

The values obtained are uniformly slightly lower than those observed in the series of normals, but otherwise present no features of especial interest.

3. *Cases with Normal pH and Diminished Buffer Values.*—(Tables 4 and 5.) An analysis of these tables shows essentially normal buffer and reserve buffer values for acid, markedly diminished values for alkali, and therefore lowered values both for total and total reserve buffers.

Several points of interest are evident from a consideration of this group of cases. It is striking that a diminished buffer for alkali is far more common than that for acid in cases which do not show a *true* acidosis, but in which there is a tendency toward acidosis, as evidenced in many instances by a lowering of the tension of the alveolar carbon

TABLE 5. CASES WITH NORMAL pH AND DIMINISHED BUFFER VALUES.
SIXTEEN CASES, TWENTY-FIVE DETERMINATIONS

		Blood	
		Extremes	Group Average
Buffer	For acid	0 - 0.3	0.1
	For alkali	0 - 0.3	0.06
	Total	0 - 0.6	0.17
Reserve buffer	For acid	0 - 1	0.76
	For alkali	0 - 0.3	0.18
	Total	0 - 1.3	0.94

dioxid. (Cases 1, 2, 4, 5, 10 and 16.) The diminished buffer for alkali observed in two cases of normal pregnancy (Cases 14 and 15) is in accordance with the almost constant finding of a lowered alveolar carbon dioxide tension during the months of gestation.¹¹

Case 4 (mercuric chlorid poisoning) shows at various stages during the clinical course several phases of buffer loss. At first, after five days of anuria, there was loss of buffer for acid; with slight clinical improvement and the reestablishment of urinary secretion, buffer for acid returned, whereas that for alkali was diminished. After intensive alkali therapy, an alkalosis was established though the alveolar carbon dioxide was still somewhat lowered; the buffer values were normal. October 6, a slight set-back occurred, with loss of buffer for alkali. It was prognosticated at this time from the buffer determinations that the alveolar carbon dioxide tension, which two days previously had been normal,

11. Leindorfer, A., Novak, J., and Porges, O. *Ztsch. f. klin. Med.*, 1912, LXXX, 301