

## Shake: the breakfast of the future for people with swallowing problems?



Within the Catholic College Kempen (Katholieke Hogeschool Kempen) there's been an ongoing nutrition research for several years involving demented people, on an interdisciplinary level: nursery, nutrition and dietetics and industrial sciences. In this Shake research the starting point was as follows: "How can we, keeping the organizational limitations in mind, ensure good, well-balanced food for our severely demented inhabitants?" The past two years this research gained momentum because of the funding with money for Scientific Research Project (SRP – Projectmatig Wetenschappelijk Onderzoek (PWO)).

### Good and well-balanced

When talking about good and well-balanced food we mean food that aside from a good nutrition value, also meets the inhabitant's physical and social needs. For example, blixer food (soft meals) led to good results, but one of the biggest problems, however, was breakfast.

### Caregiving – nursing dependent

The research was limited to the caregiving and nursing dependent inhabitants. Caregiving and nursing dependent people are inhabitants with advanced symptoms of dementia. This is distinguished by a big loss of cognitive possibilities. Intellectual abilities can no longer be tested. It's assumed that memory and language functions (both sensory and motor) have largely disappeared. Information from the personal past is at most fragmentary and stereotypical. Communication is limited to babbling words and sounds. The disorientation is complete.

These inhabitants are completely dependent for all functioning. Actions are gone or are repetitive movements, the attitude is often turning fetal. The inhabitants often show early infant reflexes such as the sucking and grasp reflex.

### Passively existing

The severely demented elderly leads a primitive life, in which he completely converges with basic needs such as eating, drinking, rest and warmth. Primitive sensor and motor stimuli are the only point of contact with the environment. Their self-care limitations can't be repressed, they've become self-care passiveness. Passiveness of the inhabitant means action from the caregiver and this is often very damaging. Strongly fixed bending positions of joints, decubitus issues (bedsore), large defensive tension during manipulations, difficult to handle people during transfers and such demand a structured approach to make it bearable for the inhabitant as well as the caregiver.

### Procedure

The breakfast concept is called shake and researched the difference between the shake and a standard breakfast and this in the area of food and calorie intake, eating behavior and the swallowing function with demented elderly and the time the nurse spent feeding the people. The shake is a full-fledged breakfast, with enough consistence and viscosity to retain the remaining swallowing and chewing function. The standard breakfast contains standardized slices of bread, filling, ointment, poured over with coffee or tea and is offered as a mash. The field research lasts four weeks of five consecutive work days for each setting, where during the second and fourth week a shake is offered.



## Results

Concerning food and calorie intake the inhabitant averagely takes in more from the shake compared to the mash, despite the same offer. This means for the food dimension that there aren't only more calories taken in, but that the total meal is better balanced in all elements (carbs, protein, fats...).

Aside from that there have been different observation scales from a nursing perspective. The two most important are the eating behavior and swallowing function of the demented inhabitant. It turns out that the demented person spits out more food of the standard breakfast, refuses to swallow more often and turns his head away more frequently. During the standardized observation of swallowing the shake also turns out to have a positive effect, seeing as there is less inadequate closing of the lips, less food residue remain after swallowing, less hoarding up, the coughing isn't as hard and there is less retching.

Last of all there is a difference in pastime. This difference can be explained using two elements. When we work with a regular meal companion, it takes less time to feed the demented. But the shake also ensures a shorter feeding time.



### Viscosity

From an engineer-technical point of view a broad variation in viscosity (thickness) has been established of different prescriptions. On top of that there are different, important influencing factors on thickness: temperature, method of preparation, temperature of preservation, and so on. These influencing factors are even reinforced by the assessment that, even under strictly controlled laboratory conditions, the same recipe doesn't always have the same viscosity. This leads to the decision that the thickness is very varied, and, translated to the nursing reality, an exactly documented viscosity is probably of less importance compared to the presence of (the crumbs of) the biscuits. This obviously makes preparing on a larger scale easier. On top of that this can shift the attention from a technical point of view to a good nutritious composition.

## Conclusions and decision

These results allow to conclude that the shake can be an equivalent replacement food for breakfast. Furthermore the time measure shows that working with a regular meal companion is useful and timesaving. Aside from that the shake itself appears to hold a strong time reduction within itself, looking at it from the perspective of better meal partitioning and as an opportunity to interact with the inhabitant. Seeing these results it seems appropriate to further investigate the shake as nursing intervention with other populations who have swallowing problems, but to also consider it clinically. Still it remains important to emphasize that this is about breakfast and aside from a correct production process there also needs to be paid attention to the amounts depending on the taste.

## Realia Shake

What?	Breakfast concept "shake" with swallowing problems
Who?	Lieven De Maesschalck, Veerle Huysmans, Johan Claes, Catholic College Kempen
For whom?	Severely demented with swallowing problems
Where?	Catholic College Kempen, Campus Lier and Geel
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More info?	lieven.de.maesschalck@khk.be