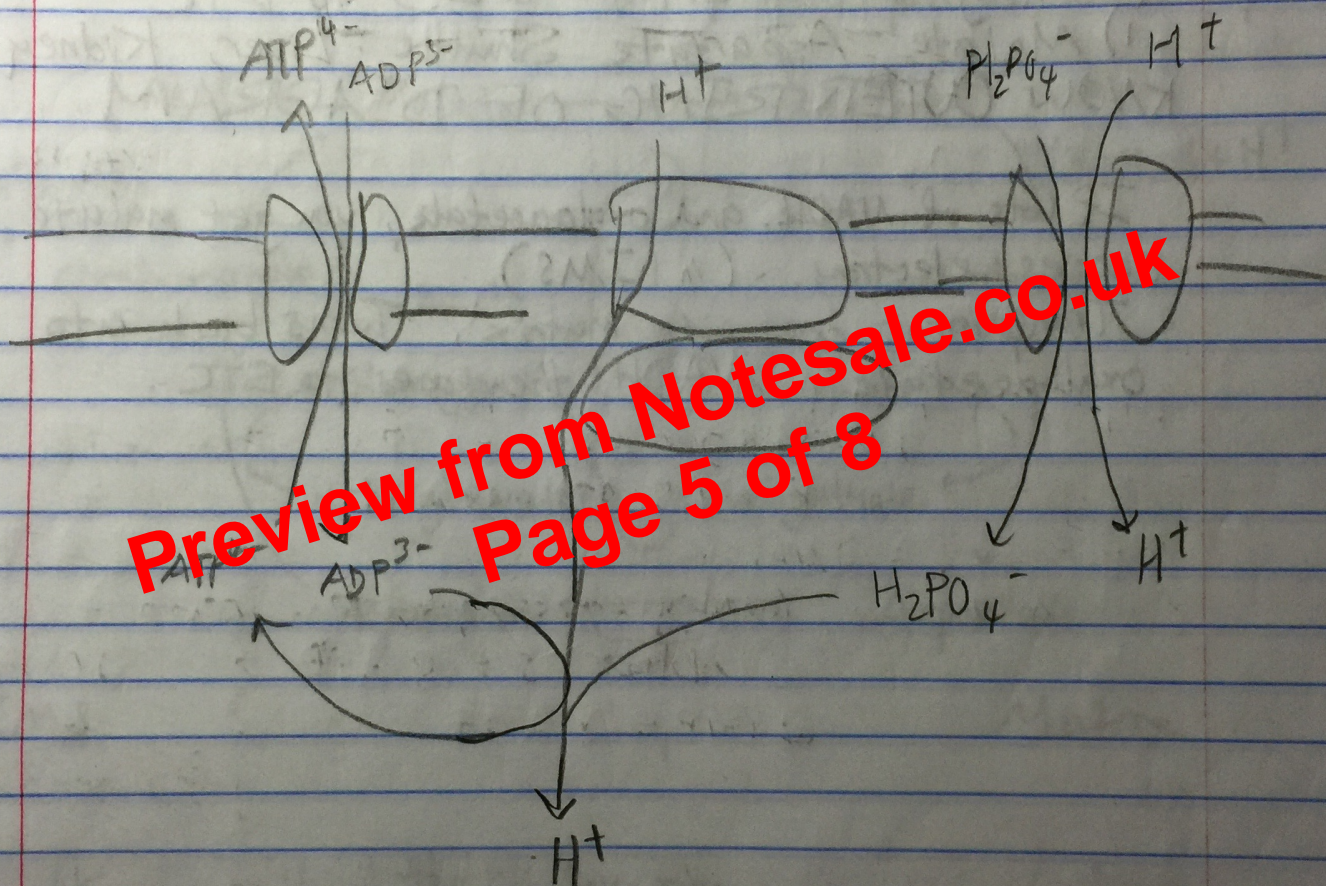


How many ATP per NADH?

- 1) Each 120° shift of ATP synthase releases 1 ATP.
- 2) Takes 3 protons to cause a 120° shift; plus 1 H^+ for P_i transport into matrix: $4H^+$ per ATP



- 3) Each NADH pumps $10 H^+$ across the membrane.
- 4) $10 \div 4 = 2.5$ ATP per NADH.
- 5) 1.5 ATP per FADH