**Background:** Antibiotics are among most frequently prescribed drugs worldwide. The overuse or misuse of antibiotics can result in significant consequences as antimicrobial resistance, therapeutic failures, drug toxicities and drug interactions. Any action aimed at improving use of antimicrobials must target physicians. **Objectives:** assess and identify factors affecting knowledge, perception and practice of the resident doctors about antibiotic resistance and antibiotic prescription at Zagazig University Hospital. **Methodology**: A cross-sectional survey was done at Zagazig University hospital between July and September 2013. Self administrated questionnaire were used. **Results**: The mean score of quiz answer, resistance perception and prescription perception were (3.6, 3.8, and 3.2 respectively). Age of resident doctors was statistically significant affecting quiz answer and antibiotics resistance perception (P=0.00).Quiz answer, antibiotics resistance perception and antimicrobial prescription perception were significantly higher among male doctors than female doctors (P=0.000). There was significant association between experience (> 2years) and quiz answer, antibiotics resistance perception (P=0.000). Age groups, quiz answer, antibiotics resistance perception and antimicrobial prescription perception were statistically significantly affecting practice of resident doctors about antibiotic prescription(P<0.05). **Conclusion**: The study concluded that knowledge and antibiotic prescription perception was suboptimal. Perception about antibiotic resistance was high, while doctors’ practice in prescribing antibiotic was satisfactory.

**Keywords:** antibiotic prescription,antibiotic resistance, knowledge, perception, resident doctors.