

Abstract Title: 3D food printers: Toward enhanced consumption of pureed diets in long term care (LTC)
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Objectives: Pureed texture diets are used in LTC settings to facilitate food intake for those living with swallowing difficulties. A challenge is that pureed foods can lack visual appeal, impeding food intake. 3D food printers allow users to print pureed foods in any desired 3D food shape, thus enhancing visual appeal. The objective was to conduct a literature search to explore the use of 3D food printing to create familiar food shapes, and the links between food appearance and food intake for people on pureed texture diets.

Methods: Resources reviewed were those describing additive manufacturing (adding layers of product to produce the final shape) and applying this process to food, and those exploring the relationship between pureed diets, visual appeal, food consumption, and risk of malnutrition.

Results: Residents on pureed diets experience decreased energy intake, perhaps related to the unappetizing appearance. A challenge associated with serving pureed foods in LTC is overcoming the negative views of staff and residents that these foods are unappetizing. This can affect the caregivers' feeding interest as well as residents' eating experiences. Projects involving 3D food printing in LTC facilities have had positive feedback owing to the superior appearance of food products. 3D printed foods offer the opportunity to enhance visual appeal of pureed foods, and increase food intake. **Conclusions:** More research is necessary into the feasibility of using 3D food printers in LTC from the perspectives of residents, families, and staff, and the effects of using 3D printed foods on perceptions about pureed foods, residents' consumption, and malnutrition rates.

Significance to the field of Dietetics: 3D printing technology is an emerging tool that has potential to transform food service in LTC that shows promise to enhance the appearance of pureed food to address malnutrition in LTC.