**Environment and Noise on the Neonatal Unit**  
*(including quiet time)*

**Introduction**
The neonatal unit can be a very stress place for babies and their families.
- Babies experiencing good quality sleep are more stable, grow more quickly and efficiently and have a shorter recovery period.
- Babies sleep better when handled less and in a quieter environment.
- Premature babies are not able to shut out external stimuli such as noise and light.
- Noise intensity, to which the neonate is exposed, varies with the type of ventilator support.

**Sound levels and potential effects**

<table>
<thead>
<tr>
<th>Sound level decibels</th>
<th>Potential effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airplane engine</td>
<td>130</td>
</tr>
<tr>
<td>Rock music</td>
<td>120</td>
</tr>
<tr>
<td>Heavy traffic</td>
<td>80 - 90</td>
</tr>
<tr>
<td>Placing bottle on incubator</td>
<td>84</td>
</tr>
<tr>
<td>Closing incubator portholes</td>
<td>80</td>
</tr>
<tr>
<td>Neonatal unit (general)</td>
<td>60 - 70</td>
</tr>
<tr>
<td>Incubator alarm</td>
<td>65 - 70</td>
</tr>
<tr>
<td>Neonatal unit radio</td>
<td>60 - 62</td>
</tr>
<tr>
<td>Bubbling water in ventilator circuit</td>
<td>62</td>
</tr>
<tr>
<td>Normal conversation</td>
<td>45 - 50</td>
</tr>
<tr>
<td>Whisper</td>
<td>30</td>
</tr>
</tbody>
</table>

**Actions to reduce noise in the neonatal unit**
- Speak softly
- Avoid sudden loud noises
- Close portholes quietly
- Do not place objects on top of an uncovered incubator or tap blood
- Turn off alarms promptly
- Avoid banging doors/draws
- Do not put charts on incubator
- Cover incubators of preterm, sick or neurologically compromised babies to muffle sound cover to help reduce noise and light
- Empty bubbling water in ventilator circuit
- Maintain noise levels within safe and comfortable limits (Ideally 50 db)

**Noise can be hazardous to hearing if the sound is loud and the infant is exposed often enough and long enough**

**Quiet Time**

**Aim**
Promote optimal growth and development of infants on neonatal unit.

**Before quiet time**
Ensure infants are well prepared and positioned comfortably.
To achieve the best possible effect for babies, parents and staff must work together to maintain this period of rest.

**Protocol**  
Time appropriate to unit  
Adhere to the following criteria as much as possible:
- Reduce talking and laughter to a whisper
- Avoid banging doors or lids, dragging chairs etc
- Rearrange care-giving activities around quiet time hours
- Carry out stabilisation procedures only
- Respond rapidly to alarms
- Switch off main light, side lights on low or off and blinds/curtain closed if unit allows
- Incubator covers in place
- No cleaning to be carried out
- During quiet time hours, parents only to visit
- Display quiet time posters in unit
- Provide parents with written information on admission

**Acknowledgement**  

**References**  
American Academy of Paediatrics, Committee on Environmental Health. Noise: a hazard for the fetus and newborn. Paediatrics 1997; 100: 724-7