



## How to deal with voiding dysfunction

### 排尿困難怎麼辦？(英文)

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#### Definition

There are two voiding functions, one is to store urine and the other is to empty urine; when impaired bladder cannot function normally in emptying urine, mostly caused by anatomic abnormality and neuropathy, this is deemed voiding dysfunction.

#### Voiding mechanisms

To completely empty urine from bladder, our brain sends out instructions to urinary center in pons; signals are given to detrusor muscle and urethra sphincter, they then work together to execute the command. During the process, voiding dysfunction occurs if any of the segments is damaged.

#### Causes include:

Central neuropathy, spinal cord injury, spinal infection, spinal tumor, herpes infection, urethral stricture, urethral or urinary bladder inflammation, urolithiasis, neurogenic urinary bladder disease, benign prostatic hypertrophy, pelvic surgery, pelvic radiotherapy, and female pelvic organ prolapse.

#### Symptoms

Patients would suffer from urine retention, decreased urine amount, hesitancy, straining for voiding, intermittency, weak stream, residual urine sensation, urgency, frequency with interval less than 2 hours, and nocturia. Those symptoms may incur unstable mood, insomnia, loss of concentration, and depression.

## Examinations

Keep a voiding diary to record voiding frequency, amount and residual urine amount, Urine analysis and urine culture, X-rays, cystoscopy, and urodynamic studies which include Uroflowmetry, CMG+EMG, stress test, pressure flow study and voiding urodynamic study.

## Treatments

There are different types of treatment for different causes:

1. Medical treatment
2. Urinate with hand compressing the low abdomen.
3. Intermittent catheterization or urinary catheter indwelling.
4. Surgical treatment.
5. Rehabilitation:
  - bladder training: urinate with fixed time interval
  - pelvic floor muscle training

## Attentions

1. There are tones of causes of voiding dysfunction, so treatments should be appropriate for different conditions.
2. Prevent complications caused by urinary tract, infection, urolithiasis, and renal function impairment.