

24 Hour urine collections No: 010D

1. Introduction

24 Hour urine collections provide vital information in the further investigation of hypertensive subjects. They provide a quantitative measurement of the subject's sodium and potassium excretion, microalbuminuria and estimation of creatinine clearance.

2. Responsibilities

Research nurses trained in the method are responsible for teaching subjects how to collect their urine efficiently.

3. Equipment

- 24 hour plastic urine container
- 1 litre plastic jug
- Low temperature marker pens & label
- Instruction sheet

4. Method

All bodily fluids should be considered as potentially infectious material and should be handled accordingly. All 24 hour urine collections should be collected using the following guidelines:-

4.1 Preparation of subject

- Explain to the subject the importance of the 24 hour urine collection. Ensure that they understand that 1 missed sample will impair/invalidate the results obtained from that collection.
- Explain what the equipment is for and the time when the 24 hour urine collection will start and finish.

4.2 Preparation of materials

- Ensure that the plastic urine container is empty and that the bottle is plain and Does not contain any acid.
- Ensure that the bottle is labelled correctly with all the subject's ID details.
- Ensure that the subject has an instruction sheet, with the space provided on it, to write down the exact start and finish time of the collection.

4.3 24 hour collection

- The 24 hour urine collection usually starts in the morning. After the subject has awoken, they first urinate as usual down the toilet and note the time on their instruction sheet. The collection time STARTS from this time, that is the time they have first urinated into the

toilet and their bladder is then empty. Instruct the subject that every time they now need to go to the toilet they must take their plastic jug to urinate into. When finished, instruct them to pour the urine content of the jug efficiently (without any spillage) into the 24 hour urine collection container.

- Instruct the subject to store the container in a cool, dry environment until it is required for another specimen.
- Instruct the subject to rinse the plastic jug out and hand dry it until next required.
- Ensure that the subject is aware that the urine collection finishes at the same time point, 24 hours after it commenced. 5 minutes prior to the end time, the subject should be instructed to empty their bladder even if they do not have the urge to go. This urine (having been placed in the container) then completes the collection.
- The subject should then be instructed to return the urine collection as soon after completing it as possible to their research centre. If possible the urine should be stored in a cool dry place (refrigerator if available) until analysed.
- Record the total volume along with the subject's details in the case report file.
- Take 4 x 50ml aliquots of the urine collection for storage and freeze it at -20°C. Ensure the urine containers are suitably labelled by using the low temperature marker pens. They should clearly indicate subject and study identification codes.
- Place the actual times and any comments or information in the subjects case report file for future reference.

5. Additional Information

- A handy reminder for men, is to instruct them to put a safety pin in their trouser fly as a useful reminder.

6. Reference Documents

Safe working and the prevention of infection in clinical laboratories - model rules for staff and visitors (HSE).