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BIO 2312: Human Anatomy and Physiology two Lab

Tuesdays: 2:30-5pm

Urinalysis Lab report

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Introduction: urinalysis is a test of the urine which is used to detect a variety of infections or disease in the human body. This procedure is noninvasive when performed on humans and doesn't require much time, (mayo clinic). When the urinalysis is performed it can test for urinary tract infections, kidney diseases as well as many other infections. The ph of the human urine is normally between a ph. of 4.5 and 8 if its anything below or above this range it can be determined that the person has a uti meaning the urine is abnormal, (Dan Brennan). In order to fix this antibiotics must be taken as well as drinking water and cranberry juice. Overall, a urinalysis is a test that is noninvasive and can help identify many things going on in our body that we are unaware of.

Normal urine is what most of us see when we pee a yellowish color with a strong odor, but this is due to many factors of our body. The color of the human urine is yellow due to urochrome which is a pigment in the urine that's gives it color, (Kathryn Watson). When humans are drinking their daily intake of water correctly the color of urine is light yellow to a clear color like the water we drink. This however doesn't occur in everyone's body because some people tend to be dehydrated. For those who are dehydrated the urine is usually you dark yellow to brownish color. it is very important for humans to stay hydrated because lack of water intake can cause the body to become weak to the point where the person can faint. Overall staying hydrated is the best thing to do in order to be productive and prevent disease and infections from forming.

Abnormal urine is not commonly talked about because it doesn't happen to most people. Abnormal normal urine refers to your urine being a greater or much darker color then it should be. When the urine is usually a dark orange or brown color this indicates

that the person's body is severely dehydrated or they can also have gilberts syndrome, (Scoot Lafee). Go over syndrome is a condition where the liver doesn't process bilirubin properly when a urinary test is taken the person has gilberts syndrome because they're bilirubin levels are lower the normal. This condition can be fixed with medication however it can last several years, of a forever lifelong condition. As will be seen in the experiment depending on the results of certain inorganic compounds a diagnoses can be given on what the patient has.

Materials and Methods: To test for sulfate a 10 ml cylinder was used and 5 ml of urine was added and then a few drops of to dilute of hydrochloric acid and 2 ml of 10% barium chloride solution. To test for chlorides 5 mil of urine were placed in a test tube and several drops of silver nitrate were added. To test for the presence of phosphate 5ML of urine were added to a test and then three to four drops of dilute nitric acid and three ML of ammonium Molybdate were added. For the other inorganic constituents, a specific dipstick was used for each inorganic constituent.

Results:

Samp le type	Leukoc ytes	Nitrite	urobilin ogen	Protei n.	P H.	Blood .	Spe cific gravi ty	Keton e.	Biliru bin.	Glucos e.
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Normal urine artificial	Negative.	Negative.	0.2 MG/dl	Negative.	6. 5	Negative.	1.02 5	Trace 5 mg/dl	Negative.	Negative.
Abnormal urine 1	Negative.	Negative.	0.2 mg/dl	100 md/dl	6. 0.	Negative.	1.03 0 mg/d l	Negative.	Negative.	2000 mg/dl
Abnormal urine 2	Negative.	Negative.	0.2. mg/dl	300 md/dl	8. 0.	Large	1.00 5 mg/d l	Trace 5. mg/dl	Negative.	1000m g/dl

Conclusion: All their samples had similar results, but they were not all the same. When the samples were tested for leukocytes, they all had negative results which means that the person doesn't have an infection in their urinary tract. If the person had an infection the leukocyte would have indicated a positive result and they would have been prescribed antibiotics. Next the samples were tested for the presence of nitrite which is also commonly present in the urine of someone with a urinary tract infection, as we can see the results were negative meaning the person doesn't have a uti. Urobilinogen is a

colorless product in the urine the normal level is 0.2mg/dl and as we can see in the results the three samples have normal urobilinogen levels. Protein was the fourth inorganic molecule tested when in the normal urine sample the protein came out negative meaning the levels are normal. As for the samples abnormal 1 and 2 the levels of protein are too high which can mean you have a disease. Ph levels in urine are usually 4.5 to 8.0 in range as we can see the results for the three sample types were in between that range meaning that the urine pH levels were normal. In sample normal urine and abnormal urine one the patient tested negative for blood in the urine which is good however the abnormal urine sample 2 patient tested positive this means that the person can have a disease called hematuria which means the person has a uti. With looking at all the results it can be concluded that the patient has diabetes or a urinary tract infection in their urinary system.

Reference:

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