Dental caries are **bacterial induced necrosis of tooth structure**.

Treatment should focus on the removal of necrotic tissue with a bacteriocidal approach.

*Carisolv® a product from ORASOLV AB*
“Since the invention and application of rotary instruments, the operative treatment of carious lesions has often resulted in considerable removal of tooth structure.”

Minimally invasive dentistry focuses on preserving healthy and sound tissue.
The art of intervention lies in NOT removing more than necessary.
“In modern dentistry the primary aim when excavating carious dentin is to eradicate only the highly infected, irreversibly demineralized and denatured biomass...”

In a study aimed to evaluate the efficiency (time taken) and effectiveness (quantity of dentine removed) of carious dentine excavation ...

...bur excavation was quickest but overprepared cavities...

...Carisolv® excavation was slower but removed adequate quantities of tissue...

Dec 2005: 62 abstract in PubMed responding to search word “Carisolv”!

If search term “chemomechanical” also included, PubMed lists 91 abstracts!

The Carisolv method was introduced on the market in 1997!
Carisolv® is the best studied method for caries removal

The Carisolv® method was introduced on the market in 1997!
Carisolv® removes necrotic, decayed, dentine and leaves healthy tooth structure unaffected –
-a minimal invasive approach when biology is an important issue.

Carisolv® has NO effect on sound and healthy dentin.

Carisolv® leaves a rougher dentin surface suitable for modern restauration techniques.

Carisolv® does not elicit adverse effect onto pulp tissue.

Clinical and histological study on oral mucosa after prolonged exposure to Carisolv® did not show any inflammatory reactions.

Carisolv® safely and selectively removes ALL the decayed dentine – leaving a caries free and clean surface.

Carisolv® – the № 1 choice when biology is important!

Carisolv® a product from ORASOLV AB
Methods for restorative dental treatments

<table>
<thead>
<tr>
<th>Method</th>
<th>Sound enamel</th>
<th>Sound dentine</th>
<th>Carious enamel</th>
<th>Carious dentine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand excavators</td>
<td>−</td>
<td>−</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Rotary burs</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Air-abrasion</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>Carisolv®</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>+++</td>
</tr>
<tr>
<td>Lasers</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

How does it work – mode of action?

Denatured collagen

Intact collagen

Demineralized carious dentine

Mineralized dentine

Carisolv® a product from ORASOLV AB
How does it work – mode of action?

Carisolv® application

Cases and product info

DE 2001

Carisolv® a product from ORASOLV AB
How does it work – mode of action?

Mechanical removal of decay.

Carisolv® has “disconnected” necrotic dentine.
How does it work – mode of action?

After Carisolv® application and after etching. The surface is now ready for restoration.

Carisolv® a product from ORASOLV AB
Use instrument of your own choice...

... just add Carisolv® for clean, safe and appropriate caries removal

Carisolv® a product from ORASOLV AB
Carisolv®

• When healthy tooth structures are precious...
• When biology is important...
• When quality counts...
• When you care about your patients...
Contact info:

- www.orasolv.se
- info@orasolv.se
- +46 (0)31 74 11 780
- +46 (0)31 74 11 781
1) Drilling, when the cavity needs to be opened up, for adjustment of cavity periphery and when there are large amounts of caries and the risk to affect healthy tissue is minimal.

2) Cover the cavity with gel and wait for 30 seconds until the carious tissue has been softened.

3) Softened caries can then be scraped away.
4) Repeat without waiting 30 seconds, until the cavity is free of caries.

5) When repeating make sure cavity always well moisten with Carisolv®

3) When cariesfree – inspection and filling as usual
Take advantage of the chemistry:

- Check if cavity caries free!
  - before filling
  - before crown cementation
  - when close to the pulp

- Less bleeding!
- Less pain!
- Less noise!
Root surfaces

Time for excavation:
Carisolv® and rotating instruments – equal

Carisolv® less traumatic
Before cementation of permanent crown- and bridgework...

...use Carisolv® to check if surface caries free!
Carisolv® – in difficult caries situations...
Carisolv® – in difficult caries situations...
Cases and product info

Carisolv® – in difficult caries situations...

