

**Homework 6**

**Bio pharmaceutics & Pharmacokinetics/PHAR434**

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* **An adult male patient (46 years old, 81 kg) was given orally 250 mg of tetracycline hydrochloride every 8 hours for 2 weeks. From the literature, tetracycline hydrochloride is about 75% bioavailable and has an apparent volume of distribution of 1.5 L/kg. The elimination half-life is about 10 hours. The absorption rate constant is 0.9 hr–1. From this information, calculate:**
  1. ***C*max after the first dose.**
  2. ***C*min after the first dose.**
  3. **Plasma drug concentration *C*p at 4 hours after the 7th dose.**
  4. **Maximum plasma drug concentration at steady-state *C*∞max.**
  5. **Minimum plasma drug concentration at steady-state *C*∞min.**
  6. **Average plasma drug concentration at steady-state *C*∞av.**







