cians and the need for operating room anesthesiologists. Weil and Shubin state that during elective procedures, intraoperative mortality in major institutions is less than 2 per 1,000. (Anesthetic mortality in healthy patients approximates 1 per 10,000). Since the mortality rate in intensive care and coronary care units is 15–20 per cent, they urge greater physician–specialist commitment to critical care medicine than, for example, to intraoperative anesthesia. This injunction must be challenged, despite the reviewer's personal commitment to intensive care medicine. First, the reason intraoperative anesthesia mortality is low is precisely that the anesthetist is responsible for just one individual. Second, critically ill patients die despite the best and most intensive care available. If high-quality intensive care units with extensive physician–specialist coverage show mortality rates of 15–20 per cent, how would more physician–specialist involvement improve this figure? In the ICU, the patient's disease process is a far better prognostic indication of survival than the intensity of care received. Borrowing from anesthesia to cover the ICU is highly questionable when the mortality rate in elective surgical patients approaching 0:10,000 can be maintained only with quality intraoperative anesthesia.

Dr. Safar's book is pertinent to practitioners of anesthesia, critical care and emergency medicine; hospital administrators; and demographers of health care in this country. The planning of medical care is proceeding rapidly and needs just such a forum to focus on priorities. For example, the high-quality outpatient anesthesia practiced in the Phoenix Surgicenter contrasts with the dismal lack of coverage in obstetrical suites, and accents the need for proper coverage of both. The book should be especially interesting to hospital-based practitioners, health care planners, and academicians involved in the future management of their own hospital, service, or specialty, whether anesthesia, cardiology, emergency medicine or any other. Every departmental library should have a copy. It is not an idealist's dream but a participants' handbook for changing the environment of critical care medicine.

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Brain Dysfunction in Metabolic Disorders. EDITED BY FRED PLUM. New York, Raven Press, 1974, 324 pp. Price: $21.50.

This volume brings together a group of contributors who share a common interest in the metabolic basis for a variety of brain disorders. For the most part, the individual authors assume that the reader possesses a modest background in neurology and biochemistry, and therefore basic introductory comments to each of the subjects considered tend to be sketchy. An exception to this is the excellent chapter by Siesjö *et al.*, which leads off the section entitled "Clinical Disorders of Cerebral Oxidative Metabolism." It is this section which should be of greatest interest to anesthesiologists, since it deals with cerebral hypoxia and ischemia (Siesjö *et al.*), the relationship of cerebral blood flow to metabolism (Reivich), the cerebral metabolic effects of seizures (Plum *et al.*), and cerebral utilization of non-glucose substrates (Ferrendelli). Of considerable interest, too, are the discussions that follow these chapters (as well as most of the other chapters).

The other major section of this book deals with neurologic changes in hepatic disease. Interestingly, in examining the possible mechanisms of neurologic disorders in both hepatic disease and hypoxia, it would appear that synaptic transmission is the sensitive site of action. Furthermore, the source of dysfunction might well be a failure of neurotransmitters due to either false transmitters or actual depletion of true transmitters. In one of the discussion sections, Dr. Kety suggests that the brain might be compared to a computer that uses most of its energy to keep the filament in the tubes heated and but a small fraction of energy for switching purposes. Yet, in terms of output, it is the switching function that is the more critical. Thus, he suggests that in both hepatic dysfunction and marginal oxygen deprivation a very subtle change in metabolism might grossly alter cerebral function without measureable biochemical change. Such a concept is useful in understanding the basis for a variety of brain disorders in which cerebral oxygen consumption is apparently unaltered.

Other chapters in this book deal with cerebral dysfunction secondary to uremia, osmotic alterations, porphyria, endocrine disease, malnutrition, vitamin deficiency, and lead toxicity. Several chapters deal directly or indirectly with the possible biochemical basis for a variety of psychiatric disorders that are not normally considered metabolic disorders.

Of considerable value to anyone wishing to pursue one of these topics in greater depth are the generally very complete bibliographies following the chapters. For the most part, these bibliographies are reasonably current, including literature references through 1973.

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Respiratory Insufficiency. EDITED BY B. BURROWS, R. J. KNUDSON, AND L. J. KETTEL. Chicago, Year Book Medical Publishers, 1974. 187 pp. Price not listed.

