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Exploring the use of sensory tools to classify commercial dairy products for dysphagia sufferers

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Current Australian standards for texture modified foods and fluids describe six categories based on viscosity (fluids) and particle size (foods). Depending on the severity and origin of swallowing difficulties, dysphagia sufferers are advised to consume products falling into particular categories. However, ready-to-eat food products specifically designed for dysphagia sufferers are scarce and patients often have to prepare food themselves or purchase non-specialised food increasing the risk of hazardous situations.

Using sensory analysis tools, the objective of this study was to determine the perceived in-mouth textural characteristics of products known to adhere to the texture modified food guidelines, and to apply those insights as a first step to classify dairy products available in Australia with a view to provide a greater choice to patients.

Using a trained panel, we developed a sensory vocabulary of 17 attributes describing the texture of 22 ready-to-eat foods designed for dysphagia sufferers. In parallel, 50 semi-solid commercially available dairy products from the Australian market were sorted by a panel of healthy subjects based on their textural properties, and 16 products were selected as representative of different clusters. The previously developed texture vocabulary was then used to profile the texture properties of the dairy products. Results of both profiles were combined to classify dairy products into the different texture-modified foods and fluids categories described in the guidelines.

With the exception of 2 products containing large particles, all dairy products analysed shared textural characteristics with products specifically designed for dysphagia sufferers and could be classified in one of the categories described by the Australian guidelines. By extrapolation, other dairy products could be graded based on their texture properties. Validation of ease of swallowing of these products with dysphagia sufferers will be required for these products to be used by dietitians and speech pathologists.