

Appendix Table 2. The Effects of Behavioral Interventions on Female Urinary Incontinence: Results from Randomized Controlled Clinical Trials*

Author Sample Followup	Active Treatment	Control Treatment	Outcome	(Events/Active Treatment) [Events/Control Treatment]	Relative Risk (95% CI)	Risk Difference (95%CI)	Quality Issues
Continence							
Aksac, 2003; (98) N = 50, stress UI 2 month followup	Pelvic floor muscle training via biofeedback (vaginal probe in electromyography pressure mode)	Usual care	Negative pad test	(16/20) [0/10]	17.29 (1.14; 261.69)		Intention to treat not stated. Randomization with choosing closed letters (patients had to pick up closed letters). Allocation concealment not adequate. Baseline data confirmed adequacy of randomization. Sample size not justified.
	Pelvic floor muscle training and biofeedback via digital palpation at home	Usual care	Negative pad test	(15/20) [0/10]	16.24 (1.07; 246.51)		
Bo, 2005(105) N = 47, urodynamic stress UI 180 month followup	Pelvic floor muscle training under the supervision of physical therapist	Home exercise groups	Self reported continence	(13/21) [4/26]	4.02 (1.54; 10.53)	0.47 (0.22; 0.71)	Intention to treat. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size justified.
Borello-France, 2006(146) N = 44, stress UI 3 month followup	pelvic-floor muscle exercises with electromyography biofeedback in the supine position	pelvic-floor muscle exercises with electromyography biofeedback in both supine and upright positions	Self reported continence+ negative stress test	(13/22) [13/22]	1.00 (0.61; 1.64)	0.00 (-0.29; 0.29)	Intention-to-treat. Open label. Block randomization schedule with a random-number table. Allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.
Mørkved, 2002, (85) N = 103, urodynamic stress UI 6 month followup	Pelvic floor muscle training, individually supervised by a physical therapist and at home with a biofeedback	Pelvic floor muscle training, individually supervised by a physical therapist and at	Negative pad test	(28/53) [21/50]	1.26 (0.83; 1.90)	0.11 (-0.08; 0.30)	Intention to treat. Single blind. Centralized but no computerized randomization stratified by results of a pad test with standardized bladder volume (20g or less and more than 20g of leakage). Allocation concealment not adequate.

	apparatus	home without biofeedback					Baseline data confirmed adequacy of randomization. Sample size justified.
Moore, 2003(104) N = 145, stress and/or urge 3 month followup	Nurse continence advisors and consulting urogynecologist provided bladder training, gradual increase in fluid intake, pelvic floor muscle training, and transvaginal electro stimulation	Outpatient regimen with 15-20 minute consultation and referral to physiotherapist and bladder training	Negative pad test	(37/74) [27/71]	1.31 (0.90; 1.91)	0.12 (-0.04; 0.28)	Intention to treat. Open label. Computer-generated randomization stratified with respect to mild and moderate leakage with permuted blocks of 20. Allocation concealment not adequate. Baseline data confirmed adequacy of randomization. Sample size justified.
Bo, 1999(80) N = 122, urodynamic stress UI 6 month followup	Pelvic floor muscle training at home and in groups with skilled physical therapists	Use of a continence guard	Self reported continence	(14/29) [1/32]	15.45 (2.16; 110.28)	0.45 (0.26; 0.64)	Intention to treat. Single blind. Computer generated random numbers stratified by baseline leakage. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.
Goode, 2003(107) N = 200, stress UI 2 month followup	Behavioral training (biofeedback-assisted pelvic floor muscle training, bladder control strategies, and self-monitoring with bladder diaries) and pelvic floor electrical stimulation	Self-administered behavioral training administered with a self-help booklet	Negative stress test	(32/67) [25/67]	1.28 (0.86; 1.91)	0.10 (-0.06; 0.27)	Intention to treat. Open label. Computer-generated stratified by types and severity of incontinence and race randomization with block size of 6. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.
Wang, 2004(143) N = 120, overactive bladder 3 month	Electrical stimulation in the management of overactive bladder	Pelvic floor muscle training	Self reported continence	(17/42) [12/40]	1.35 (0.74; 2.46)	0.10 (-0.10; 0.31)	No intention to treat. Single blind. Central computer-generated randomization in blocks of 6. Allocation concealment adequate. Baseline data did not confirm adequacy of randomization. Sample

