

Mundtrockenheit: Ursachen, Formen und Behandlung

Dr. Cordula Leonie Merle, Prof. Dr. Sebastian Hahnel

1. Affoo RH, Foley N, Garrick R, Siqueira WL, Martin RE: Meta-Analysis of Salivary Flow Rates in Young and Older Adults. *J Am Geriatr Soc* 2015; 63: 2142-2151
2. Agostini BA, Cericato GO, Da Silveira ER et al.: How Common is Dry Mouth? Systematic Review and Meta-Regression Analysis of Prevalence Estimates. *Braz Dent J* 2018; 29: 606-618
3. Albrecht K, Binder S, Minden K et al.: Systematisches Review zur Schätzung der Prävalenz entzündlich rheumatischer Erkrankungen in Deutschland. *Z Rheumatol* 2023
4. Banda KJ, Chu H, Chen R et al.: Prevalence of Oropharyngeal Dysphagia and Risk of Pneumonia, Malnutrition, and Mortality in Adults Aged 60 Years and Older: A Meta-Analysis. *Gerontology* 2022; 68: 841-853
5. Bressan V, Stevanin S, Bianchi M, Aleo G, Bagnasco A, Sasso L: The effects of swallowing disorders, dysgeusia, oral mucositis and xerostomia on nutritional status, oral intake and weight loss in head and neck cancer patients: A systematic review. *Cancer Treat Rev* 2016; 45: 105-119
6. Choudhary R, Reddy SS, Nagaraju R, Nagi R, Rathore P, Sen R: Effectiveness of pharmacological interventions for Sjogren syndrome - A systematic review. *J Clin Exp Dent* 2023; 15: e51-e63
7. Davies AN: The management of xerostomia: a review. *Eur J Cancer Care (Engl)* 1997; 6: 209-214
8. Dawes C: Circadian rhythms in the flow rate and composition of unstimulated and stimulated human submandibular saliva. *J Physiol* 1975; 244: 535-548
9. Dawes C: Salivary flow patterns and the health of hard and soft oral tissues. *J Am Dent Assoc* 2008; 139 Suppl: 18S-24S
10. Dawes C, Macpherson LM: Effects of nine different chewing-gums and lozenges on salivary flow rate and pH. *Caries Res* 1992; 26: 176-182
11. Deutsche Krebsgesellschaft, Deutsche Krebshilfe, AWMF: Supportive Therapie bei onkologischen PatientInnen - Langversion 1.3, AWMF, 2020, Registernummer: 032/054OL. <https://www.leitlinienprogramm-onkologie.de/leitlinien/supportive-therapie/>, 08.10.2023
12. Dodds MWJ, Haddou MB, Day JEL: The effect of gum chewing on xerostomia and salivary flow rate in elderly and medically compromised subjects: a systematic review and meta-analysis. *BMC Oral Health* 2023; 23: 406
13. Drancourt N, El Osta N, Decerle N, Hennequin M: Relationship between Oral Health Status and Oropharyngeal Dysphagia in Older People: A Systematic Review. *Int J Environ Res Public Health* 2022; 19

