

seen in films. In 2 cases a second lumbar puncture within two days showed an increase of protein and fall in the number of cells. . . .

"A review of the circumstantial evidence pointed to a cold water filter as being a possible source of infection. This filter was a Berkefeld multiple candle type and was connected directly to the roof water tanks. The outflow water, assumed to be sterile, was used to rinse the lumbar puncture needles which were kept in formaldehyde vapor. . . . In view of these findings the use of the filter was promptly discontinued, after which no further cases of meningitis occurred. Thus, although circumstantial evidence strongly suggests the contaminated water as the source of infection, direct proof of this has not been obtained."

J. C. M. C.

CAMERON, W. M., AND KASANIN, J.: *A Pharmacologic and Clinical Re-evaluation of Amphetamine (Benzedrine) Sulfate*. *New England J. Med.* **224**: 544-550 (Mar. 27) 1941.

"The molecular configuration of amphetamine (Benzedrine) places it in the group of phenyl amines, another member of which is ephedrine. None of the phenyl amines is truly sympathomimetic in their effects. Amphetamine is not sympathiotropic in its mode and locus of operation, and consequently should not be equated with epinephrine. Amphetamine is relatively feeble in potency in comparison with other aromatic amines, such as epinephrine, arterenol and tyramine. It is clearly established that increased length of the side chain and the absence of OH-groups are associated with increased toxicity. By these criteria amphetamine must be suspected of relatively high toxicity, which can be ruled out only by further pharmacologic experimentation. Because the toxicity of amphetamine has not been

sufficiently determined and its action is relatively feeble, it seems preferable to employ other amines for peripheral effects on the cardiovascular, gastrointestinal and other systems.

"Clinically, amphetamine is valuable in certain diseases of the central nervous system, such as narcolepsy and postencephalitic parkinsonism, and in certain intoxications. The administration of the drug in neuroses, depressions and schizophrenia seems of doubtful value, and may occasionally be harmful. Favorable results reported in such heterogeneous states as orthostatic hypotension, chronic alcoholism, obesity, and schizophrenia do not speak for specificity of action, but indicate rather that other variables (present in every therapeutic situation) may have contributed to the ultimate improvement of the patients." 67 references.

J. C. M. C.

LIVINGSTONE, H.; HEIDRICK, F.; HOLICKY, I., AND DACK, G. M.: *Cross-licks from Anesthetic Face Masks*. *Surgery* **9**: 433-435 (March) 1941.

"We wish to report the results of guinea pig inoculations of saline washings of anesthetic masks removed from patients having active pulmonary tuberculosis. Specimens were taken as follows: (A) After removal of the mask from the face; (B) after washing the mask with water, as is the custom in many institutions; (C) after washing the mask as in (B) and then immersing it for one hour in the following solution:

Formaldehyde (38 per cent solution)	210 cc.
Aqua	606 cc.
Alcohol 95 per cent q.s. ad	4,000 cc.

This solution was made by one of us (G. M. D.) after bacteriologic investigation to determine the lowest percentage of formalin necessary to destroy the tubercle bacilli in less than one hour. . . .

"In the 39 anesthetic face masks examined 13, or 33.3 per cent, contained

tubercle bacilli when removed from the patient's face; 6, or 15.4 per cent, still were contaminated with tubercle bacilli after being washed in water according to the technic all too frequently employed, whereas none contained tubercle bacilli after being washed in water and then soaked for one hour in the formaldehyde-alcohol solution. . . . After removal, all of these parts should be thoroughly washed with soap and hot water until the odor of formalin cannot be detected. This is necessary in order to avoid a skin burn during the next administration and to eliminate the irritating formalin fumes from the apparatus. We have observed no deleterious effect to the patients or the apparatus." 3 references.

J. C. M. C.

HENDERSON, YANDELL, AND TURNER, J. M.: *Artificial Respiration and Inhalation: The Principle Determining the Efficiency of Various Methods*. J. A. M. A. **116**: 1508-1515 (Apr. 5) 1941.

"In the thirty odd years since Schafer introduced prone pressure artificial respiration, this method of resuscitation has come to be used in all English speaking countries to the virtual exclusion of all other manual methods. . . . Outside the English speaking countries, however, the Silvester and other older methods are still extensively used. . . . All these methods, old and new, were demonstrated by means of photographs and respiratory measurements at the International Congress on Resuscitation and First Aid at Zurich in August, 1939. One of us participated, and in this paper we shall draw in part on the evidence there presented. . . .

"In all manual methods, expirations are induced by the operator compressing the chest of the patient with his hands, or by pressing the diaphragm up against the bases of the lungs. The Schafer method differs from the others

in the fact that this is all that the operator attempts to do. To induce inspirations he merely removes his hands or quickly releases the pressure, it matters not which. The inspirations are therefore wholly due to the elastic recoil of the chest in the intervals between compressions. But in order to permit this expansive force or recoil to come into play the more easily, the patient's arms are once and for all placed as far forward as possible; one of them is bent at the elbow with the head resting on it. The chest is thus brought initially, as far as possible, into the inspiratory position. . . . The technic is therefore extremely simple; it requires much less exertion on the part of the operator than any other method, and it can be maintained longer without fatigue. The one requirement for maximum efficiency is that the tempo shall be slow enough and the intervals between compressions long enough to allow the chest to expand all that it will. In patients with broken ribs prone pressure is the least harmful form of manipulation. All, or nearly all, the other manual methods attempt to contribute actively to the expansion of the chest by pulling the arms, rolling the body or lifting the shoulders. . . .

"When the volume of air which a normal man breathes in natural respiration and then the amount of artificial respiration that can be induced by the Schafer, Silvester or any other manual method are measured, all these volumes—that of natural breathing and those under the various forms of artificial respiration—are always essentially the same in liters of air per minute. . . . No manual method tested in this laboratory or demonstrated at Zurich, no matter how vigorously applied, has ever produced any considerable degree of overventilation of the lungs, as demonstrated by the fact that when the artificial respiration is stopped the subject, after apnea of only