Isabella Leitch was a remarkable woman. I came to realise this soon after I started work at the Rowett Research Institute in September 1937 where I had been appointed to carry out the clinical examinations of the children in the Boyd Orr survey. My colleague, the late Angus Thomson, and I frequently sought her advice, which was often blunt but always helpful.

Isabella Leitch had spent the 1914–18 war carrying out research in genetics and plant physiology at Copenhagen University with Prof. A Krogh, a Nobel prize winner in medicine, and she had obtained her DSc at Aberdeen University in 1919 on the basis of published and unpublished papers.

In spite of the fact that she was, by then, an experienced research worker, she was unable to find a research post in Aberdeen. At length, in 1923, she found a job as temporary librarian at the Rowett Research Institute.

She soon found herself involved in various research programmes, first in animal nutrition and later, when the Institute became involved in human nutrition, in that area too. Her encyclopaedic knowledge and sharp critical mind made her a key figure and she became adviser and personal assistant to the director, John Boyd Orr.

In the 1930s, the signs of specific nutritional diseases such as scurvy, rickets and pellagra, were well known, but there was little agreement on the early symptoms and signs of

Table 3 The cost of obesity (America) (Life insurance premiums weighting)

<table>
<thead>
<tr>
<th>Height (ins)</th>
<th>Premium 100</th>
<th>Premium 115</th>
<th>Premium 129</th>
<th>Premium 141</th>
<th>Premium 154</th>
</tr>
</thead>
</table>

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Commentary: Isabella Leitch (1890–1980)—a personal memoir

John Pemberton

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References

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Isabella Leitch’s paper is exciting reading in many ways. Our main difficulty in writing this commentary was choosing a single topic from her several original ideas that have major relevance to the nutritional problems of developing countries today. We opted to discuss the possible hazards of catch-up growth.

Leitch’s analogy of the growth of pigs and humans is thought-provoking. Based on research on pigs who were starved early in life and then fed appropriately, she observed that ‘skeleton and muscle will not grow as they would have done if they had had the opportunity at the right time, and the extra food will be used mainly to lay on fat’. She then uses this analogy of the ‘low–high’ pig to propose that humans who suffered malnutrition in early life would be better off by remaining thin than malnutrition. Certain changes in the skin, anaemia, defective night vision, increased frequency of infections and slower rates of growth were suspected to be signs of malnutrition and we looked for these.

Angus Thomson and I often consulted Dr Leitch (as we always called her), and she was able to give us valuable advice on what was worth looking for and measuring in the children we were going to examine. One such piece of advice she gave us, which has turned out to be very significant, was to measure leg length as well as total height.

The Boyd Orr survey was completed in July 1939 but, because of the outbreak of war in September and the dispersal of most of the research workers, the full results were not published until 1955.

A few papers on specific aspects of the survey were published before this. One of these was Isabella Leitch’s paper on growth. In this she drew attention, among other things, to a finding from the survey that the ‘longer legged children suffered less bronchitis than the shorter legged at all ages’.

Although I occasionally experienced her severe criticism, as when she returned the draft of an article I was proposing to send to *The Lancet* blue pencilled all over, I remember her with respect and affection. She was one of those scientists whose honesty, knowledge, high standards and willingness to help the less experienced workers, enhance the reputation of an entire research institution.

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