To the average anesthesiologist, the term "respiratory insufficiency" probably brings to mind a narrowing of respiratory reserves conducive to respiratory failure. The commonest etiologic groups of which he might think would be the postoperative and traumatic groups. To such an anesthesiologist this

small volume is likely to be something of a disappointment, as it disposes of these particular issues in a few scattered paragraphs. For students and practitioners its strengths lie in the descriptions of pulmonary function, particularly in relation to chronic obstructive pulmonary disease, and the book can be recommended to students and practitioners for this reason. It contains no details of intensive respiratory care and includes only a very limited bibliography. All told, the authors have succeeded in producing a readable account of respiratory disorder, written from the physiologic point of view.

Some omissions and minor errors deserve comment. For instance, the interrelationship between the effects of loss of elastance on flow–volume curves and its effects on closing capacity and on arterial oxygen tension are not discussed, nor is the significance of posture, obesity, and left heart failure for the functional residual capacity–closing volume relationship and consequently for arterial oxygen tension explained. The O_2–CO_2 diagram is shown with the usual axes reversed and presents arterial carbon dioxide and oxygen tensions as related inversely and linearly. While the linearity is correct for alveolar gas, it is not correct for blood, owing to the effect of P_{CO_2} change on the oxyhemoglobin dissociation curve. This is particularly of note in patients with abnormal alveolar–arterial oxygen tension differences.

In the discussion of causes of arterial hypoxemia, there is no mention of the important effect of factors influencing mixed venous oxygen content (in patients with an increase in intrapulmonary shunt fraction); alveolar–capillary block is still presented as causing a decrease in diffusing capacity distinct from that produced by ventilation–perfusion inequality, although this concept has undergone reevaluation in recent years.

The authors recommend managing flail chest by internal or external fixation of the chest wall. Only if this fails or if surgical treatment is deferred do they recommend mechanical ventilation. This must be contrary to standard practice in the majority of cities in the Western world. In discussing oxygen therapy, they stress the importance of minimizing inspired oxygen concentration to avoid central ventilatory depression in certain patients with emphysema, and to avoid pulmonary oxygen toxicity. Bearing in mind that the intended readers include novices, it might have been better to recommend not sparing the oxygen, *except* in patients known to have severe chronic pulmonary failure.

In summary, although this book is easy to read and contains much useful information, its emphasis and omissions limit its interest as an addition to the library of the anesthesiologist.

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Review of Medical Pharmacology. 4th edition. EDITED BY F. H. MEYERS, E. JAWETZ, AND A. GOLDFIEN. Los Altos, Lange Medical Publications, 1974. 721 pp. Price: $10.50.

In an era of inflated costs, this book is a bargain, although less than 20 per cent of it contains information of interest to anesthesiologists. Few changes have been made in the 26 pages devoted to general anesthetics, muscle relaxants and local anesthetics. Excessive space devoted to "Preparations Available," especially at the conclusion of the chapter on local anesthetics, represents unnecessary duplication of information readily available in the Physician's Desk Reference. Nevertheless, the book does present a timely and lucid summary of general pharmacology for individuals preparing for State or National Board exams.

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Obstetric Therapeutics. EDITED BY D. F. HAWKINS. Baltimore, Williams and Wilkins, 1974. 594 pp. Price: $29.25.

In the United States we recognize that there is a certain regionalized flavor to the practice of obstetrics. Reading the art of obstetrics described from a British perspective re-emphasizes that different sets of clinical problems lead to different priorities in research and different patterns of clinical practice.

In this country we do not see significant infection with intrauterine fetal monitoring and do not provide antibiotic cover for this procedure. We do not place much reliability on x-ray to assess fetal development, relying more on ultrasonography and amniotic fluid studies. The described procedure of amniotomy appears quaint by our standards, but it should be remembered that in Britain many deliveries are managed by midwives, some in nonhospital settings. The authors do not clearly separate the problems of post-datism from those of postmaturity.

Perhaps the most significant difference is the approach to weight gain in pregnancy. Weight reduction programs in pregnancy seem inadvisable in view of the recognized association of maternal acetonuria with intellectual impairment in the offspring. Moreover, the Collaborative Study of Cerebral Palsy showed that the better babies came from pregnancies with weight gains somewhat in excess of those previously thought to be ideal.

The chapters on the pharmacology of the pregnant uterus and the role of the physiotherapist are well done, but for the practitioner of obstetrics in this country, Hawkins' *Obstetric Therapeutics* would not be an appropriate consultant text.

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