

AIR.

This element is the first requisite to life and health. Without air, no living thing could survive beyond a very brief space. Air is the first thing required by every being at its birth. The blood, while circulating through the lungs, comes in contact with the air contained within the air cells and passages, and receives oxygen there from, thereby becoming vivified. **This vivification of the blood is very essential to the maintenance of life**, for the amount and intensity of the vital force possessed by the flesh tissues depend largely upon the proper and constant aeration of the vital fluid, which is principally effected by the lungs, and **can only be properly performed during full and free respiration**.

The part played by oxygen in the maintaining of life, so far as is known, is this: It burns up the broken-down tissues, and thus converts them into carbonic-acid gas and ashes. The gas is immediately, absorbed by the red corpuscles of the blood, and is by them conveyed to the lungs, where it is exchanged for oxygen. **It is this exchange of carbonic-acid gas for oxygen that constitutes aeration.** The ash which is left after the burning of the broken-down tissues, is held in solution by the serum of the blood, and is by it transported to the various organs of depuration, by which it is separated from the blood and discharged in the urine, perspiration, bile, and fecal matters. **If oxygen is not received into the system in sufficient quantity, the broken-down tissues are not removed from among the living ones as they should be, and in consequence, their presence prevents the formation of new tissue, and thus the body is not properly maintained.** On the other hand, **if oxygen is received into the system in sufficient quantity, all the worn-out matter is burned, or oxidized, and ample opportunity is given for the rebuilding or repairing of all parts.** Another benefit derived from the oxidation of the wastes of the body is **the evolution of heat**; for it is by this process that the animal heat is produced and maintained. The demand for oxygen to assist in the work of disintegration as above described, is so great that an amount of blood equal to the entire volume of that contained in the body is carried to the lungs every three or four minutes for the purpose of throwing off its load of carbonic-acid gas and receiving a fresh supply of oxygen. Now, as air sustains so important a relation to life and health, it is highly important that it should be received into the lungs in as pure a condition as possible. **For this reason, every person, whether in health or in disease, should be located where he will not inhale the noxious gases that are thrown off** by decaying vegetable or animal substances, nor those that arise from the chemical combination of minerals; and **he should always see that his living and sleeping rooms are well ventilated both day and night.**

The Hygienic Family Physician: A Complete Guide for the Preservation of Health, and the Treatment of the Sick without Medicine, pg. 6-8 by M. G. Kellogg