Burn Injury
Depth

Surface Localisation
depth
Treatment
Objective: complete healing before day 21.

By spontaneous healing.
Or by surgery.

- excision and grafting.
Initial local treatment

Superficial burns:

- Diagnosis can be difficult...
- Blisters excision
- Occlusive dressing
Initial local treatment

- Daily dressings
- Antibacterial topic
- Vaseline gauze

Evaluation on day 10.
« Good » healing

Spontaneous

No bad scarring if:

Before day 10.

Hydratation

Solar protection
Grafting

Dermo-epidermal graft

Technique
Donor site
Timing
Grafting

Dermo-epidermal graft:

Technique
Site de prélèvement
Chronologie

Excision
Grafting

Dermo-epidermal graft

Technique

Site de prélèvement

Chronologie

Harvest
Grafting

Dermo-epidermal graft

Technique
Donor site
Chronologie
Sequeiae

Unavoidable in case of deep burns!!
Retraction Hypertrophy Colour
Sequelae and Rehabilitation

Hypertrophic scarring

Contractions

Physiotherapy

Splinting

Pressure therapy
Reconstructive surgery
Death

Multiple organ failures

Infection
Outcome Age

Burned Surface %

Survival probability (%)
Fire-related burns are more severe
Germany, Austria, Switzerland

Burn centers

» R. Büttemeyer et al. Burns 2004; 30: 115-20

Patients

Pattern of injury. 2000
Deep
Extensive
Smoke inhalation
Cyanide poisoning
Carbone dioxyde poisoning
Cyanyde poisoning

Antidote: hydroxocobalamin
Intensive care
Surgery
Surgery and intensive care
Outcome (Depth and smoke inhalation)

Burned Surface %

Survival probability %

- Superficial
- Deep

Smoke inhalation
Burn Injuries from Fires. Incidence
World
## Appendix 4. Injury related mortality, world, 1998

<table>
<thead>
<tr>
<th>Both Sexes</th>
<th>Number of Deaths</th>
<th>Mortality Rate (per 100,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Injuries</td>
<td>5,764,825</td>
<td>97.9</td>
</tr>
<tr>
<td>Road Traffic Injuries</td>
<td>1,170,694</td>
<td>19.9</td>
</tr>
<tr>
<td>Suicide</td>
<td>947,697</td>
<td>16.1</td>
</tr>
<tr>
<td>Homicide</td>
<td>735,972</td>
<td>12.5</td>
</tr>
<tr>
<td>War</td>
<td>588,050</td>
<td>10.0</td>
</tr>
<tr>
<td>Drowning</td>
<td>495,463</td>
<td>8.4</td>
</tr>
<tr>
<td>Falls</td>
<td>315,633</td>
<td>5.4</td>
</tr>
<tr>
<td><strong>Fires</strong></td>
<td><strong>282,178</strong></td>
<td><strong>4.8</strong></td>
</tr>
<tr>
<td>Poisoning</td>
<td>251,881</td>
<td>4.3</td>
</tr>
<tr>
<td>Other injuries</td>
<td>977,259</td>
<td>16.6</td>
</tr>
<tr>
<td>Rank</td>
<td>All ages</td>
<td>0-4 years</td>
</tr>
<tr>
<td>------</td>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>1</td>
<td>Perinatal conditions</td>
<td>89 558 861</td>
</tr>
<tr>
<td>2</td>
<td>Acute lower respiratory infections</td>
<td>64 228 262</td>
</tr>
<tr>
<td>3</td>
<td>Diarrhoeal diseases</td>
<td>61 928 529</td>
</tr>
<tr>
<td>4</td>
<td>Malaria</td>
<td>28 377 796</td>
</tr>
<tr>
<td>5</td>
<td>Measles</td>
<td>25 431 470</td>
</tr>
<tr>
<td>6</td>
<td>Congenital abnormalities</td>
<td>25 000 333</td>
</tr>
<tr>
<td>7</td>
<td>HIV/AIDS</td>
<td>18 802 590</td>
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<tr>
<td>8</td>
<td>Anemia</td>
<td>14 143 562</td>
</tr>
<tr>
<td>9</td>
<td>Protein-energy malnutrition</td>
<td>14 143 562</td>
</tr>
<tr>
<td>10</td>
<td>Tetanus</td>
<td>10 121 217</td>
</tr>
<tr>
<td>11</td>
<td>STDs excluding HIV</td>
<td>5 782 412</td>
</tr>
<tr>
<td>12</td>
<td>Falls</td>
<td>5 535 576</td>
</tr>
<tr>
<td>13</td>
<td>Drowning</td>
<td>4 191 500</td>
</tr>
<tr>
<td>14</td>
<td>War injuries</td>
<td>3 942 734</td>
</tr>
<tr>
<td>15</td>
<td>Road traffic injuries</td>
<td>3 122 911</td>
</tr>
</tbody>
</table>

Global Burden of disease:

- **Fires** 4 354 125
- 1%
Burn injuries from cigarette-ignited housefires.

International.


8 countries with reliable statistics (U.S.A., U.K., Holland, Hungary, Japan, Denmark, New Zealand, Israel)

Leading cause of fire fatalities

10%+ of fire deaths (30% in U.S.A.)
Burn injuries from cigarette-ignited Housefires.

U.S.A

Hall J.R. N.F.P.A. August 2006

U.S.A. 2003: 25,600 cigarette-ignited fires
760 deaths (30% fire deaths)
(34% children)
1,520 injured
## Europe

<table>
<thead>
<tr>
<th>Per year</th>
<th>Fires</th>
<th>Deaths</th>
<th>Injured</th>
<th>Material damage, mio €</th>
</tr>
</thead>
<tbody>
<tr>
<td>CZ</td>
<td>1.036</td>
<td>19</td>
<td>43</td>
<td>1,3</td>
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<tr>
<td>EL</td>
<td>2.089</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EE</td>
<td>251</td>
<td>64</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>LV</td>
<td>589</td>
<td>68</td>
<td>69</td>
<td>0,24</td>
</tr>
<tr>
<td>LT</td>
<td>1.079</td>
<td>102</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT</td>
<td>8</td>
<td></td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>SK</td>
<td></td>
<td>15</td>
<td>13</td>
<td>0,33</td>
</tr>
<tr>
<td>SI</td>
<td>128</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FI</td>
<td>700</td>
<td>30</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>SE</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>UK</strong></td>
<td>4.200</td>
<td>125</td>
<td>1.400</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>10.080</td>
<td>455</td>
<td>1.575</td>
<td><strong>4,87</strong></td>
</tr>
</tbody>
</table>
Europe. Situation in the Member States

• Data on cigarette-related fires from 11 Member States\(^1\) provide that these MSs encounter every year
  – 10,000 fires
  – 460 deaths and 1,600 injuries
  – €5 million of damage

\(^1\) CZ, EL, EE, LV, LT, PT, SK, SI, FI, SE, UK
Housefires (2005)*

Housefires: 90 571

Deaths: 295

Severe injuries: 728

Light injuries: 5241

* Direction de la Défense et de la Sécurité Civile. Ministère de l’interieur.
France

Cigarette-ignited housefires?

Deaths: 30-90/year?
He does not smoke......
Keep in mind the "Pasteur" concept of eradication of disease:

1) **Vector (agent)**

2) **Environment (physical and social)**

3) **Host (person at risk)**