Prevention of occupational hand eczema among Danish hairdressing apprentices

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Presented by Heidi Søsted
at Health and Safety in Hairdressing
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The dream of becoming a hairdresser...
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42 % of educated Danish hairdressers have ever had hand eczema
• 71% were apprentices at hand eczema onset

• 44 % no longer worked in the trade

• Those who left, were 8.4 years in the trade

Lysdal SH. et al. Contact Dermatitis 2011
Occupational skin diseases

Definition: A skin disease caused or aggravated by work conditions

- 90 – 95 % of all cases comprises hand eczema

- Hairdressers is one of the most frequent occupations reporting occupational skin diseases

- High impact on the individual and on society

Skoet R et al, Contact Dermatitis 2004
Diepgen TL et al, Int Arch Occup Environ Health 1999
Incidence rates of cases with an Occupational Skin disease within occupational groups

Dickel et al 2001
Hand eczema

Polymorphic pattern: erythema, scaling, vesicles, oedema, papules and fissures

Allergenes  Irritants  Atopic dermatitis

Research Centre for Hairdressers and Beauticians
**First day at hairdressing school**

<table>
<thead>
<tr>
<th></th>
<th>Hairdressing apprentices (n=374)</th>
<th>Other young people (n=1277)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hand eczema</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifetime prevalence</td>
<td>8.0% (30)</td>
<td>12.5% (159)</td>
<td>0.009</td>
</tr>
<tr>
<td><strong>Eczema on wrists or forearms</strong></td>
<td></td>
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<tr>
<td>Lifetime prevalence</td>
<td>5.3% (20)</td>
<td>11.9% (149)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>Atopic dermatitis</strong></td>
<td>21.4% (80)</td>
<td>29.8% (381)</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Hairdressers have less atopic dermatitis and less eczema compared to the reference group

Bregnhøj et al 2011
Apprentices at hairdressing schools
What was the goal?
The education programme

*We developed an education programme in cooperation with the teachers from the intervention schools*

- Power point presentations
- Groupwork
- Glove size measure
- Hand outs
- Usefull links
- Pamphlet
- Products
- Nickel test
- Contact to the salons
Students glove use after 1½ year in hairdressing school

<table>
<thead>
<tr>
<th>Activity</th>
<th>Students of educated teachers (n=147)</th>
<th>Students of “ordinary” teachers (n=136)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shampooing school</td>
<td>70.7 %</td>
<td>46.3 %</td>
</tr>
<tr>
<td>Bleaching</td>
<td>89.8 %</td>
<td>77.2 %</td>
</tr>
</tbody>
</table>

Bregnhøj et al. 2012
Eczema in the cohort of hairdressers apprentices after 1½ year

<table>
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<tr>
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<th>Students of educated teachers</th>
<th>Students of “ordinary” teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>% (n/total)</td>
<td>8.0% (30/147)</td>
<td>29.4% (40/136)</td>
</tr>
</tbody>
</table>

**Hand eczema**

After 1½ year education 20.4% (30/147) 29.4% (40/136)

**Hand eczema and eczema on wrists or forearms**

After 1½ year education 21.8% (32/147) 33.8% (46/136)

Bregnhøj et al 2011 and 2012
Outcome of the education programme

- In the intervention group compared with the control group

- Decreased time with wet hands
- Increased time with glove use
- Increased glove use in high exposure procedures
- Increased glove use in the salons
- Decreased incidence of hand eczema

Bregnhøj et al 2012
I hope this gets the hairdressers' dreams come true...