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**Title:** AMBULATORY URODYNAMICS AND HOME FLOWMETRY, ARE THERE DIFFERENCES IN THE RECORDED DATA.

### Aims:

To compare and evaluate micturition data recorded during home flowmetry and ambulatory urodynamics, two methods with natural filling of the bladder under circumstances as near as possible to the normal voiding habits of the investigated person.

### Material and methods:

Thirty healthy, normal young men, age 21-32 years, underwent 5 days with home flow recordings of their voids. They had free fluid intake and filled in a fluid diary. For home flow recordings the Dacapo (Dantec, Denmark) was used. Several month later the same volunteers had a 24-hour ambulatory urodynamic investigation. We used suprapubic catheterisation of the bladder with a 6F double lumen catheter. During ambulatory recordings the volunteers were randomised to two groups, one group with a fluid intake of 30 ml/kg body weight/day and one group with 60 ml/kg body weight/day to increase urine production. For ambulatory recordings the MMS 2020 (MMS, Enschede, The Netherlands) was used. After finishing both investigations data concerning voiding frequency, voided volume (VV), maximal flowrate (Qmax), and flowtime were compared.

### Results:

The results are shown in table 1 for the 30 ml group, and in table 2 for the 60 ml group.

Normal fluid intake (30ml / kg body weight / day)					
	Home flow (median)	Std.	Amb urodyn (median)	Std.	P-value
Number of voids/day	6	1.9	6	1.6	N.S (p=0.85)
Voided volume (ml)	326	84	285	73	N.S (p=0.57)
Flowtime (sec)	18.5	5.7	18.1	5.3	N.S (p=0.42)
Qmax (sec)	27.3	5.8	28.1	6.4	N.S (p=0.81)

**Table 1**

Fluid load (60ml / kg body weight / day)					
	Home flow (median)	Std.	Amb urodyn (median)	Std.	P-value
Number of voids/day	6	1.7	9	2.0	<b>P&lt;0.001</b>
Voided volume (ml)	252	67	328	61	N.S (P=0.08)
Flowtime (sec)	16.0	6.4	19.1	6.2	N.S. (p=0.20)
Qmax (sec)	27.4	5.5	26.0	7.6	N.S (p=0.98)

Almost no differences in the results between the two recording methods are seen. The only significant difference was, as expected, seen in voiding frequency in the fluid loaded group. It also seems as if there is a trend towards

larger voided volumes during fluid loading, even though the significant level is not reached.

**Conclusion:**

Almost no differences in the recorded micturition parameters between home flowmetry and ambulatory urodynamics were found in this group of young, normal, male volunteers. We therefore conclude that ambulatory urodynamics is the nearest approximation to normal circumstances when urodynamic recordings are obtained. Suprapubic catheterisation does not influence on the recorded parameters. We could not compare bladder pressure, since home flowmetry is non-invasive, and no pressure measurements were recorded. But since all other parameters were equal, one could imagine that pressure would be so, too. The study was funded by the Enuresis Foundation, Aarhus, Denmark.