

TABLE 1
PH OF BLOOD SAMPLES

	Maternal periph- eral vein	Maternal uterine vein	Um- bilical vein	Um- bilical artery
1†	7.36	7.36	7.31	7.22
2	*	7.34	7.34	7.29
3	7.38	7.38	7.32	7.24
4	7.37	7.34	7.31	7.24
5	7.39	7.36	7.31	7.27
6	7.34	7.32	7.31	7.22
7	7.40	7.34	7.32	7.25
8	7.39	7.39	7.35	7.28
9	7.42	7.42	7.31	7.27
10	*	*	7.30	7.25
11	7.37	*	7.32	7.29
12	7.37	7.35	7.34	7.30
Mean	7.38	7.36	7.32	7.26

* Unsatisfactory sample.

† In the first mother and fetus studied, the values obtained were respectively 7.36, 7.32, 7.01, and 6.98. The order of magnitude and range of subsequent observations indicate that these fetal values belong to a different universe of data. Intrauterine fetal embarrassment, in the presence of which Eastman noted similarly low fetal pH values, was not present. There is neither clinical nor technical explanation at present for the extreme deviation of this one set of data, and therefore, it is not included in the table.

were identified to the person doing the determination by number only. Two different electrodes were employed, one in a water bath, and the other in an incubator, each with a different galvanometer system. There was no difference in the mean or range of the 2 sets of values. Each system was sensitive to less than 0.005 pH unit.

The results are presented in Table 1. The mean pH of umbilical vein blood is 7.32, and that of umbilical artery blood, 7.26. These values are almost identical with those of Noguchi, obtained on infants at birth. It is, therefore, certain that the human infant in utero at term exists in a state of acidosis relative to its mother. This may not be altered by normal labor. Since the umbilical artery in utero carries a mixed arterial-venous blood, it is likely that the acidosis in fetal tissues at term is of a degree hitherto unsuspected and sufficient to affect gas exchange and alter metabolic processes significantly.

References

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3. EASTMAN, N. J. *Bull. Johns Hopkins Hosp.*, **50**, 39 (1932).
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Comments and Communications

Scientific Conferences and Papers

A COMMUNICATION by Paul F. Klens in *SCIENCE* (117, 112 [1953]) had some excellent advice on the preparation of papers for scientific meetings and their delivery. I add some comments and suggestions. Lantern slides should not have any details that cannot be read easily with the unaided eye, when held in the hand before a light. There should not be more than 26 lines of typed material single spaced, and a line should not have more than 65 letters or figures.

There is a curious expression of self-consciousness in the deplorable tendency to take rear seats and leave front seats vacant, thus adding to the difficulty of hearing a weak-voiced speaker and of seeing details in badly planned slides.

Local committees on arrangements often fail to consider the acoustic properties of rooms used for meetings. Voice amplifiers should be used in large rooms, if obtainable. It has been my observation that failure to provide them is often not because they are not available, but is simply due to thoughtlessness or negligence. When a microphone is provided, it should be used. It is silly vanity to scorn such devices, as often happens. A thoughtful speaker realizes that an audience will probably have one or more members whose hearing is not keen. Furthermore, a speaker is apt to overestimate the volume of his voice. His voice may not be so loud as he thinks or his articulation

may not be good. In rooms seating one hundred or more persons, an amplifier is helpful, especially if there are street noises that enter the room, or if there is noisy apparatus in adjacent rooms.

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Adrenal Weight—Body Weight

IN connection with the third and fourth sentences of the paper "The Relation of Adrenal Weight to Body Weight in Mammals" by John C. Christian (*SCIENCE*, 117, 78 [1953]), I call your attention to our several publications on these relationships. My paper "A Comparison of Certain Gland, Organ and Body Weights in Some African Ungulates and the African Elephant" (*Growth*, **2**, 335-346 [1938]), expressed these relations graphically on a log-log grid. It was shown that the equation $Y = bX^k$ is applicable.

A second paper, "The Scale of Being and the Power Formula" (*Growth*, **5**, 301-327 [1941]), gave the b values for the adrenal gland resulting from the application of the above equation. That paper included adrenal data from the following: 167 reptiles; 220 birds; 1212 domestic, even-toed ungulates; 79 odd-toed ungulates; 86 carnivores; and 251 primates, mostly wild and exclusive of man.