

# Spoonable bread for Care home residents with swallowing problems.

An example of meaningful innovation and implementation by well-trained chefs gastro-engineering in Antwerp (Belgium).

Lieve Van der Paelt, Jade Lambrecht

A mealtime is often the most important – and most enjoyable – moment of the day, because food triggers taste buds, and creates a small moment of happiness and a positive experience for many. However, chewing and swallowing problems are important risk factors for loss of appetite and malnutrition. This is a well-known challenge in elderly care. In Belgium, up to 70% of people aged 75y and over are malnourished and 33% of those aged 80y and over show some form of swallowing disorders. Care home The Rainbow in Zwijndrecht (Belgium) does not stand by and is the first Belgian long term care facility to take a challenging initiative by offering innovative “spoonable bread” to residents suffering a difficult food intake. And there is more to come...

Figure 1: Two examples of spoonable bread, with different toppings



## SWALLOWING PROBLEMS: A MULTI-LAYER CHALLENGE IN HEALTHCARE

Since people with swallowing problems eat on average only  $\frac{1}{4}$  of the normal amount, they insufficiently absorb nutritional elements. This means that the small volumes eaten should contain all the necessary proteins, vitamins, minerals and calories to maintain nutritional balance. An intake of 0.8 g protein/kg body weight/day is sufficient for healthy adults and during normal exercise. However, in weak or sick

people, the recommended amount of protein increases to 1.2 to 1.5 g/kg body weight/day. “Our residents with dysphagia have an equal right to high-quality, tasty food with the appropriate nutritional values,” says Lieve Van der Paelt, director of care home The Rainbow. “Although we are talking about a small segment of the residents, we absolutely cannot minimize the importance. Our mixed food offer needed an upgrade, and we found a suitable solution at Gastromeals, the social cooperative behind Spoon It®, which offers ‘spoonable bread’ for our residents with eating difficulties.”

**Figure 2: Key players in this project (from left to right): Lieve van der Paelt (director of care home The Rainbow), John-Willem van Dijk (Chef Gastro-engineering in training), Ilse van Duyse (Chief Paramedics), Martijn van Gemst (Chef Gastro-engineering), Beni van Dam (Sales & Marketing specialist at Gastromeals)**



## SPOONABLE BREAD: AN INNOVATION FROM THE CENTER FOR GASTROLOGY

### **Collaboration with Gastromeals started**

Gastromeals (<https://www.gastromeals.eu/>) is the official spin-off of CRIGA, the 'Center for Research and Innovation in Gastrology & Primary Food Care', embedded in the Center for Gastrology (Leuven). It is a non-profit organization that has been the silent engine behind various innovations in meals for care for more than a decade. Together with universities and knowledge centers in Europe, it starts projects and conducts research.

“Spoonable bread (Spoon It®, see <https://www.youtube.com/watch?v=lAMwmypxcHM&t=1s>) is made from fresh common bread and is available in different textures with various toppings, without pieces and adjusted in viscosity, so that it doesn't stick in the mouth”, explains Beni Van Dam, sales and marketing specialist at Gastromeals. “It offers a good basis for the residents of the care home The Rainbow who have an interest in an adequate intake of proteins and calories. For example, a breakfast made with 20 g of whole grain spoonable bread, 80 ml of whole milk, 20 g of ‘Spoon It®’- peanut butter and 50 g of Greek yogurt contains 270 kcal. One portion provides no less than 10.75 g of protein and the whole grain version also contains 8% fiber, making it an excellent source of natural fiber.”

“Thanks to the scientific basis of 'Spoon It®', we didn't hesitate for long. We buy the necessary ingredients and our chef, who has followed the training 'chef gastro-engineering'<sup>1</sup>, prepares the spoonable bread. The enhanced role of the chef is unique in this approach,” adds Lieve. “Thanks to Gastromeals, we now have useful tools to prepare food with both texture sensation and extra palatability for our residents with swallowing disorders.”

“Spoonable bread is not only healthy, nutritious and safe to spoon, it is also easy to prepare and attractively packaged. Because you have to agree that a nice looking dish tastes all the better. The residents deserve this,” adds Martijn van Gemst, Chef gastro-engineering Lt of Gastromeals.

### **Innovative texture framework: IGADY**

“We offer the Spoonable bread in two different textures, based on the IGADY matrix, a perfect complement to the IDDSI framework (International Dysphagia Diet Standardisation Initiative framework). IGADY - Innovative Gastrological Approach Dysphagia - describes the minimum tongue pressure required for swallowing food and the maximum particle size that occurs in the meal,” says Beni. In other words, the IGADY matrix converts clinical measurements into culinary relevant data and is intended to improve data exchange and communication between doctors and paramedics on the one hand and chefs gastro-engineering on the other. “All our Spoon It® dishes carry a reference to this IGADY matrix. For example, we can compare Spoon It® and IDDSI for a few dishes:

- Spoon It® white and whole wheat spoonable bread - Dry 10-1 is comparable to an IDDSI level 4. The package states that the spoonable bread should be mixed with 40ml or 80ml of liquid according the portion size. Depending on the desired fluidity, this can be increased to 80 ml or 120 ml respectively. With such increased addition of liquid, spoonable bread of IDDSI level 3 is obtained.
- Spoon It® white and whole wheat spoonable bread - Dry 10-2 is comparable to an IDDSI level 4 and 5. With these variants, the taste sensation is much more intense for the end user. It is advisable to test which variant best suits the swallowing problem.
- The Spoon It® toppings have an IGADY parameter of 10-1 and are offered without particles. The viscosity has been adjusted to avoid sticking in the mouth and fits perfectly with all spoonable bread variants and corresponding IDDSI levels mentioned above.”



**Figure 2: Another example of spoonable bread**

### **PLANNED EXTENSIVE RANGE**

“At the moment we only offer spoonable bread in our residential care home, but that is just the beginning of this new approach. Our residents with swallowing problems deserve an equally extensive high-quality menu choice, the nutritional values of which we can perfectly determine. How nice would it be if we could offer them the taste of bacon and eggs or pizza again? In short, we would like to evolve towards a complete, extensive range, so that there is plenty of choice. That too is taking good care of our residents,” says Lieve.



**Figure 3: The handy packaging of Spoon it® spoonable bread**



The drive for innovation is strong at Gastromeals and the expansion of the range of products is therefore paramount. “Soon we will be launching additional spoonable biscuits with vanilla flavour, ideal as a snack. And there are other ideas in the pipeline, such as Spoon It+, spoonable bread with even more protein and ready-to-eat products.”

#### **Textbook example of a win-win situation**

The Rainbow is the first Belgian healthcare institution, and the only one in the Three Rivers FoodDelta, to offer spoonable bread. “Thanks to their support and involvement, we as a start-up can use the kitchen facilities of this large healthcare institution. In this way we have created a living lab in which we can immediately offer realized (and future) innovations to the residents. Their response and judgment leads to mutual consultation, co-creation and possibly adjustments to our innovative gastrologic approach,” says Beni.

“This collaboration also has important added value for the care home. The residents were involved in this innovative gastrological approach from the start and were our most important judges,” adds Lieve. “At the residents' council, they were invited together with their relatives to test the spoonable bread, which was found to be very positive. "Tested and approved", we couldn't wish for a better start. And hopefully it will lead to even better plans for the future.”

**Figure 4: In care home De Rainbow (Zwijndrecht, Belgium) only spoonable bread is offered.**



## REFERENCE

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