CORRESPONDENCE

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REFERENCES


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Formulas for Calculating Fluid Maintenance Requirements

*To the Editor:*—In 1957, Holliday and Segar described the maintenance requirements for water of hospital patients, based on caloric expenditure. Without changing the concept described by the above-mentioned authors, I have modified their formulas to those proposed in table 1 for calculation of a patient’s hourly maintenance fluid volume, and compared the proposed formulas with equations currently available (table 1). It has been simpler for the medical students and residents in anesthesia service to calculate the hourly maintenance requirement for water of patients by using these proposed formulas, in which certain restrictions, such as “for each kg over 10 kg” and “for each kg over 20 kg,” have been eliminated.

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<table>
<thead>
<tr>
<th>Formula</th>
<th>Amount (ml) and Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Weight</td>
<td>Original (per Day)</td>
</tr>
<tr>
<td>0–10 kg</td>
<td>100 cal/kg</td>
</tr>
<tr>
<td>10–20 kg</td>
<td>1,000 cal</td>
</tr>
<tr>
<td>$\geq 20$ kg</td>
<td>+ 50 cal/kg*</td>
</tr>
<tr>
<td></td>
<td>1,500 cal</td>
</tr>
<tr>
<td></td>
<td>+ 20 cal/kg†</td>
</tr>
</tbody>
</table>

* For each kg over 10 kg.
† For each kg over 20 kg.

REFERENCE


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Bioassay, Potency, and Intravenous Anesthetics

*To the Editor:*—In their interesting paper, Sarnquist and associates compared clinical effects of thiopental and midazolam. The calculation of drug potencies in this study was based on the duration of sleep. I would like to make some comments in this regard, since I believe that the use of the duration of drug effect in comparing drug potencies is unjustified. In the textbook of pharmacology by Goodman and Gilman, a dose–response curve is described with the dose represented on the horizontal axis, and the intensity of effect on the vertical axis; the location of the dose–effect curve along the dose axis is given as an expression of the potency of a drug. For anesthetics, potency can be defined as the relative amounts of drugs that will produce the same depth of anesthesia. Depth of anesthesia is analogous to intensity of effect. Intensity of effect cannot be substituted for by duration of effect, since potency is dependent on the number of receptors involved in the drug–receptor interaction and not on the duration of their involvement.

Sarnquist and co-authors stated that dose–response curves for midazolam and thiopental have similar...