# The ‘Voiding school’ (‘Plasklas’): an interactactive tool designed to help children in acquisition of urinary continence.

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**Acquisition of bladder control** is an important developmental milestone in children. Episodes of incontinence in the pre-school age of children are common, but epidemiological studies show that daytime bladder control is achieved in the majority of children at 3-4 years of age, and nighttime bladder control between 3.5 and 6 years.

Urinary incontinence in children may be caused by congenital anatomical anomalies, but in the majority of incontinent children, no obvious reason can be found.

Besides those children in whom the acquisition of continence is delayed, the acquisition of continence in all children is an important milestone. The society pressures children to acquire continence as soon as possible. Some children have a delay in achieving bladder control, some achieve control and then relapse, and some have persistent ongoing incontinence.

For the child who suffers from daytime urinary incontinence, the problem is very public being evident within school, home and leisure environments making them prone to embarrassment and ridicule.

The impact of night-time urinary incontinence or bedwetting (called enuresis nocturna) occurs predominantly within the family setting but has **increasing social impact** as the child gets older and wants to stay away from home at night. Bedwetting is an issue that millions of families face every night. It is extremely common among young kids, but can last into the teen years. Bedwetting can however be very stressful for families: Kids can feel embarrassed and guilty about wetting the bed and about spending the night at a friend’s house or at a camp. Parents often feel helpless to stop it.

Bedwetting is the most common chronic condition in children after allergies.

Prevalence of children suffering from EN varies according to the age and sex, but it is estimated that in Belgium, 10% of children suffer from EN at the age of 6. In the Western world, studies describe a prevalence of EN varying from 6 to 20 % of children between 5 and 18 years of age. It is estimated that at age 7, 5 to 17.9% of children worldwide have bedwetting episodes (EN). At age 10, 2.6% to 11.6% still present EN worldwide.

There are fewer studies documenting the prevalence of DI in children, but it is estimated that the worldwide prevalence varies from 4.9% to 11.7% at age 7.

The associations of urinary incontinence (day-time and/or night-time) with emotional behavioral problems for the child as well as psychosocial and financial issues are well established.

When acquisition of continence is delayed, first-line treatment is non-pharmacological and is called **urotherapy**. It means non-surgical non-pharmacological treatment of incontinence. It can be defined as a bladder re-education or rehabilitation program aiming at correction of the problem. To achieve the normalization of continence-related bladder problems, a combination of patient education, cognitive, behavioral and physical therapy methods is used.

Ghent University Hospital hosts the Pediatric Uro-Nephrologic Centre (PUNC), which results in a strong cooperation between the Ghent Pediatric Urology Department and the Ghent Pediatric Nephrology Department. Cooperation within the team has led to development of an advanced expertise in incontience in children

The PUNC has produced specific tools to treat children with incontinence. The ‘voiding school’ or ‘plasklas’ is one of those concepts created by the PUNC, which helps children in their acquisition of continence in a specific environment to improve the learning process.

The **‘Plasklas’** is a concept where the basic principles of urotherapy are explained to the child and his/her parents during **a group session**. The group session is led by a physiotherapist supported by an urologist, and basic behavioural and cognitive principles are taught to the child, using child-friendly material specially developed for this purpose.

The educative material was developed by a creative professional on specific demand of the PUNC team. Each of the characters of the ‘Heroes of the pee’ or ‘Plashelden’ was specifically developed to meet the PUNC team demands, in order to educate children about the basic principles of urotherapy.

As urotherapy is based on behavioral and cognitive principles, its application in children is quite cumbersome, and demands staff specifically dedicated to children. The educational material developed for the ‘plasklas’ is specifically dedicated to children, and improves the learning process of urotherapy.

To date, no educational tool exists to teach urotherapy to children, making the ‘plasklas’ unique.

The ‘Plasklas’ is nowadays a group session where children receive educational information about their urinary organs and urotherapy. Cartoons specially designed for this aim, and created to be child-friendly, guide the child into urotherapy. A super hero cartoon (Peeman ‘plasman’) leads the children to discover the mechanisms leading to continence. Under the guidance of the peeman, the child discovers how urine is produced, the different anatomical parts of the urinary system, and continence. The cartoons guide the children through urotherapy.

Today the Plasklas has been used on more than 140 children with a very promising result: As the children respond very positively to the plasklas, they are keener to apply what has been taught by the peeman during the Plasklas, and the compliance is much higher.

