

## Hydrophilic Coated Catheters

The advantages and benefits using hydrophilic coated catheters are many and various. The low friction and viscous surface of the catheter are the most obvious, and in human medicine these catheters, because of their many benefits, have been used for a long time.

**In the first study below, the conclusion is clear:**

*"Hydrophilic-coated catheters perform better than uncoated catheters with regard to haematuria and preference."*

**This conclusion is backed up in the next study, where the conclusion also is very clear:**

*"The results indicate that there is a beneficial effect regarding UTI when using hydrophilic-coated catheters."*

### STUDY:

**Hydrophilic-coated catheters for intermittent catheterisation reduce urethral micro trauma: a prospective, randomised, participant-blinded, crossover study of three different types of catheters.**

Stensballe J<sup>1</sup>, Looms D, Nielsen PN, Tvede M.

<sup>1</sup>Department of Anaesthesia, Centre of Head and Orthopaedics, Copenhagen University Hospital, Denmark. jakob.stensballe@rh.hosp.dk

### PUBLISHED:

Eur Urol. 2005 Dec;48(6):978-83. Epub 2005 Aug 2.

### OBJECTIVE:

To compare two hydrophilic-coated (SpeediCath and LoFric and one uncoated gel-lubricated catheter (InCare Advance Plus) concerning withdrawal friction force and urethral micro trauma.

### METHODS:

49 healthy male volunteers participated in this prospective, randomised, blinded, crossover study of three different bladder catheters. The withdrawal friction force was measured, and urine analysis of blood, nitrite and leucocytes, microbiological analysis of urine cultures and subjective evaluation of the catheters were performed.

### RESULTS:

40 participants completed the study and were included in the analysis. SpeediCath exerted a significantly lower mean withdrawal friction force and work than the gel-lubricated uncoated catheter, whereas LoFric exerted a significantly higher mean friction force than both of the other catheters. The hydrophilic catheters caused less microscopic haematuria and less pain than the gel-lubricated uncoated catheter. Furthermore, 93% of the participants preferred the hydrophilic catheters.

### CONCLUSION:

Hydrophilic-coated catheters perform better than uncoated catheters with regard to haematuria and preference. SpeediCath, but not LoFric, exerts less withdrawal friction force than InCare Advance Plus.

### LINK:

<http://www.ncbi.nlm.nih.gov/pubmed/16126331>

# Hydrophilic Coated Catheters

## STUDY:

Intermittent catheterisation with hydrophilic-coated catheters (SpeediCath) reduces the risk of clinical urinary tract infection in spinal cord injured patients: a prospective randomised parallel comparative trial.

De Ridder DJ<sup>1</sup>, Everaert K, Fernández LG, Valero JV, Durán AB, Abrisqueta ML, Ventura MG, Sotillo AR.

<sup>1</sup>Department of Urology, University Hospitals KU Leuven, Belgium. Dirk.deridder@uz.kuleuven.ac.be

## PUBLISHED:

Eur Urol. 2005 Dec;48(6):991-5. Epub 2005 Aug 15.

## OBJECTIVES:

To compare the performance of SpeediCath hydrophilic-coated catheters versus uncoated polyvinyl chloride (PVC) catheters, in traumatic spinal cord injured patients presenting with functional neurogenic bladder-sphincter disorders.

## METHODS:

A 1-year, prospective, open, parallel, comparative, randomised, multi centre study included 123 male patients, > or =16 y and injured within the last 6 months. Primary endpoints were occurrence of symptomatic urinary tract infection (UTI) and hematuria. Secondary endpoints were development of urethral strictures and convenience of use. The main hypothesis was that coated catheters cause fewer complications in terms of symptomatic UTIs and hematuria.

## RESULTS:

57 out of 123 patients completed the 12-month study. Fewer patients using the SpeediCath hydrophilic-coated catheter (64%) experienced 1 or more UTIs compared to the uncoated PVC catheter group (82%) ( $p = 0.02$ ). Thus, twice as many patients in the SpeediCath group were free of UTI. There was no significant difference in the number of patients experiencing bleeding episodes (38/55 SpeediCath; 32/59 PVC) and no overall difference in the occurrence of hematuria, leukocyturia and bacteriuria.

## CONCLUSION:

The results indicate that there is a beneficial effect regarding UTI when using hydrophilic-coated catheters.

## LINK:

<http://www.ncbi.nlm.nih.gov/pubmed/16137822>