Prevention of Hot Water Scalds in the Elderly

Cheree Walker Occupational Therapy 2012
Prevalence

Graph and Statistics supplied by NSW SBIS with thanks.

Burn Scalds >65yrs in Bathroom treated in NSW Adult Burn Units
Full thickness burns

- Scald burns are life threatening and result in lengthy hospital stays.
- Infection and sepsis increase the mortality rate.
- Anatomic areas requiring grafting are commonly feet, buttocks and back.
The higher the water temperature, the shorter the exposure time required to develop a full thickness burn injury.  

Moritz and Henriques 1947

<table>
<thead>
<tr>
<th>Type of Liquid</th>
<th>Temperatures</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling water from a kettle</td>
<td>100°C</td>
<td>Under 1 Second</td>
</tr>
<tr>
<td>Cup of hot tea/ coffee</td>
<td>70-75°C</td>
<td>Under 1 second</td>
</tr>
<tr>
<td>Hot water from a non-regulated tap</td>
<td>60°C</td>
<td>1 second</td>
</tr>
<tr>
<td>Hot water from a kettle 5-10 minutes after boiling</td>
<td>55°C</td>
<td>10 seconds</td>
</tr>
<tr>
<td>Hot water from a tap with a temperature regulator.</td>
<td>50°C</td>
<td>5 minutes</td>
</tr>
</tbody>
</table>
Prevention

• **How can we improve outcomes for the elderly?**
  • Installation of a tempering valve or thermostatic mixing valve to lower water outlet temperature to 50°C
  • See the handout provided.
  • Avoid use of baths and shower cubicles with fixed screens.
  • Recommend a hob-less shower recess with shower curtain.
  • This allows room to move away from the hot water source when able e.g. following an epileptic seizure
Occupational Therapy Intervention

- Consider installation of water tempering devices as part of your home visit check list and risk management strategy.
References