Mastery Series: Bacterial Cell Wall

1. What is the basic role of the bacterial cell wall?
2. What is peptidoglycan?
3. What are NAGs and NAMs?
4. Do Gram + or Gram – cells have a thicker peptidoglycan layer?
5. Do Gram + or Gram – cells have a lipid layer that surrounds the peptidoglycan?
6. How do the following affect the cell wall?
    a. Penicillin, vancomycin, cephalosporins
    b. Lysozyme
7. Where is Lipid A found?
8. What does LPS stand for?
9. What are three effects of the LPS layer?

Mastery Series ANSWERS: Bacterial Cell Wall

1. What is the basic role of the bacterial cell wall?
   Prevent rupture
2. What is peptidoglycan?
   Protein/sugar molecule
3. What are NAGs and NAMs?
   Specific sugars that are connected to form layers of cell wall
4. Do Gram + or Gram – cells have a thicker peptidoglycan layer?
   Gram positive
5. Do Gram + or Gram – cells have a lipid layer that surrounds the peptidoglycan?
   Gram negative
6. How do the following affect the cell wall?
   a. Penicillin, vancomycin, cephalosporins – block formation of protein X-links between the layers of the cell wall
   b. Lysozyme –breaks the NAG and NAM sugar connections
7. Where is Lipid A found? –in the outer lipid layer of Gram negative cells
8. What does LPS stand for? lipopolysaccharide
9. What are three effects of the LPS layer?
   1. Endotoxin
   2. Inhibits phagocytosis
   3. Blocks antibiotic entry