

Evidence Profile 1.1: A Proactive Approach to Bladder and Bowel Management in Adults

Recommendation 1.1 Evidence Profile (Quantitative)

Recommendation Question 1: Should toileting strategies be recommended to improve outcomes in persons living with urinary incontinence?

Recommendation 1.1: The expert panel recommends that health providers encourage individualized toileting strategies in persons living with urinary incontinence.

Population: Adults (18 and older) living with urinary incontinence

Intervention: Toileting strategies

Comparison: No toileting strategies

Outcomes: Episodes of incontinence, quality of life and use of incontinence products

Setting: All health settings

Bibliography: 177, 2332, 3571

Quality assessment							Study details		No. of participants		Reported effects/outcomes	Certainty	Reference
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication Bias	Country	Intervention	Intervention	Control			
Episodes of Incontinence (measured using UDI-SF6 ¹ questionnaire, ICIQ-OAB ² questionnaire, voiding diaries, objective measurements such as wet episodes per day, incontinence rate per day, and use of incontinence products)													
2	RCT	Not serious ^a	Serious ^b	Not serious ^c	Serious ^d	Not serious	177: Hong Kong	Prompted voiding intervention delivered by nursing home staff (5 nursing homes) to its residents for 6 months. The residents were prompted to void every 2 to 2.5 hours from 7:00AM to 7:00PM for 7 days a week. The participants were adults 65 and over. Control group received usual care.	N = 26 *Values are given as mean (SD) Average wet episodes/day (number of times wet diapers were collected per day) At baseline = 3.7 (1.8) At 6 months after intervention = 3.1 (1.4)	N = 22 *Values are given as mean (SD) Average wet episodes/day (number of times wet diapers were collected per day) At baseline = 3.7 (1.2) At 6 months after intervention = 4.2 (1.3)	177: There was reduction in wet episodes/day as well as incontinence rate/day (9.1% decrease) after the intervention.	⊕⊕○○ LOW	177: Lai & Wan (2017) 3571: Rizvi et al., 2018

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							3571: Pakistan	Bladder training (BT) sessions, which included urge suppression techniques, self-monitoring (voiding dairies) and life style modifications. The BT sessions were provided by physicians and incontinence nurses for 12 weeks. The initial training session was 20min and was reinforced on subsequent visits. Participants were all women between ages 22-65 years.	<p>Average incontinence rate/day (%)</p> <p>At baseline = 61.6 (29.0)</p> <p>At 6 months after intervention = 52.5 (22.6)</p> <p>N = 47</p> <p>Average incontinence score after treatment in BT arm= 4.77±5.5 (mean ± SD)</p>	<p>Average incontinence rate/day (%)</p> <p>At baseline = 61.8 (19.3)</p> <p>At 6 months after intervention = 70.4 (21.4)</p> <p>N = 47</p> <p>Average incontinence score before treatment in BT arm = 8.38±4.3 (mean ± SD)</p>	<p>3571:</p> <p>There was an average reduction of 3.1 in incontinence score in the intervention group.</p> <p>Overall, both studies demonstrated a reduction in episodes of incontinence with the use of a toileting intervention.</p>		
1	Quasi-experimental study – prospective, before and after	Very serious ^e	Not serious	Not serious	Serious ^d	Not serious	2332: Korea	30 minutes systematized bladder training (BT) program, which consisted of :1) education of normal daytime frequency and amount; 2) watching videos of normal physiology of urination; 3) education of holding urine till a certain goal; 4) education on how to train the bladder including: a) refraining from going to the bathroom after feeling an urge to void, b) in order to stop thinking	<p>*Values are presented as mean ± SD</p> <p>Average Incontinence Rates</p> <p>A) Baseline (n=85) = 0.6±0.8</p> <p>B) 1st education</p>	No control	The study reported a trend towards reduction in incontinence rates after 1 st and 2 nd education sessions compared to the baseline.	⊕○○○ VERY LOW	2332: Lee et al., 2013

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								<p>about voiding, ceasing action and thought temporarily, and c) performing pelvic floor exercises 5 to 6 times</p> <p>1 month after the first BT, patients received a reinforcement BT of the same educational content.</p> <p>The average follow up period was 13.5±12.8 weeks.</p> <p>Participants were men and women aged 40 and above.</p>	<p>(n=69) = 0.5±0.6</p> <p>C) 2nd education (n=39) = 0.5±0.6</p> <p>Between (A) and (B), p= 0.278</p> <p>Between (B) and (C), p = 0.058</p>				
Quality of Life (measured using questionnaires IIQ-SF7 ³ , OAB-q ⁴ , SF-36 ⁵)													
1	RCT	Serious ^f	Not serious	Not serious ^c	Serious ^d	Not serious	3571: Pakistan	Bladder training (BT) sessions, which included urge suppression techniques, self-monitoring (voiding dairies) and life style modifications. The BT sessions were provided by physicians and incontinence nurses for 12 weeks. The initial session was 20min and was reinforced on subsequent visits. Participants were all women between ages 22-65 years.	N = 47 Average QOL score after treatment in BT arm= 5.34 ± 5.8 (mean ± SD)	N = 47 Average QOL score before treatment in BT arm= 8.30 ± 5.7 (mean ± SD)	The mean difference in QOL scores = 2.95±7.5 (p =0.009). There was an improvement in QOL scores after the BT intervention. *QOL was measured using IIQ-SF7 questionnaire. The scores range from 0 to 100; higher scores indicate lower quality of life.	⊕⊕○○ LOW	3571: Rizvi et al., 2018
1	Quasi-experimental - prospective, before	Very Serious ^e	Not serious	Not serious	Serious ^d	Not serious	2332: Korea	30 minutes systematized bladder training (BT) program, which consisted of :1) education of normal daytime frequency and amount; 2) watching videos of normal physiology of urination; 3)	HRQOL Total (OAB-q) A) Baseline (n=85) =	No control	HRQOL Total (OAB-q) - The study reported an improvement in HRQOL after the first education session compared to baseline. The study	⊕○○○ VERY LOW	2332: Lee et al., 2013