Carisolv® a product from ORASOLV AB
Cases and product info
Carisolv® a product from ORASOLV AB
Carisolv® a product from ORASOLV AB
Dentine caries

- Necrotic
- Translucent
- Normal

Carisolv® a product from ORASOLV AB
Amino acids

- Leucine
  - CH₃
  - CH - CH₂ - C - COO⁻
  - NH₃

- Lysine
  - H₃N⁺
  - -CH₂ - CH₂ - CH₂ - CH₂ - C - COO⁻
  - NH₃

- Glutamic acid
  - O⁻
  - C - CH₂ - CH₂ - C - COO⁻
  - NH₃

Carisolv® a product from ORASOLV AB
Carisolv™ gel

Singlemix

Multimix

Carisolv® a product from ORASOLV AB
Carisolv® a product from ORASOLV AB
Carisolv® a product from ORASOLV AB
Selection of instruments.

Start with Multi-Star if possible.
Carisolv® instruments are non-invasive...

Drills and excavators are intended to be invasive...
In vitro research

Caries removal
- Ericson et al 1998
- Banerjee et al 2000
- Cederlund et al 1999
- Splieth et al 1999
- Dammaschke et al 2000
- Haffner et al 2000
- Moran et al 2000
- Neutschil et al 2000
- Tonami et al 1999
- Fluckiger et al 2005

No adverse effects dentine
- Banerjee et al 2000
- Cederlund et al 1999
- Hannig et al 1999
- Wennerberg et al 1999

Dentine bonding
- Haak et al 2000
- Frankenberger et al 2000
- Harada et al 2000
- Pawlowska et al 2000
- Suda et al 2000
- Cehreli et al 2003
- Burrow et al 2003
- Sonoda et al 2005

Hybrid layer effects
- Mason et al 1999
- Perdigao et al 1999
- Suda et al 1999

Collagen effects
- Hannig et al 1999
- Jepsen et al 1999
- Tonami et al 1999
- Dammaschke et al 1999b

Surface structure
- Banerjee et al 2000
- Haffner et al 2000
- Tonami et al 1999
- Arvidsson et al 2002, 2004

Pulp effects
- Dammaschke et al 2001
- Young et al 2001

Carisolv® a product from ORASOLV AB
**Clinical research**

- **Caries removal**
  - Ericson et al 1999
  - Fure et al 2000, 2004
  - Berakdar et al 2000
  - Burke et al 1999
  - Carneiro et al 2000
  - Haffner et al 1999
  - Masouras et al 1999
  - Maragakis et al 2000
  - Songpaisan et al 2002
  - Kavvadia et al 2004
  - Bergmann, Leitao 2005

- **Restoration survival**
  - Fure et al 2000, 2004
  - Nevrin et al 1999
  - Zimmerman et al 2000

- **No adverse effects**
  - Fure et al 2000
  - Nevrin, Carlen 1999
  - Zimmerman et al 2000
  - Wennerberg et al 2001

- **Antibacterial effects**
  - Kneist et al 1999
  - Baysan et al 1999
  - Lager et al 2003
  - Azrak et al 2004

- **Pulp effects**
  - Lumbau et al 2000
  - Braun et al 2000
  - Dammaschke et al 2001
  - Bulut et al 2004

Carisolv® a product from ORASOLV AB
Review articles

Reviews
Banerjee et al 2000
Beeley et al 2000
Maragakis et al 2001
Morrow et al 2000
Ziskind et al 2005

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Sweden

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+46 (0)31 74 11 781
Clinical cases – cavities:
- Step-by-step and clinical tips
- Case 1 – Deep distal molar
- Case 2 – Multiple cervical
- Case 3 – Deep cervical
- Case 4 – Small cervical
- Case 5 – Wide cervical
- Case 6 – Deciduous molar
- Case 7 – Deep occlusal molar
- Case 8 – Lingual-cervical
- Case 9 – Deep mesial molar
- Function of instruments
- Schematic view of caries

Product information:
- Amino acids
- Distribution systems
- Start package
- Instruments
- Manufacturer
- Distributors

Read more:
- Published articles
- Text book

Back to start