ALIMASSENS HIGHLIGHTS

IMPACT OF AGEING ON SALIVATION

Mathilde Descamps, Claire Sulmont-Rossé, Hélène Labouré, Gilles Feron

Centre des Sciences du Goût et de l'Alimentation, INRA, CNRS, Université de Bourgogne, Dijon, France

Saliva plays an essential role in food consumption. First of all, it contributes to the pleasure of eating by modulating oral sensations (flavour, texture, bitterness...) and by releasing aromas. Then, saliva humidifies the food particles resulting from chewing to form a "food bolus" which is easy to swallow. Finally, the saliva cleans the mouth after the food has been swallowed and thus prevents caries.

So as to study the effect of age on saliva flow, 93 young adults (22-55 years) and 84 elderly people (70-92 years) took part in a salivation test: the participants were asked to spit into a recipient for 5 minutes. The results showed that saliva production in the elderly was 38% lower than that in the younger adults. This decrease in saliva production was independent of the dental status and the taking of medication. The elderly participants with good dentition (n=27) and/or taking no medication (n=19) also presented the same significantly lower saliva production compared with younger adults. Finally, the results showed considerable variations in saliva production between individuals. For example, among the elderly participants, 13% suffered from hyposalivation (saliva production less than 0.1 ml/minute) while in 18%, saliva production was greater than the average production of the younger adults.

This study showed an age effect *per se* on saliva production, independently of factors associated with ageing, such as poor dentition or the taking of medication. Future studies will investigate the underlying mechanisms of the effect of ageing on salivation. Going further, this study underlined the importance of taking into account this reduced production of saliva in the development of foods adapted to the oral capacities of our elderly.

References

Descamps M, Labouré H, Prot A, Septier C, Tournier C, Feron G, Sulmont-Rossé C (submitted). Salivary flow decreases in healthy elderly people independently of dental status and drug intake. Journal of Texture Study.

This research was conducted it the framework of the SensInMouth [ANR-07-PNRA-014] and ALIMASSENS [ANR-14-CE20-0003-01] programmes funded by the Agence Nationale de la Recherche in France. The research was also supported by the Conseil Regional de Bourgogne [PARI Agral 1] and by the European Fund for Regional Economic Development [EFRED].