creased capacity for work, but the previous and subsequent sea level performances were not attained. . . . Two of the men remained for five hours above 25,000 feet, of which time twenty minutes was spent at 29,000, without supplementary oxygen. . . . On the following day, two men, using ordinary oxygen equipment, stayed for an hour above 45,000 feet, reaching 50,000 feet for a few minutes. . . . These two high runs demonstrated that the men had increased their tolerance for high altitude by approximately 6,000 to 8,000 feet. . . . The measurements indicated that the men reacted to anoxia by an increase in pulmonary ventilation, (causing) a lowering of the arterial carbon dioxide, a decrease in the alkaline reserve, and an increase in the alkalinity of the blood. These chemical changes, together with the increase in hemoglobin, sustained the arterial oxygen content close to the sea-level value, and minimized the fall in arterial oxygen pressure and saturation. . . . Even pure oxygen did not return the men to their sea-level (work) performance. . . . It is suggested that the fall in alkaline reserve becomes the limiting factor by reducing the buffering capacity of the blood (and that) accumulation of carbon dioxide and the resultant decline in pH then serve as stronger respiratory stimulants than in the case of the sea-level man. . . . The four subjects did not acclimatize to altitude as completely or rapidly as do mountaineers. The reason . . . may be attributed to the confined quarters which made sustained and strenuous work impossible.”

S. J. B.


A patient with group A blood was transfused with blood from a group O donor where the high titre serum agglutinins of the latter caused agglutination of the recipient’s corpuscles, followed by hemoglobinuria, uremia and death. Such incompatibility is not revealed by the standard cross matching tests (donor’s cells against recipient’s serum) and was only found by subsequent titring of donor’s serum.

The theoretical dangers of transfusion of patients of other groups with universal donor blood containing high titre agglutinins have long been recognized. Aubert et al in 1942 concluded that the transfusion of conscious patients of group A with considerable group O serum or plasma containing extremely potent Anti A iso-agglutinins did not produce any action which could be classed as dangerous. However, the group O blood with high and agglutinin titre should be considered dangerous.

Wiener, 1943, points out that when the patient is under an anesthetic the symptoms may be unnoticed and even when the patient is conscious the first symptoms may be those of uremia.

These accidents are rare. The only way such incompatibilities can be detected is by the method of titring the donors serum in every case. However where larger numbers of universal donors are employed in blood banks it appears desirable to accept only those with agglutinin titres below a certain arbitrary level. The titre 256 for X seems to be the upper limit of safety.

K. S. S.


“Three cases of addiction to meperidine hydrochloride are here reported. Two cases were examples of primary addiction to the drug. The third case demonstrates the occurrence of prefer-