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Closed-circuit Anesthesia Made Easier

To the Editor:—Closed-circuit anesthesia, or low-flow anesthesia, has become increasingly popular in our center because it permits a better understanding of the mechanisms of absorption of anesthetic agents.

In closed-circuit anesthesia the fresh gas flow is equal to oxygen uptake (\dot{V}_{O_2}) plus anesthetic uptake. Brody's equation¹ is a convenient way to calculate \dot{V}_{O_2} by multiplying $\text{kg}^{3/4}$ by 10.

Many anesthesiologists find this equation impractical;

ultimately, this may limit their use of closed-circuit anesthesia. We propose a simplified way to calculate \dot{V}_{O_2} by substituting $0.3 \text{ kg} + 3$ for $\text{kg}^{3/4}$ in Brody's equation (table 1).

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REFERENCE

1. Brody S: *Bioenergetics and Growth*. New York, Reinhold, 1945

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TABLE 1. \dot{V}_{O_2} as Calculated by Each Formula

Weight (kg)	10 ($\text{kg}^{3/4}$)	10 (0.3 kg + 3)
10	56	60
20	95	90
30	128	120
40	159	150
50	188	180
60	216	210
70	242	240
80	268	270
90	292	300
100	316	330

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Pharmacokinetics and Physiognomy

To the Editor:—My attention was called to the term "physiognomy" appearing in the *ASA Annual Refresher Course Lectures, 1985*.^{*}† Both lectures reproduce a table in which item 8 reads, "Pharmacokinetics are unaltered by altered physiognomy." The same term appears in the lecture, "Reasons to preferentially select general anesthesia,"‡ published in the *International Anesthesia Research Society 1986 Review Course Lectures*.

As far as I know these are the first three instances in which this unusual term, "physiognomy," appears in the anesthesiology literature. The concept is stated as follows: "Time course of anesthetic effect should be relatively unaffected by altered body habitus,"^{*} and "Thus, anesthetic

requirements in terms of the MAC of an inhalation anesthetic is similar for thin, fat or muscular individuals."[†]

I fear an inappropriate word may take hold. The following comments are an attempt to suggest we should not use the term "physiognomy" to denote "body habitus."

A most interesting book called *La Physiognomie ou L'Art de Connaitre les Hommes d'apres les Traits de leur Physiognomie*¹ (Physiognomy or the Art of Knowing People According to their Facial Features) was written in the 18th century by Johann Kasper Lavater, a Swiss theologian who was born in Zurich on November 11² or 15,¹ 1741, and died in the same city on January 2, 1801. Lavater is considered as the founder of the "science" of physiognomics,² physiognomy being "the systematic relation of psychological characteristics to facial features or body structure. Since many efforts to specify such relationships have been discredited, the term, physiognomy, commonly connotes pseudoscience or charlatany on the level of fortune-telling or palmistry."³

* Saidman L: Advantages-disadvantages of inhalation anesthesia. Thirty-sixth Annual Refresher Course Lectures, 123A, 1985.

† Stanley TH: Advantages-disadvantages of narcotic anesthesia. Thirty-sixth Annual Refresher Course Lectures, 123B, 1985.

‡ Stanley TH: Reasons to preferentially select general anesthesia. International Anesthesia Research Society, Review Course Lectures, 1986.