether base, must have developed in the process. Ethylene was then manufactured, and added to absolute ether, and a similar analgesic product to that already described was obtained. It is therefore reasonable to believe that ethylene is at least one of the analgesic substances for which we were looking. The method for manufacturing ethylene was through the interaction of alcohol and sulphuric acid. The gas was found to be more efficient if made at 175° (rather than 160° C.). All dangers of production of carbon-monoxide were eliminated by blood testing. In order that an ether-ethylene solution will demonstrate the described properties, the ether to which the ethylene is added must be absolute. The reason this secret of ether anaesthesia has not been discovered before, is that processes to obtain pure ether have never been before originated. Analyses of every ether on the market shows traces of ethylene, and it is its concentration upon which the anaesthetic power of a said ether depends. If, for instance, it is present in sufficient quantity in a sample of ether, it is possible to have the patient lose all sensation before being made drunk by the narcotic solvents. That is, it is now possible with this knowledge to control sensation as well as narcosis. The state of drunkenness which is necessary for a certain grade of analgesia depends entirely upon the condition of the circulation of the patient.

A word here on administration of the ether-ethylene solution may save many from failure. We all recognize in commercial ether anaesthesia, that there is an exciting stage occurring previous to unconsciousness. When, as it is now possible, we can control sensation through ethylene concentration, the question arises, are we going to run analgesia, this, or the other side of the excitation stage. It is very annoying indeed to both surgeon and anaesthetist to decide on a pure analgesia this side of the excitement stage, and not to use a sufficiently concentrated gas-ether. Under such circumstances, the patient may state that they are entirely without feeling, but when major stimulation comes, they may squirm. If now the anaesthetist, instead of using another sample in which the gas is more concentrated, makes the mistake of trying to continue his too dilute gas-ether, the patient is going to enter the ordinary ether excitement stages, while being operated on.

When the anaesthetic stage is deeper than the excitement stage occurring with concentrated gas-ether, the patient is a very long time recovering sensation and reflexes. It is therefore of use in tonsil work.