

# Extraordinary daytime urinary frequency (EDUF): warning signs pediatricians should not miss in times of COVID-19

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*“Whoever is careless with the truth in small matters cannot be trusted with important matters”*  
Albert Einstein

## Keywords

Pandemic, COVID-19, mental health, children, EDUF, urology.

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Containment measures and social distancing due to the 2019 novel Coronavirus Disease (COVID-19) pandemic have had deep negative impacts on mental health on both adults and children, leading to increased mental disorders and somatic symptoms in otherwise healthy individuals [1, 2]. Clinicians have experienced how emotional stress and concern about the global pandemic may degenerate into heightened anxiety and stress responses with downstream effects on overall health, in turn resulting in misplaced health-protective and help-seeking behaviors [3].

Beyond the direct consequences related to the infection, we can assume clinicians are going to be challenged by the urgency and the need to face this emerging spectrum of reactive disorders. Pediatric urologists as well are going to be involved, since emotional stress often underlies specific urological conditions such as extraordinary daytime urinary frequency (EDUF), nocturnal enuresis and urinary incontinence [4, 5]. EDUF is a benign self-limited condition characterized by daytime frequent voiding without complaint of burning, urinary incontinence, altered urinary stream in the nighttime, excessive fluid intake nor excessive urinary volume [5]. Despite the lack of recent literature in children, a recent study on a cohort of adults described frequent urination (> 3 times/hour) as a reactive symptom of an undefined “home staying syndrome” together with abnormal sleep (altered sleep time and duration) [6]. It is likely that the current pandemic may increase the incidence of EDUF, nocturnal enuresis and urinary incontinence in children, too, maybe modifying the age of presentation. According to the International Children’s Continence Society definition [7], children diagnosed with EDUF are previously toilet-trained children, they complain frequent voiding and small micturition volumes solely during the day. The daytime voiding frequency is at least once per hour with an average voided volume of < 50% of expected bladder capacity. Comorbidities, such as polydipsia, diabetes mellitus, nephrogenic diabetes insipidus, daytime polyuria, urinary tract infections or viral syndrome, need to be excluded. Patients should be given a voiding diary to record each micturition, paying particular attention to the volume of the very first urination of the day in order

to estimate bladder capacity. Diagnosis of EDUF is likely when bladder capacity is unharmed, there is no sign of urinary tract infection (negative urine sticks) and there is no evidence of altered urinary stream at night.

Now more than ever, pediatricians need to be trained in recognizing signs and symptoms of EDUF as well as nocturnal enuresis and urinary incontinence. Besides, when EDUF is suspected, a multi-disciplinary team including a pediatrician, a pediatric urologist and a child and adolescent psychiatrist should cooperate towards a prompt diagnosis and an adequate support both to patients and their families.

### Declaration of interest

The Authors declare that there is no conflict of interest.

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