<table>
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<th>Method</th>
<th>Explanation and Importance</th>
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| Random Specimen      | - Collected at any time of the day.  
- Commonly used for urinalysis and microscopy because it is easier to obtain.  
- They may give inaccurate view of a patient's health if the specimen is too diluted and analyte values are artificially lowered.  
- Paediatric specimens are generally of this type.  
- Patient must avoid the introduction of contaminants into the specimen during and after collection; the inside of the cup or lid must not be touched. |
| First Morning Specimen | - The high concentration of the specimen makes it the best for urinalysis and microscopic analysis.  
- Proper collection practices and accurate recording of the collection time are important criteria of a first morning specimen.  
- Note: After collection, the specimen can be preserved in a refrigerator until analysis.                                                                                                                                                             |
| Clean-catch Midstream | - This is the preferred type of specimen for culture and sensitivity testing because of the reduced incidence contamination.  
- Patients are required to first cleanse the urethral area.  
- The patient should then void the first portion of the urine stream into the toilet.  
- The urine midstream is then collected into a clean container.  
- This method of collection can be conducted at any time of day or night.                                                                                                                                                                     |
| In females, an additional measure is taken to avoid contamination from the labia of the vaginal. As indicated on the image below, two fingers are used to keep the two labia opened while the midstream portion is collected. (See figure below). |
| Timed Collection     | - Mostly for biochemical measurements like creatinine, urine urea nitrogen, glucose, sodium, potassium, etc in urine over a specified length of time, usually 8 or 24 hours.  
- The bladder is emptied prior to beginning the timed collection.  
- Then, for the duration of the designated time period, all urine is collected into a collection container, with the final collection taking place at the very end of that period.  
- The specimen should be refrigerated during the collection period, unless otherwise requested by the physician.  
- Accurate timing is critical to the calculations that are conducted to determine analyte concentrations and ratios.  
- Interpretations based on faulty calculations can result in improper diagnoses or medical treatment.                                                                                                                                   |
| Catheterized Specimen | - Used for bedridden patients or people who cannot urinate independently.  
- The healthcare provider inserts a foley catheter into the bladder through the urethra to collect the urine specimen.                                                                                                                                           |
| Suprapubic Specimen  | - Used when a bedridden patient cannot be catheterized or a sterile specimen is required.  
- The urine specimen is collected by needle aspiration through the abdominal wall into the bladder.  
- The risk of contamination is highly reduced and the present of germs, irrespective of their number is considered infection.                                                                                                                |
| Paediatric Specimen  | - For infants and small children, a special urine collection bag is adhered to the skin surrounding the urethral area.  
- Once the collection is completed, the urine is poured into a collection cup or transferred directly into an evacuated tube with a transfer straw.  
- Urine collected (squeezed) from a diaper or from stool containers is not recommended for laboratory testing due to high risk of contamination.                                                                                               |