Course Name : Bachelor of Physical Education
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Lecture No. 17
Lecture Title : Examination of Urine : Chemical, Microscopic

FAQ

Q1. What is Leukocyte Esterase ?

Ans - Leukocyte esterase is an enzyme present in most white blood cells (WBCs). A few white blood cells are normally present in urine and usually give a negative chemical test result. When the number of WBCs in urine increases significantly, this screening test will become positive.

Q2. What is Nitrite ?

Ans - This test detects nitrite and is based upon the fact that many bacteria can convert nitrate (a normal substance in urine) to nitrite. Normally, the urinary tract and urine are free of bacteria and nitrite. When bacteria enter the urinary tract, they can cause a urinary tract infection. A positive nitrite test result can indicate a UTI. However, since not all bacteria are capable of converting nitrate to nitrite, someone can still have a UTI despite a negative nitrite test. The results of this test will be considered along with the leukocyte esterase (above) and a microscopic examination.

Q3. What is Bilirubin ?

Ans - This test screens for bilirubin in the urine. Bilirubin is not present in the urine of normal, healthy individuals. It is a waste product that is produced by the

liver from the hemoglobin of RBCs that are broken down and removed from circulation. It becomes a component of bile, a fluid that is released into the intestines to aid in food digestion.

Q4. What is Microscopic Examination ?

Ans - A microscopic examination may or may not be performed as part of a routine urinalysis. It will typically be done when there are abnormal findings on the physical or chemical examination and the results from all will be taken into account for interpretation. The microscopic exam is performed on urine sediment – urine that has been centrifuged to concentrate the substances in it at the bottom of a tube. The fluid at the top of the tube is then discarded and the drops of fluid remaining are examined under a microscope. Cells, crystals, and other substances are counted and reported either as the number observed "per low power field" (LPF) or "per high power field" (HPF).

Q5. What are Epithelial Cells ?

Ans - Epithelial cells are usually reported as "few," "moderate," or "many" present per low power field (LPF). Normally, in men and women, a few epithelial cells can be found in the urine sediment. In urinary tract conditions such as infections, inflammation, and malignancies, an increased number of epithelial cells are present. Determining the kinds of cells present may sometimes help to identify certain conditions. For example, epithelial cells containing large amounts of broken-down hemoglobin (called hemosiderin) may indicate that there were red blood cells or hemoglobin in the urine recently, even if there are none now.