14. Dwipa L, Wardhani R, Setiani T et al.: Summated Xerostomia Inventory to detect both xerostomia and salivary gland hypofunction. *Eur Rev Med Pharmacol Sci* 2023; 27: 517-523
15. E. Seidel-Jacobs, Th. Tonnies, W. Rathmann: Epidemiologie in Deutschland. In: Deutscher Gesundheitsbericht. Diabetes 2023. Die Bestandsaufnahme, 10-15
16. Femiano F, Rullo R, Di Spirito F, Lanza A, Festa VM, Cirillo N: A comparison of salivary substitutes versus a natural sialogogue (citric acid) in patients complaining of dry mouth as an adverse drug reaction: a clinical, randomized controlled study. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2011; 112: e15-20
17. Flink H, Tegelberg A, Lagerlöf F: Influence of the time of measurement of unstimulated human whole saliva on the diagnosis of hyposalivation. *Arch Oral Biol* 2005; 50: 553-559
18. Gause A: Neufassung der Empfehlungen der Kommission Pharmakotherapie der DGRh. Empfehlungen zur supportiven Therapie des Sjögren-Syndroms. *Z Rheumatol* 2007; 66: 76-77
19. Ginsberg SM: Xerostomia. An interdisciplinary approach to managing dry mouth. SLACK Incorporated, Thorofare, NJ 2020
20. Hahnel S: Mundtrockenheit. Ursachen, Diagnose, Therapie. Spitta, Balingen 2012
21. Hahnel S, Schwarz S, Zeman F, Schäfer L, Behr M: Prevalence of xerostomia and hyposalivation and their association with quality of life in elderly patients in dependence on dental status and prosthetic rehabilitation: a pilot study. *J Dent* 2014; 42: 664-670
22. Henson BS, Inglehart MR, Eisbruch A, Ship JA: Preserved salivary output and xerostomia-related quality of life in head and neck cancer patients receiving parotid-sparing radiotherapy. *Oral Oncol* 2001; 37: 84-93
23. Herrmann G, Müller K, Behr M, Hahnel S: Xerostomie und ihr Einfluss auf die mundgesundheitsbezogene Lebensqualität. *Z Gerontol Geriatr* 2017; 50: 145-150
24. Johnson JT, Ferretti GA, Nethery WJ et al.: Oral pilocarpine for post-irradiation xerostomia in patients with head and neck cancer. *N Engl J Med* 1993; 329: 390-395
25. Katebi K, Hassanpour S, Eslami H, Salehnia F, Hosseiniard H: Effect of Pilocarpine Mouthwash on Salivary Flow Rate in Patients with Xerostomia: A Systematic Review and Meta-Analysis. *J Dent (Shiraz)* 2023; 24: 76-83
26. Kielbassa AM, Shohadai SP, Schulte-Mönting J: Effect of saliva substitutes on mineral content of demineralized and sound dental enamel. *Support Care Cancer* 2001; 9: 40-47
27. Lafaurie G, Fedele S, López RM-G et al.: Biotechnological advances in neuro-electro-stimulation for the treatment of hyposalivation and xerostomia. *Med Oral Patol Oral Cir Bucal* 2009; 14: E76-80
28. Lappe V, Dinh TS, Harder S et al.: Multimedication Guidelines: Assessment of the Size of the Target Group for Medication Review and Description of the Frequency of Their Potential Drug Safety Problems with Routine Data. *Pharmacoepidemiology* 2022; 1: 12-25
29. Laugisch O, Holtfreter B, Pink C, Samietz S, Völzke H, Kocher T: Polypharmacy and saliva volumes in the northeast of Germany - The Study of Health in Pomerania. *Community Dent Oral Epidemiol* 2022; 50: 139-146

