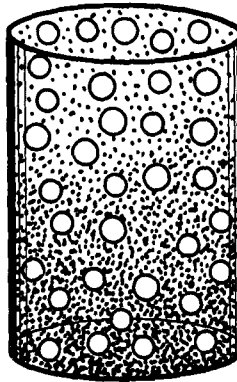


Oxygenation

A New Location for the Heart-Lung Machine

By Clifford J. Senecal* & Sam K. Fisher**



More or less traditionally the heart-lung machine has been located at the side of the operating table, usually on the side opposite the operating surgeon. Frequently the surgeon or his team desire to change positions but find this difficult because of the arterial, venous and coronary suction lines. Completion of preparation of the heart-lung machine for bypass including filling, recirculation and on-table preparation is delayed because of need

for cooperation of the operating surgeon or his assistants.

We have relocated the entire heart-lung machine to the foot of the operating table. Even before the surgeon begins the earliest part of the operation the equipment can be ready for complete bypass. Partial bypass can be accomplished from femoral vein to artery and subsequently changed to atrial drainage if desired. No obstruction

is present at any time to the surgeon or his assistants. The completely filled lines are available, when the surgeon is ready, for attachment to the arterial and venous cannulae. Room is available for observers, photographers, artists, etc.

The arterial and venous lines are passed to the scrub nurse, who connects them together for recirculation. She also received the coronary suction lines and has them sterile on the table. To accomplish the change in position the arterial line ($\frac{3}{8}$ ") was lengthened one foot and the venous line ($\frac{1}{2}$ ") three feet, coronary suction lines ($\frac{1}{4}$ ") were lengthened two feet each. Priming volume was increased 6% or 128 cc to a total of 2100 cc for the six liter flow bubble oxygenator to 2300 cc for the 3 liter bag and to 1100 cc for the 2 liter flow.

The procedure has been used on over 400 cases without pump mishap and with markedly increased operating room and team efficiency. Set-up time has been reduced 50-60% to 13-15 minutes from 30-40 minutes.

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Book Review

INHALATION THERAPY PROCEDURE MANUAL (Second Edition) By De Kornfeld and Gilbert

100 pages; Price \$7.25; published by Charles C. Thomas, Springfield, Illinois

A concise handbook of IT procedures revised to eliminate obsolete equipment and include the latest in respirators and accessories. Sections on drugs, sterilizing, and record-keeping

have been brought up-to-date and reflect the greater experience of the authors since publication of the previous edition. This manual will be of inestimable value to the student or on-

the-job trainee as it clearly defines the responsibilities of the therapist in relation to those of the doctors and the other members of the medical and allied medical patient care team.

HYPERBARIC OXYGENATION AND ITS CLINICAL VALUE: By N. G. Meijne, M.D.

261 pages; Price \$16.50; published by Charles C. Thomas, Springfield, Illinois

In view of the fact that the present danger is that the true advantages of hyperbaric oxygenation in clinical application will be underestimated due to a large amount of defeatism, this monograph is offered in an attempt to give an objective re-evaluation of what

can be done as well as what can't be accomplished with this controversial medical tool.

This study is colored somewhat by the authors primary interest in cardiovascular surgery. Such topics as the

effects of hyperbaric oxygen on coronary circulation, oxygen under increased pressure in cardiac surgery, hyperbaric oxygen in pump-oxygenator support bypass, and organ preservation in a pressurized oxygen atmosphere are covered in depth. In addition, there is a complete discussion of physiology and that limiting factor in hyperbaric oxygen therapy, oxygen toxicity. With complete documentation in a cross-indexed bibliography, this volume could well serve as the handbook of this science for some time to come.