

## Accepted Manuscript

Title: The Influence of Food Consistency on Chewing Rate and Muscular Work

Authors: A. van der Bilt, J.H. Abbink

PII: S0003-9969(17)30232-7  
DOI: <http://dx.doi.org/doi:10.1016/j.archoralbio.2017.07.011>  
Reference: AOB 3949

To appear in: *Archives of Oral Biology*

Received date: 24-1-2017  
Revised date: 22-6-2017  
Accepted date: 16-7-2017



Please cite this article as: van der Bilt A, Abbink J.H. The Influence of Food Consistency on Chewing Rate and Muscular Work. *Archives of Oral Biology* <http://dx.doi.org/10.1016/j.archoralbio.2017.07.011>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

**The Influence of Food Consistency on Chewing Rate and Muscular Work**

**Running title:** Food Consistency and Chewing

A. van der Bilt\*, J.H. Abbink

Department of Oral-Maxillofacial Surgery, Prosthodontics and Special Dental Care  
University Medical Center Utrecht  
PO Box 85.500, 3508 GA Utrecht, The Netherlands

**\* Corresponding author:**

Andries van der Bilt  
Department of Oral-Maxillofacial Surgery,  
Prosthodontics and Special Dental Care  
University Medical Center Utrecht  
G05.122  
P.O. Box 85500, 3508 GA Utrecht  
The Netherlands  
E-mail: a.vanderbilt@umcutrecht.nl  
Telephone: +31-88-7568087

**Highlights**

- Harder foods are not associated with slower average chewing rates
- At the beginning of chewing, hard foods are chewed slower than soft foods
- Subsequently, hard foods are chewed faster than soft foods
- Chewing rate first decreases and later increases during the chewing sequence
- Differences between foods in chewing rate and work are largest at the begin phase

**Abstract**

Food properties influence the parameters of the masticatory process, such as jaw movement, muscle activity and chewing rate. Firm foods will require more muscle activity than softer foods. However, the influence of food hardness on chewing rate is ambiguous as both slower and higher chewing rates have been reported for harder foods. Rheological characteristics of the food, such as plasticity and elasticity, may help to explain differences in chewing rate. The aim of our study was to determine the influence of

Download English Version:

<https://daneshyari.com/en/article/5637837>

Download Persian Version:

<https://daneshyari.com/article/5637837>

[Daneshyari.com](https://daneshyari.com)