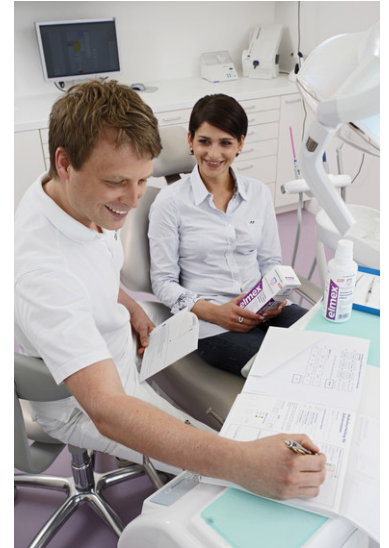


## New: elmex EROSION PROTECTION against enamel and dentin erosion

**In-situ study: Use of combination of stannous chloride and amine fluoride successful**

München,  
11  
September  
2009 –  
Erosive defects of the hard tooth structures result from the chronic action of acids of non-bacterial origin on the surface of the tooth. These acids come either from acidic foods (exogenous) or from the stomach



Recommendation of elmex EROSION PROTECTION during treatment time

[≡ Download image \(JPG, 4063 kb\)](#)



Protection against acid-related

(endogenous), e.g. in the case of reflux diseases. While exogenous acid attacks can be partially reduced by dietary changes, the teeth are largely unprotected against attacks by endogenous acids.

To date, the prevention of erosive tooth damage essentially consists of the early and proper recognition (bearing differential diagnoses in mind) of the early stages of erosion, as well as information and individual

tooth  
erosions

↪ [Download image \(JPG, 323 kb\)](#)

patient  
counseling.  
In the case  
of erosion  
defects of  
an  
exogenous  
origin, the  
further  
progression  
of the loss  
of hard  
tooth  
structures  
can  
generally  
be  
prevented  
only by  
modifying  
dietary  
habits. The  
first signs  
of erosive  
destruction  
are difficult  
for the  
patient to  
recognise. "  
Rounding  
" of incisor  
edges and  
fissures as  
well as  
increasing  
translucency  
of the  
incisor  
edges are  
the results  
of initial  
enamel  
loss. Later

on there  
are  
indentations  
and surface  
loss with  
involvement  
of the  
dentin.  
Histologically,  
the surface  
defects can  
be  
described  
as having a  
typical  
etching  
pattern and  
locally  
reduced  
microhard-  
ness. They  
are thus  
clearly  
different  
from  
beginning  
caries  
which  
occurs in  
the case of  
deminerali-  
sation  
under a  
pseudo-  
intact  
coating.  
Further  
stages of  
acid-  
related  
erosion are  
mineral loss  
in the area

dentin and  
finally the  
expansion  
of the  
dentin  
tubules  
with  
degradation  
of the  
intertubular  
dentin. This  
defect  
structure  
can no  
longer be  
regenerated.

In contrast  
to caries,  
causal and  
symptomatic  
measures  
in the case  
of erosion  
defects  
generally  
stop  
further  
damage,  
such that  
invasive  
treatments  
are only  
necessary if  
there are  
already  
esthetic or  
functional  
impairment.

Symptomatic  
measures  
to prevent

loss of hard  
tooth  
structures  
are based  
on the  
deposit of  
low-  
soluble,  
generally  
mineral  
deposits on  
the surface  
of the  
tooth. This  
generally  
occurs  
through  
the use of a  
dental  
rinse, which  
contains  
the  
substances  
to be  
deposited  
in a soluble  
form. The  
effectiveness  
of the oral  
hygiene  
products is  
thus very  
crucially  
determined  
by the  
polyvalent  
metal ions  
used, such  
as tin or  
titanium  
and by the  
type of  
fluoride

compound.

Prof. Dr.  
Carolina  
Ganss and  
her team at  
the  
Polyclinic  
for Dental  
Maintenance  
and  
Preventive  
Dentistry at  
the Justus-  
Liebig  
University  
in Giessen  
were able  
to  
demonstrate  
that the  
combination  
of stannous  
chloride  
and amine  
fluoride,  
formulated  
in a dental  
rinse  
(elmex  
EROSION  
PROTECTI-  
ON), is  
highly  
effective in  
protecting  
against  
acid-  
related  
erosions. In  
contrast to  
formulations  
containing

this  
protective  
effect also  
remains  
unchanged  
in the case  
of heavy  
acid  
exposure.

The  
authors  
propose a  
plausible  
mode of  
action of  
these  
erosion  
inhibitors,  
with which  
an  
amorphous,  
stannous  
deposit is  
first  
deposited  
on the  
surface of  
the tooth  
which,  
under  
exposure  
to erosive  
acids,  
eventually  
leads to  
the deposit  
of low-  
soluble,  
stannous  
mineral  
substance  
in the top

layer of the surface of the tooth. For the in-situ study, enamel samples were treated with citric acid several times per day for several minutes. In comparison to placebo samples, it could be demonstrated that the loss of enamel substance after once-daily rinsing with a stannous chloride and amine fluoride solution was reduced by 67% (vs. 19% for sodium fluoride). In analogous experiments, dentin loss was also able to be

significantly  
reduced by  
47%.

Thus the  
new elmex  
EROSION  
PROTECTI-  
ON dental  
rinse, with  
its active  
ingredient  
combination  
of stannous  
chloride  
and amine  
fluoride,  
effectively  
protects  
against  
acid-  
related  
tooth  
erosions.

Literature:  
Ganss C,  
Schlüter N.  
Prevention  
and  
treatment  
of acid-  
related loss  
of hard  
tooth  
structures  
(erosions).  
IAPD  
(internal  
report)  
2009.

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