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	and after							<p>education of holding urine till a certain goal; 4) education on how to train the bladder including: a) refraining from going to the bathroom after feeling an urge to void, b) in order to stop thinking about voiding, ceasing action and thought temporarily, and c) performing pelvic floor exercises 5 to 6 times</p> <p>1 month after the first BT, patients received a reinforcement BT of the same educational content.</p> <p>The average follow up period was 13.5±12.8 weeks.</p> <p>Participants were men and women aged 40 and above.</p>	<p>63.0±26.3</p> <p>B) 1st education (n=69) = 51.1±22.6</p> <p>C) 2nd education (n=39) = 49.6±22.6</p> <p>Between (A) and (B), p= <0.001</p> <p>Between (B) and (C), p = 0.564</p> <p>QOL (SF-36) - 8 DOMAINS</p> <p>*Values are presented as mean ± SD</p> <p>See p. 14 (Table 2) of study 2332 for scores of these 8 domains.</p>		<p>reported a trend towards improvement in HRQOL between 1st and 2nd BT education sessions.</p> <p>SF-36 - Among the SF-36 domains, the Role-physical domain showed improvement after the first BT and the General Health domain showed improvement after the second BT.</p> <p>For the remaining 6 domains, the study reported a trend towards improvement in QOL between baseline, after 1st and 2nd education sessions.</p>		
Use of Incontinence Products (measured objectively)													
1	RCT	Not serious ^a	Not serious	Not serious	Serious ^d	Not serious	177: Hong Kong	Prompted voiding intervention delivered by nursing home staff (5 nursing homes) to its residents for 6 months. The residents were	N = 26 *Values are given	N = 22 *Values are given	177: There was a reduction in the use of incontinence products per day after the	⊕⊕⊕○ Moderate	177: Lai & Wan (2017)

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								<p>prompted to void every 2 to 2.5 hours from 7:00AM to 7:00PM for 7 days a week. The participants were adults 65 years and older.</p> <p>Control group received usual care.</p>	<p>as mean (SD)</p> <p>Average wet episodes/day (number of times wet diapers were collected per day)</p> <p>At baseline = 3.7 (1.8)</p> <p>At 6 months after intervention = 3.1 (1.4)</p> <p>Average incontinence rate/day (%)</p> <p>At baseline = 61.6 (29.0)</p> <p>At 6 months after intervention = 52.5 (22.6)</p>	<p>as mean (SD)</p> <p>Average wet episodes/day (number of times wet diapers were collected per day)</p> <p>At baseline = 3.7 (1.2)</p> <p>At 6 months after intervention = 4.2 (1.3)</p> <p>Average incontinence rate/day (%)</p> <p>At baseline = 61.8 (19.3)</p> <p>At 6 months after intervention = 70.4 (21.4)</p>	intervention.		

1. UDI-SF6: Urogenital Distress Inventory Short Form 6
2. ICIQ-OAB: International Consultation on Incontinence Questionnaire for Overactive Bladder
3. IIQ-SF7: Incontinence Impact Questionnaire Short Form 7
4. OAB-q: Overactive Bladder Questionnaire
5. SF-36: Short Form 36-item Health Survey

Explanations

- a. Based on the Risk of Bias tool for Randomized Controlled Trials, the studies had some concerns related to risk of bias due to limitations in how the studies were conducted. Therefore, we downgraded by 0.5.
- b. The data collection tools varied between studies; therefore we downgraded by 0.5.
- c. In study 3571, bladder training was part of a multi component program. Further, all participants in this study were women. Therefore, we downgraded by 0.5.

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- d. Total number of participants was less than the optimal 400 participants. We downgraded by 1.
- e. Based on the ROBINS-I tool for quasi-experimental studies, the study had very serious concerns related to risk of bias due to limitations in how the study was conducted. We downgraded by 1.5.
- f. Based on the Risk of Bias tool for Randomized Controlled Trials, the study had some serious concerns related to risk of bias due to limitations in how the study was conducted. Therefore, we downgraded by 1.

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