rebreathing equipment, nurses’ clothing and last but not least the patient’s hair. . . . It is safer to use cotton blankets for shock treatment of anesthetized patients. The passage of gases through the rubber rebreathing equipment generates static electricity which has been found to measure as high as 3,900 volts. This, of course, can only be controlled by the use of a material conductive of electricity instead of the rubber we have today. We can, however, safeguard the use of the present type of equipment by remembering the following suggestions. Keep the face mask dampened. Never remove the rebreathing bag without keeping a firm grasp of both the bag and the tubing to form an electrical path through your body for a sufficient length of time to bleed off any accumulated current. Care must be exercised when removing the face mask to assure an electrical path from the mask through your body to the patient’s head. The clothing worn by nurses also has been responsible for explosions. Silk is the principal offender. Silk hose insulate the body. Some hospitals have reduced this hazard by furnishing special shoes with copper rivets through the soles and cotton stockings. Walking to and from the sterilizing equipment is often sufficient to generate a dangerous charge of static. Some hospitals are binding the hair of patients with a linen tape, turban fashion, to remove that hazard. Human hair when combed or stroked is a good generator of static. . . . Properly humidified atmospheres reduce the likelihood of static electricity forming in dangerous quantities because moist air permits the currents to bleed off to the ground before they are of sufficient magnitude to form a spark hot enough to ignite the gases. When you do have a means of controlling the humidity in your operating rooms be sure that you also have either an automatic means of keeping the proper percentage of moisture in the air or an accurate instrument to measure the exact amount of moisture present. Equipment which cannot be depended upon to maintain proper conditions might be worse than none at all as it is sure to result in a false sense of safety. . . .

"[Other causes of fires and explosions in the operating room are] cautery, . . . improper electrical equipment, . . . electric clocks, . . . the surgical lamp, . . . motor driven equipment, . . . smoking, . . . X-ray films, . . . [and] oxygen . . . under pressure.”

J. C. M. C.


"A report is made of the results obtained with the inhalation of practically undiluted oxygen by ninety-seven persons suffering from headache. In cases of apparently typical migraine, 42 per cent. of the patients were completely relieved, 44 per cent. more were helped, 2 per cent. obtained delayed relief, and 12 per cent. obtained no help. In the case of patients with headache almost certainly not migrainous in character none was completely relieved during the treatment, 16 per cent. got relief on the way home, and 24 per cent. were helped while breathing oxygen. In the case of those persons with headaches of doubtful origin only 33 per cent. were helped. Apparently, then, when the headache is migrainous, there are about four chances in five that the inhalation of oxygen will relieve the patient, and when the headache is not migrainous there is only about one chance in three that this treatment will help. The results appeared to be better with prompt
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institution of treatment than with delayed treatment."

J. C. M. C.


Rationale of and Indications for Administration of 100 per cent. Oxygen. Basic physiologic principles and factors are:

1. Blood transports oxygen from lungs to tissue and carbon dioxide from tissue to lung.

2. The partial pressure of oxygen is a factor in the degree of saturation of the blood. One hundred per cent. oxygen increases the tension 10-15 per cent.

3. Ten or 15 per cent. increase in oxygen may appear to be very little, but its importance is greater in conditions which slow up circulation as an 80 per cent. desaturation occurs rather than the usual 40 per cent.

4. The gradual expiration of the tissue nitrogen will lead to removal of intestinal nitrogen. This in conjunction with a Miller-Abbot tube will greatly relieve distention.

5. Indefinitely defined types of severe headache may be relieved by 100 per cent. oxygen. This is also true of headache after encephalography. Alcoholic morning-after headache may be relieved.

6. Reduction of pathogenicity of bacteria is little explored, but in cases of anaerobic infection, the increased oxygen tension is directly antagonistic, and in addition, quickly removes the emphysema.

7. Massive atelectasis may be symptomatically improved until bronchoscopy or other therapy can be instituted. Pulmonary edema may be benefited by the increased aeration and also by some drying effect on lungs if 5 mm. of water pressure is used.

8. The pain of some types of heart disease may be relieved.

Lack of Pulmonary Irritation from Inhalation of One Hundred Per Cent. Oxygen

The authors have never observed a case of pulmonary irritation attributable to 100 per cent. oxygen, but they never use it longer than 48 hours at a time. They have administered it intermittently for several days.

Apparatus for Inhalation of Oxygen

The familiar B.L.B. mask is described.

L. O.


"In general, intravenous therapy is usually considered for the following purposes: (1) to replace lost fluid or circulating blood, (2) to combat dehydration of tissues, (3) to reduce dehydration of tissues in certain instances, and (4) to promote specific types of chemotherapy. . . . The anesthetist must recognize the purpose for which a certain type of fluid is administered and use the agent carefully. For the most part, solutions of physiologic salt and dextrose are most frequently administered intravenously preoperatively and postoperatively. The salt content of the blood is an important governing factor in the interchange of fluids between the cellular tissues of the body and the blood stream. Whenever carbohydrate cannot be taken orally, dextrose is commonly administered in a solution of 5 or 10 per cent. In the presence of a diminished protein content in the plasma, the use of acacia or a trans-