A multicentre, randomised controlled trial comparing the clinical effectiveness and cost-effectiveness of early nutritional support via the parenteral versus the enteral route in critically ill patients (CALORIES)

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Plain English summary

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There are two main ways to way to feed seriously ill patients who cannot eat for themselves: either directly into the bloodstream (the intravenous or parenteral route) or into the stomach (via a tube inserted through the mouth, nose or through the skin of the abdomen – the enteral route). It is not known which is best, particularly during the first few days of a serious illness. The aim of this study was to investigate which route is best for patients who have just been admitted to an intensive care unit of the UK NHS. We also measured the costs of each method.

A total of 2400 patients from 33 NHS hospitals took part in the study. Their feeding route was chosen at random. A total of 1200 patients were fed intravenously (the parenteral route) and 1200 patients were fed into the stomach (the enteral route).

There was no significant difference between the groups in the number of patients who died at 1, 3 or 12 months. Patients who received nutritional support via the stomach had more vomiting and more diarrhoea. At 12 months, the overall costs of intravenous feeding were £28,354 per patient and £26,775 for feeding via the stomach. The additional costs of intravenous feeding were not justified by better outcomes.

The results of the study support continuing to feed seriously ill patients via the stomach when this is possible.

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