

19. Carlsson GE, Lindquist LW. Ten-year longitudinal study of masticatory function in edentulous patients treated with fixed complete dentures on osseointegrated implants. *Int J Prosthodont* 1994; **7**: 448–453.
20. Kayser AF. Shortened dental arches and oral function. *J Oral Rehab* 1981; **8**: 457–462.
21. Sheiham A, Steele JG, Marcenes W *et al*. The relationship among dental status, nutrient intake and nutritional status in older people. *J Dent Res* 2001; **80**: 408–413.
22. Gotfredsen K, Walls AWG. What dentition assures oral function? *Clin Oral Implant Res* 2007; **18** (Suppl 3): 34–45.
23. Nassani MZ, Devlin H, McCord JF, Kay LJ. The shortened dental arch – an assessment of patients' dental health state utility values. *Int Dent J* 2005; **55**: 307–312.
24. Österberg T, Steen B. Relationship between dental state and dietary intake in 70-year-old males and females in Göteborg, Sweden: a population study. *J Oral Rehab* 1982; **9**: 509–521.
25. Brodeur J-M, Laurin D, Vallee R, Lachapelle D. Nutrient intake and gastrointestinal disorders related to masticatory performance in the edentulous elderly. *J Prosthet Dent* 1993; **70**: 468–473.
26. Krall E, Hayes C, Garcia R. How dentition status and masticatory function affect nutrient intake. *J Am Dent Assoc* 1998; **129**: 1261–1269.
27. Sandstrom B, Lindquist LW. The effect of different prosthetic restorations on the dietary selection in edentulous patients. A longitudinal study of patients initially treated with optimal complete dentures and finally with tissue-integrated prostheses. *Acta Odont Scand* 1987; **45**: 423–428.
28. Hamada MO, Garrett NR, Roumanas ED *et al*. A randomized clinical trial comparing the efficacy of mandibular implant-supported overdentures and conventional dentures in diabetic patients – Part IV: comparisons of dietary intake. *J Prosthet Dent* 2001; **85**: 53–60.
29. Hiiemae KM. Mechanisms of food reduction, transport and deglutition: how the texture of food affects feeding behavior. *J Texture Stud* 2004; **35**: 171–200.
30. Hiiemae KM, Palmer JB. Food transport and bolus formation during complete feeding sequences on foods of different initial consistency. *Dysphagia* 1999; **14**: 31–42.
31. Mioche L, Hiiemae KM, Palmer JB. A postero-anterior videofluorographic study of the intra-oral management of food in man. *Archiv Oral Biol* 2002; **47**: 267–280.
32. Ahlgren J. Masticatory movements in man. In: *Mastication*. Anderson DJ, Matthews B, eds. Bristol: John Wright and Sons, 1976; pp.119–130.
33. Hiiemae KM, Heath MR, Heath G *et al*. Natural bites, food consistency and feeding behaviour in man. *Archiv Oral Biol* 1996; **41**: 175–189.
34. Prochel P, Hofmann M. Frontal chewing patterns of the incisor point and their dependence on resistance of food and type of occlusion. *J Prosthet Dent* 1988; **59**: 617–624.
35. Pera P, Bassi F, Schierano G, Appendino P, Preti G. Implant anchored complete mandibular denture: evaluation of masticatory efficiency, oral function and degree of satisfaction. *J Oral Rehab* 1998; **25**: 462–467.
36. Hiiemae KM, Palmer JB, Medicis SW, Hegener J, Jackson BS, Leiberman DE. Hyoid and tongue surface movements in speaking and feeding. *Archiv Oral Biol* 2002; **47**: 11–27.
37. Ardran GM, Kemp FH. A radiographic study of movements of the tongue in swallowing. *Dent Pract* 1955; **5**: 252–263.
38. Thexton AJ. Mastication and swallowing: an overview. *Br Dent J* 1992; **173**: 197–206.
39. Leggett R. Review of transit times through major segments of the alimentary tract. *Annals of the ICRP, ICRP 100: Human Alimentary Tract Model for Radiological Protection* 2006; **36**, Annex C: 203–232.
40. Jean A. Brain stem control of swallowing: neuronal network and cellular mechanisms. *Physiol Rev* 2001; **81**: 929–969.
41. Cadden SW, Orchardson R. Mastication and swallowing: 2. Control. *Dent Update* 2009; **36**: in press.

Abstract

DO YOU PRESCRIBE ALCOHOL TO YOUR PATIENTS?

The role of alcohol in oral carcinogenesis with particular reference to alcohol-containing mouthwashes. McCullough MJ, Farah CS. *Australian Dental Journal* 2008; **53**: 302–305.

This paper reviews the literature relating to alcohol and oral cancer, and especially the limited published work on the effect of alcohol-containing mouthwashes. It appears that, until recently, there was a known but not statistically significant aetiological connection. However, a recent paper by Guha *et al*, reporting an extensive study, has now shown a significant link between the daily use of alcohol-containing mouthwashes and the disease. In conjunction with the twice daily use of these medicaments, those who were also smokers suffered a nine-fold (9.12) increase in their risk

of acquiring oral cancer, those who also drank alcohol suffered a five-fold (5.12) increase, and even patients with no other risk factor habits showed an increased risk of almost five times (4.96).

The authors point out that, whilst many of these products have been shown to be effective in penetrating oral biofilms and reducing bacterial load, it would be wise to restrict their use to short term therapeutic situations. Indeed, like other medication, mouthwashes should only be used under written and detailed prescription from a dental practitioner for short periods and specific reasons. They conclude that, in their opinion, it is inadvisable for healthcare professionals to recommend the long-term use of alcohol-containing mouthwashes.

Peter Carrotte
Glasgow Dental School

CPD ANSWERS

June 2009

- | | |
|-------------------|--------------------|
| 1. A, B, C | 6. A, D |
| 2. A, C, D | 7. A, B, C |
| 3. A, B | 8. B, D |
| 4. A, B, C | 9. A, B, C |
| 5. C, D | 10. B, C, D |