Open Mail

To the Editor, The Public Health Journal, State Medicine and Sanitary Review.

House Ventilation.

Sir,—Air in houses may be polluted by the gases breathed from our lungs and that escaping from leaky stoves. Air contains enormous numbers of dust particles. The average city air is estimated to contain three million dust particles to the cubic inch. Country air contains two thousand dust particles to the cubic inch. The air indoors contains ten times as many dust particles as the air out-of-doors. With the dust, of course, are mingled the small dust plants with probable germs of disease. Ventilation is the replacing of the impure air of a room, or other enclosed space, with proper air from out-of-doors.

Inasmuch as the adult human body requires for regular use about five hundred cubic inches of air every minute, the air in the immediate vicinity of the nose is quickly used up and an equal amount of impure air is breathed out of the lungs. It is therefore necessary that pure air from out-of-doors be constantly pouring into our rooms and the impure air passing out.

One cannot do his best work if he is breathing impure air. One is more susceptible to disease if he breathes impure air, because his body is not strong enough to resist the disease germs when they are once admitted into the body. Disease germs which grow in the interior of our bodies also flourish best in a small supply of air. The proof that people are injured by breathing impure air, has been obtained by comparing statistics for a certain number of years gathered among men living in unventilated, and those living in well ventilated places.

Air does not move of its own accord. In our houses we best create a circulation of air by having two windows open, one for the impure air to pass out, another for pure air to enter. One window open, however, will serve as two. Ventilating should be done in such a way as not to cool the room too much; for this reason the window is best lowered from the top, in order that the air may be heated before mingling with the air in the lower part of the room. The lower sash may be raised and a loosely fitted board inserted; fresh air then enters through the space between the upper and lower sash and is directed upward, thus avoiding direct draft.

It is better to have a window open all the time than to air the room only occasionally. There should be a constant removal of impure air and a fresh supply of pure air. An open stove or fireplace is a reliable means of getting rid of impure air.

Air is of even greater importance at night than it is during the day. The body recuperates mostly at night during sleep; then large amounts of oxygen are required, so there should be plenty of fresh air at night. The sleeper may be protected from drafts by a screen or chair between the window and the bed.

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Purifying Smoke by Washing.

Sir,—In a method of freeing chimney gases from soot and dust by washing, which has given good results, the gases are drawn by a fan from the boiler, passed through a brick-lined chamber containing water sprays, and then led by a tortuous course to a rather short stack. For 300 cubic feet of hot gases per hour, one gallon of water is used. The pea clack coal contains forty per cent. of dust and in 24 hours the smoke-washing has collected as much as 1,600 pounds of grit, or about 1.5 per cent. of the coal burned.

J. C. K.
