

Dental erosion – Diagnosis, risk factors, prevention

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Dental erosion is defined as the loss of hard tooth structure, which – in contrast to caries – is caused by acids without bacterial involvement. It is characterised by partial demineralisation and the subsequent erosion of an ultra-thin layer of enamel every time an acid attack takes place. Whereas extensive demineralisation is manifested in the initial stage by smooth, silky-glazed surfaces, advanced stages result in the formation of pits in the enamel, which extend into the dentine and may later lead to flattening of the entire fissure relief of the cusp.

Acids which cause erosion are divided into two groups according to their origin, namely extrinsic and intrinsic. Whereas extrinsic acids often come from acidic foods or drinks, the most common harmful agent among intrinsic acids is gastric acid. However, the degree to which erosion ultimately develops clinically varies greatly from individual to individual, since there are multiple developmental and compensation mechanisms which interact with each other. Monocausal diagnostics which are geared only to determining a risk factor such as the pH value of the damaging acid or poor salivary flow are therefore an inadequate basis for the introduction of suitable prophylactic measures or cause-related therapy. Moreover, erosive loss of substance is irreversible. For this reason it is crucial for the patient that adequate prophylactic and therapeutic measures are introduced in good time.

Intensive diagnostics should be instigated by the time clinical defects are established, but also only when there are signs of an increased risk of erosion. The screening index (BEWE = Basic Erosive Wear Examination) recently presented by Bartlett, Ganss und Lussi (Bartlett et al. 2008) not only lends itself well to the assessment of acid damage and takes little time to apply, but it also helps the dentist in the individual planning of preventive measures.

In order to assist the dentist in systematically detecting risk factors, GABA has developed a set for diagnosing the risk of dental erosion, based on the corresponding relevant scientific publications, and with the involvement of experts. It allows for specific evaluation of a wide range of risk factors and simplifies the systematic planning of prophylactic and causal therapeutic measures. In cases where causal therapy is not possible or is inadequate, it is also possible to effectively curb the loss of hard tooth structure by the regular application of stannous products in particular.

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