

### Clinical Findings:

- If blood glucose is normal but urine glucose is high → Glucose is not being reabsorbed → Problem with proximal tubule → will also cause a high phosphatemia
- Conjugated bilirubin in urine → liver disease or common bile duct is obstructed → No urobilinogen
- Unconjugated bilirubin isn't water soluble, can't be found in the urine
- Leukocytes → Can be caused by a kidney infection/UTI
- Nitrite → Indicative of gram negative kidney infection
- Protein → Should never be in urine → Glomerular damage → Should always be checked in HTN and DM patients
- pH abnormality → Diabetic Ketoacidosis
- Blood:
  - Macroscopic → Red colour in urine
  - Microscopic → Not visible to the naked eye
  - If blood is present in urine → test for pyruvate, test for myoglobin/haemoglobin
  - ▷ Myoglobin = muscle breakdown (Rhabdomyolysis), i.e. after heavy exercise
- Specific Gravity → Reflects hydration, will be elevated if anything is present in urine, i.e. glucose, etc.
- Ketones → Found in anorexics, starvation, diabetes, etc. → breakdown of fat
  - Ketones can cross the blood brain barrier in pregnant women → Can hurt the foetus

Children present with Kussmaul's breathing, metabolic acidosis → Respiratory alkalosis, there is a spike in presentations in 20 year olds

What would be the next test be after detecting a high glucose in urine?

- A blood glucose test

*Diabetics and patients with Hypertension need urine analysis often*

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## Introduction:

W	Wash Hands
I	Introduce Yourself + Patient's Identity
P	Permission
P	Patient Position + Pain
E	Explanation

## Instructions:

Put on **gloves and place tissue paper on desk**

Identify urine sample and check **patient identity** matches

**Inspects urine** and comments on **colour** *Comment on obvious blood*

Examine for **cloudiness/sediment** *Ensure to mention this*

Check **expiry date** on dipsticks

Take out dipstick and **immediately close container**

Immerse **all pads** of dipsticks in urine *Do not spill urine*

Remove dipstick and start timer

Place dipstick **horizontally** on tissue paper

Compare pads to the container at the correct times **without touching against the container**

Dispose of waste appropriately in medical waste bin *Wrap urinalysis stick in tissue, fold into glove, fold both into second glove*

## Wash hands

Report abnormalities present in urine, link to appropriate clinical case, and answer any relevant questions



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Not published yet.  
Last updated 11th April, 2024.  
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