

Priestley. The exact quantity of oxygen, which is lost in natural respiration, varies in different animals, and even in different conditions of the same animal. Birds, for instance, consume larger quantities of oxygen by their respiration; and hence require, for the maintenance of life, a purer air than other vertebrated animals. Vauquelin, however, found that many species of insects and worms possess the power of abstracting oxygen from the atmosphere in a much greater degree than the larger animals. Even some of the terrestrial mollusca, such as snails, are capable of living for a long time in the vitiated air in which a bird had perished. Some insects, which conceal themselves in holes, or burrow under ground, have been known to deprive the air of every appreciable portion of its oxygen. It is observed by Spallanzani, that those animals, whose modes of life oblige them to remain for a great length of time in these confined situations, possess this power in a greater degree than others, which enjoy more liberty of moving in the open air: so admirably have the faculties of animals been, in every instance, accommodated to their respective wants.

Since carbonic acid consists of oxygen and carbon, it is evident that the portion of that gas which is exhaled from the lungs is the result of the combination of either the whole or a part, of the oxygen gas, which disappears during the act of respiration, with the carbon contained in the dark venous blood, which is brought to the lungs. The blood having thus parted with its superabundant carbon, which escapes in the form of carbonic acid gas, regains its natural vermilion colour, and is now qualified to be again transmitted to the different parts of the body for their nourishment and growth. As the blood contains a greater proportion of carbon than the animal solids and fluids which are formed from it, this superabundant carbon gradually accumulates in proportion as its other principles, (namely, oxygen, hydrogen, and nitrogen) are abstracted from it by the processes of secretion and nutrition. By the time it has returned to the