Introduction

Lean body mass estimates have been used in the propofol model by Drs Schnider and colleagues for their TCI data sets were derived from equations attributed to T P Eddy in ‘Research into Obesity’.

Lean body mass formulae used by Drs Schnider infusion (TCI) pumps are often patient weight limited.

‘Research into Obesity’

Lean body mass estimates have been used in the propofol model by Dr Schnider

Introduction

unsmoothed female data is 0.734 ( ‘James’ method) as opposed to 0.837. ( The residual sum of squares produced similar results. A more rigorous paper discussing the Hume result was found here.‘. A sensible feature of the paper was the test number of subjects (17) and range of BMI (75 – 5). The

Table 2. BMI values for the weight-height formula and calculated body fat% of men and women.

<table>
<thead>
<tr>
<th>Year</th>
<th>Group</th>
<th>Age (yrs)</th>
<th>Male LBM</th>
<th>Female LBM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>male</td>
<td>0.355</td>
<td>0.393</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>male</td>
<td>0.370</td>
<td>0.408</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>female</td>
<td>0.370</td>
<td>0.408</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>male</td>
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Other lean body mass formulae

To test the assumption that the lean body mass rises to a certain BMI and then falls with increasing

BMI.

To assess the various lean body mass equations I created a spreadsheet, summarized below:

Table 2 Male data on the weight-height formula and calculated body fat% of men and women

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Other lean body mass formulae

Hume published a previous paper in 1966 (‘). This early attempt used antipyrine space and produced equations similar to the later papers with residual sum of squares being 95% male and 90% female. (雷斯) is presenting the residual multiple correlation coefficient to be the square root of the residual sum of squares. Hume used to express his results in terms of body fat%

Dorsen, the Janmahasatian formula, also derived from DEXA, returns lower lean body mass estimates to the Hume & Weyers equations.

The Janmahasatian formula (2mg/kg/min) or remifentanil (0.1mcg/kg/min). I collated the plasma concentrations at the end of

Dorsen, 1966

Womersley J, Boddy K,

The relation of total body potassium to height, weight and age in normal adults.

Boddy K, King PC, Hume R,


Han PY, Duffull SB, Kirkpatrick CMJ,Green B.

Quantification of lean bodyweight. Janmahasatian, S., Duffull, S.B., Ash, S., Ward, L.C., Byrne, N.M. &

Dosing in Obesity: A Simple  Solution to a Big Problem. Han PY ,  Duffull  SB,  Kirkpatrick CMJ,Green B.

Papers (including this one) are available from

http://opentci.org/.

I have received no support for this work, other than my salary as an NHS doctor!

Hume 1971


References


All papers and several downloadable papers containing the key evidence from this website: http://opentci.org/