Egg-cellent way to prevent malnutrition

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By Jessica Danaher

Malnutrition is a term used to describe an imbalance in nutrition; with a deficiency in energy, protein and other nutrients leading to unfavourable effects on body function, composition and clinical outcomes. Malnutrition is associated with a series of complications including higher infection rates, muscle loss, fractures and pressure ulcers, impaired wound healing and a longer length of hospital stay during hospital admissions.

This is of particular concern amongst the ageing population, who experience high rates of malnutrition in both the community and hospital setting. In Australian hospitals, malnutrition is estimated to affect approximately 30 to 45% of elderly patients during short term acute admissions, and up to 49% of patients during long-stay rehabilitation admissions. However, there is also evidence to suggest that many patients may be undiagnosed and accordingly, untreated.

The development and progression of malnutrition is primarily caused by inadequate dietary intake, but it can also be caused by increased nutritional requirements associated with a disease state, or an impaired ability to absorb or utilise the nutrients available in food and fluid. Many factors can affect dietary intake in acute care settings such as a person's medical condition(s), dissatisfaction with hospital meals, loss of appetite, and the cultural appropriateness of meals.

Early detection of malnutrition, and the subsequent implementation of nutritional interventions, is vital. Nutritional interventions can decrease the prevalence and severity of malnutrition and its related complications, as well as the patient's length of stay and associated costs. Following the identification of malnourished patients (or those who are at risk of malnutrition) several treatment options may be implemented, depending on the needs of the individual patient. Common nutritional intervention strategies include dietary counselling, fortification of meals to increase the energy and protein content of the diet, and the provision of oral nutritional supplements. In some complex or severe cases, enteral and parenteral nutrition may be warranted.

Food plays a central and important role in patient care, and in the prevention and treatment of malnutrition in the hospital setting. However, despite the provision of adequate nutrition, up to 40% of hospital food can be wasted. Plate waste refers to the quantity or percentage of served food that remains uneaten by patients. A high level of plate waste is associated with a reduction in patient's energy and protein intake, which if less their nutritional requirements, can lead to malnutrition. Of interest is the variability of plate waste in hospital settings, with less waste found to occur at breakfast time compared to other main meals, signifying that appetite is greatest at breakfast.

Enhancing the nutritional quality of available breakfast options may therefore improve dietary intake and serve a role in the prevention and treatment of malnutrition. In Australia, many hospitals only provide a continental breakfast, which is served cold and typically comprises light food items. Cooked breakfast items, which can be more energy and protein dense, are less commonly offered.

The addition of cooked breakfast items has recently been adopted by Western Health Hospital (Melbourne) in an aim to assist patients to meet their energy and protein requirements, and thus reduce the risk of malnutrition. Cooked breakfast additions to the hospitals 'full ward diet' included a baked egg muffin, omelette and baked beans.

An audit of this Western Health initiative was undertaken by Deakin University Masters of Dietetics students to determine how the addition of cooked breakfast items influenced daily plate waste and overall dietary intake. It was found that elderly patients eating cooked breakfast items were consuming significantly more energy and protein at breakfast than those eating a continental breakfast. Of particular interest however, was that the increased energy and protein intake at breakfast was achieved without compromising dietary intake at the subsequent lunch or dinner meal. As such, total daily dietary intake was found to be higher in elderly patients eating a cooked breakfast than those eating a continental breakfast (by approximately 500 kilojoules of energy and 10 grams of protein).

Despite the higher energy and protein intake of elderly patients eating a cooked breakfast, plate waste was not affected. Instead, the daily amount of food wasted by patients was similar between cooked and continental breakfast eaters. This may have been due to cooked breakfast items being ordered in addition to regular continental breakfast items, rather than in place of.

The work demonstrated the benefits of a cooked breakfast in enhancing the energy and protein intake in elderly patients. The provision of energy and protein dense foods, in line with recommended dietary intake levels is likely a simple method that may reduce malnutrition risk in elderly patients in hospital settings, and may also be applicable to residents living in residential care nursing homes. ■

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