30. Lingström P, Birkhed D: Plaque pH and oral retention after consumption of starchy snack products at normal and low salivary secretion rate. *Acta Odontol Scand* 1993; 51: 379-388
31. Lopez-Jornet P, Lucero Berdugo M, Fernandez-Pujante A et al.: Sleep quality in patients with xerostomia: a prospective and randomized case-control study. *Acta Odontol Scand* 2016; 74: 224-228
32. López-Pintor RM, Casañas E, González-Serrano J et al.: Xerostomia, Hyposalivation, and Salivary Flow in Diabetes Patients. *J Diabetes Res* 2016; 2016: 4372852
33. Luckhaupt H: Medikamentöse Therapie in der HNO-Heilkunde. Georg Thieme Verlag, Stuttgart 2016
34. Mese H, Matsuo R: Salivary secretion, taste and hyposalivation. *J Oral Rehabil* 2007; 34: 711-723
35. Meyer-Lueckel H, Schulte-Mönting J, Kielbassa AM: The effect of commercially available saliva substitutes on predemineralized bovine dentin in vitro. *Oral Dis* 2002; 8: 192-198
36. Molek M, Florenly F, Lister INE, Wahab TA, Lister C, Fioni F: Xerostomia and hyposalivation in association with oral candidiasis: a systematic review and meta-analysis. *Evid Based Dent* 2022
37. Momm F, Volegova-Neher NJ, Schulte-Mönting J, Guttenberger R: Different saliva substitutes for treatment of xerostomia following radiotherapy. A prospective crossover study. *Strahlenther Onkol* 2005; 181: 231-236
38. Mortazavi H, Baharvand M, Movahhedian A, Mohammadi M, Khodadoust A: Xerostomia due to systemic disease: a review of 20 conditions and mechanisms. *Ann Med Health Sci Res* 2014; 4: 503-510
39. Nationale Diabetes-Surveillance am Robert Koch-Institut: Diabetes in Deutschland - Bericht der Nationalen Diabetes-Surveillance 2019. Robert Koch-Institut 2019
40. Nederfors T, Isaksson R, Mörnstad H, Dahlöf C: Prevalence of perceived symptoms of dry mouth in an adult Swedish population--relation to age, sex and pharmacotherapy. *Community Dent Oral Epidemiol* 1997; 25: 211-216
41. Noaiseh G, Baker JF, Vivino FB: Comparison of the discontinuation rates and side-effect profiles of pilocarpine and cevimeline for xerostomia in primary Sjögren's syndrome. *Clin Exp Rheumatol* 2014; 32: 575-577
42. Ramos-Casals M, Brito-Zerón P, Bombardieri S et al.: EULAR recommendations for the management of Sjögren's syndrome with topical and systemic therapies. *Ann Rheum Dis* 2020; 79: 3-18
43. Salimi F, Saavedra F, Andrews B, FitzGerald J, Winter SC: Trans-cutaneous electrical nerve stimulation to treat dry mouth (xerostomia) following radiotherapy for head and neck cancer. A systematic review. *Ann Med Surg (Lond)* 2021; 63: 102146
44. Schröder H, Thürmann P, Telschow C, Schröder M, Busse R: Arzneimittel-Kompass 2022. Springer Berlin Heidelberg, Berlin, Heidelberg 2022
45. Sreebny LM: Saliva in health and disease: an appraisal and update. *Int Dent J* 2000; 50: 140-161

46. Sreebny LM, Yu A, Green A, Valdini A: Xerostomia in diabetes mellitus. *Diabetes Care* 1992; 15: 900-904
47. T. Waltimo PK: Wie viel Speichel ist genug? In: Speichel. Hrsg. A. Filippi und T. Waltimo. Quintessenz, Berlin 2020
48. Teoh L, Moses G, McCullough MJ: Oral manifestations of illicit drug use. *Aust Dent J* 2019; 64: 213-222
49. Thomson WM: Measuring change in dry-mouth symptoms over time using the Xerostomia Inventory. *Gerodontology* 2007; 24: 30-35
50. Thomson WM, Chalmers JM, Spencer AJ, Williams SM: The Xerostomia Inventory: a multi-item approach to measuring dry mouth. *Community Dent Health* 1999; 16: 12-17
51. Thomson WM, van der Putten G-J, Baat C de et al.: Shortening the xerostomia inventory. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2011; 112: 322-327
52. Tulek A, Mulic A, Hogset M, Utheim TP, Sehic A: Therapeutic Strategies for Dry Mouth Management with Emphasis on Electrostimulation as a Treatment Option. *Int J Dent* 2021; 2021: 6043488
53. van de Rijt, Liza J M, Stoop CC, Weijenberg RAF et al.: The Influence of Oral Health Factors on the Quality of Life in Older People: A Systematic Review. *Gerontologist* 2020; 60: e378-e394
54. van Nieuw Amerongen A, Bolscher JGM, Veerman ECI: Salivary proteins: protective and diagnostic value in cariology? *Caries Res* 2004; 38: 247-253
55. Zero DT, Lussi A: Erosion--chemical and biological factors of importance to the dental practitioner. *Int Dent J* 2005; 55: 285-290