Guidelines for the Use of Penicillin G

Recommended Neonatal Dose, Route, and Interval

- **Meningitis:** 75,000 to 100,000 units/kg/dose IV infusion over 30 minutes, or IM
- **Bacteremia:** 25,000 to 50,000 units/kg/dose IV infusion over 30 minutes, or IM
- **Group B streptococcal infections:** some experts recommend using 200,000 units/kg/day for bacteremia, and 500,000 units/kg/day for meningitis, in divided doses at more frequent intervals than those listed below.
- **Gonococcal infection (only with proven penicillin-susceptible isolate):** Use higher doses listed for meningitis and bacteremia.
- **Congenital syphilis:** Aqueous crystalline penicillin G: 50,000 units/kg/dose IV over 30 minutes, given Q 12 hours during the first 7 days of life, and Q 8 hours thereafter, irrespective of gestational age; or Procaine penicillin G: 50,000 units/kg/dose IM, once daily. Treat for 10 to 14 days.
- **Procaine and benzathine penicillin G are for IM administration only.**

<table>
<thead>
<tr>
<th>PMA (weeks)</th>
<th>Post Natal (days)</th>
<th>Interval (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤29</td>
<td>0 to 28</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>&gt;28</td>
<td>8</td>
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<tr>
<td>30 to 36</td>
<td>0 to 14</td>
<td>12</td>
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<tr>
<td></td>
<td>&gt;14</td>
<td>8</td>
</tr>
<tr>
<td>37 to 44</td>
<td>0 to 7</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>&gt;7</td>
<td>8</td>
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<tr>
<td>≥45</td>
<td>ALL</td>
<td>6</td>
</tr>
</tbody>
</table>

Chief Indications

- Infections caused by susceptible organisms such as Staph, Streptococcus pneumoniae, N. gonorrhoeae, Corynebacterium diptheriae, Clostridium perfringens and Syphilis

Possible Adverse Reactions:

1. Cardiac arrest in patients who received high doses infused rapidly
2. Bone marrow depression, granulocytopenia
3. Hepatitis

Contraindications & Precautions

- Hypersensitivity to penicillin
- Use with caution in patients with a cephalosporin allergy, renal dysfunction, or seizure disorder.
Nursing Implications
• Observe IV site for phlebitis
• May cause false positive direct Coombs test

References:
1. Neofax 2010

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