Aminosalicylic Acid (Paser)

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**Aminosalicylic Acid (PASER)**

**Uses**
- The drug is used to treat tuberculosis along with other medications.

**Body's Processing of the Drug**
- **How does the body take the drug in?**
  - The drug is administered orally. It is supposed to be given with or immediately following meals to reduce the effect of nausea and vomiting. The medicine is almost completely absorbed from the gastrointestinal tract, the sodium form is more rapidly absorbed than the acid.

**After the Drug is Absorbed**
- The drug is distributed to tissue and body fluids except in the cerebrospinal fluid spaces. In humans, it is absorbed in the body fluids. Aminosalicylic acid suppresses the growth and multiplication of Mycobacterium tuberculosis by preventing the folic acid from synthesizing. The drug also has a powerful hypotensive action which lowers the blood pressure in the blood.

**Presence of Nonpolar Carbons/Polar Functional Group Related to Water Solubility**
- **4 nonpolar carbons/3 polar functional groups**
- Water soluble, for every 4 nonpolar carbons, one polar functional group is sufficient to dissolve a molecule.

**How to calculate molar mass**
- Molar mass of each element: C, H, N, and O are 12 g/mol, 1 g/mol, 14 g/mol, and 16 g/mol, respectively.
- Carbon: 7.122 g/mol, hydrogen: 0.45 g/mol, oxygen: 0.45 g/mol.
- Molar mass of C6H6NO = 153.15 g/mol.

**Literature value for molar mass**
- 153.14 g/mol.

**Availability of the Drug**
- This drug is only available in granules, delayed-release 4 g/pkt.

**Dosing-Chosen Dose**
- The smallest dose is 4 grams. Tuberculosis, 2.5-4 g/day.
- This dosage for tuberculosis treatment for an adult is 4 grams PASER by mouth, three times a day. The maximum dose is 12 grams per day.

**How does the body break down the drug?**
- Once the body has used the drug it is metabolized in the liver.

**How does the body eliminate the drug?**
- Over 80% of the drug is eliminated in urine within 7 to 12 hours.

**Chemical Names**
- 4-Amino-2-hydroxybenzoic acid, 4-amino-salicylic acid.

**Water Solubility in words**
- Insoluble.

**Expanded Structure:**

**Water Solubility Literature Value**
- 1690 g/L (at 23°C).

**Water Solubility in g/100 mL**
- \( \frac{1690}{\text{mol}} \times \frac{1}{1000 \text{mL}} \times \frac{1}{1000 \text{g/mol}} = 0.00169 \text{g/mL} \)

** References:**

**Image of Drug**

**Condensed Structural Formula**

**Tables per Chosen Dose:**
- 4 g 3 times a day by mouth.