followup							size justified.
Cammu, 1998(147) N = 30, urodynamic stress UI 3 month followup	Weekly session of pelvic floor muscle training/vaginal probe-electromyography biofeedback	Vaginal weight cones (20, 32, 45, 57 and 70g)	Negative stress test	(12/30) [12/30]	1.00 (0.54; 1.86)	0.00 (-0.25; 0.25)	Intention to treat. Open label. Computerized randomization with random numbers tables. Allocation concealment not adequate. Baseline data confirmed adequacy of randomization. Sample size not justified
Wang, 2004(143) N = 120, overactive bladder 3 month followup	Biofeedback-assisted pelvic floor muscle training with a vaginal probe-electromyography biofeedback	Pelvic floor muscle training	Self reported continence	(15/38) [12/40]	1.32 (0.71; 2.44)	0.09 (-0.12; 0.31)	No intention to treat. Single blind. Central computer-generated randomization in blocks of 6. Allocation concealment adequate. Baseline data did not confirm adequacy of randomization. Sample size justified.
Bo, 1999(80) N = 122, urodynamic stress UI 6 month followup	pelvic floor muscle training at home and in groups with skilled physical therapists 1/week	Use of a continence guard	Negative pad test	(11/29) [2/32]	6.07 (1.47; 25.12)	0.32 (0.12; 0.51)	Intention to treat. Single blind. Computer generated random numbers stratified by baseline leakage. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Baseline data confirmed adequacy of randomization. Sample size justified.
Kim, 2001(102) N = 33, stress or mixed UI 3 month followup	Continence Efficacy Intervention Program: common pelvic floor muscle education, audiovisual tape, schedule guideline, assessing self-care methods	Conventional care	Self reported continence	(6/16) [2/17]	3.19 (0.75; 13.55)	0.26 (-0.03; 0.54)	No Intention to treat. Open label. Randomization by the order of coming to the clinic. Allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.
Diokno, 2004(96) N = 359, continent women (0-5	Behavioral modification program: pelvic floor muscle training, bladder	Usual care	Self reported continence	(61/164) [55/195]	1.32 (0.98; 1.78)	0.09 (-0.01; 0.19)	Intention to treat not stated. Single blind (nurse examiner). Randomizations in blocks of 16 women to provide balanced recruitment between groups.

days of incontinent episodes in the previous year) 12 month followup	training						Allocation concealment adequate. Results adjusted to baseline differences. Sample size not justified.
Elser, 1999(144) N = 204, stress UI or detrusor instability 3 month followup	Pelvic floor muscle training with visual and verbal biofeedback	Bladder training	Self reported continence	(25/68) [17/68]	1.47 (0.88; 2.46)	0.12 (-0.04; 0.27)	No intention to treat Open label. Stratified by severity of urinary incontinence, urodynamic diagnosis, and treatment site randomization. Allocation concealment not reported. Baseline data did not confirm adequacy of randomization. Sample size justified.
Mørkved, 2002, (85) N = 103, urodynamic stress UI 6 month followup	Pelvic floor muscle training, individually supervised by a physical therapist and at home with a biofeedback apparatus	Pelvic floor muscle training, individually supervised by a physical therapist and at home without biofeedback	Self Reported Continence	(19/53) [14/50]	1.28 (0.72; 2.27)	0.08 (-0.10; 0.26)	Intention to treat. Single blind. Centralized but no computerized randomization stratified by results of a pad test with standardized bladder volume (20 g or less and more than 20g of leakage). Allocation concealment not adequate. Baseline data confirmed adequacy of randomization. Sample size justified.
McFall, 2000(103) N = 145, any UI 3 month followup	Community-based intervention: bladder training, managing the urge to urinate, and performing pelvic muscle exercises	Usual care	Self reported continence	(25/72) [15/73]	1.69 (0.97; 2.93)	0.14 (0.0; 0.29)	No intention to treat. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. No justification for sample size.
Alewijnse, 2003 (148) N = 129, any UI 14 month followup	Pelvic floor muscle training with reminder and self-help guide	Bladder training and pelvic floor muscle training	Self reported continence	(17/52) [21/51]	0.79 (0.48; 1.32)	-0.08 (-0.27; 0.10)	Intention to treat. Open label. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.
Bo, 2005(105) N = 47,	Intensive pelvic floor muscle	Home exercise groups	Self reported continence	(6/21) [4/26]	1.86 (0.60;	0.13 (-0.11;	Intention to treat. Open label. Randomization and allocation

urodynamic stress UI 180 month followup	training with 8-12 maximum contractions for 6-8 seconds 3 series/ day under the supervision of physical therapist for 6 months				5.73)	0.37)	concealment not reported. Baseline data confirmed adequacy of randomization. Sample size justified.
Goode, 2003(107) N = 200, stress UI 2 month followup	Behavioral training (biofeedback-assisted pelvic floor muscle training, home exercises, bladder control strategies, and self-monitoring with bladder diaries)	Self-administered behavioral training administered with a self-help booklet	Negative stress test	(18/66) [25/67]	0.73 (0.44; 1.21)	-0.10 (-0.26; 0.06)	Intention to treat. Open label. Computer-generated stratified by types and severity of incontinence and race randomization with block size of 6. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.
Wells, 1991(135) N = 157, stress UI 6 month followup	Pelvic muscle exercises	Phenylpropanolamine hydrochloride in a dose of 50 mg/ day, increasing to 50 mg 2 times/day	Self reported continence	(22/82) [11/75]	1.85 (0.96; 3.56)	0.12 (0.00; 0.25)	No Intention to treat. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified
Wyman, 1998(149) N = 204, urodynamic stress UI 6 month followup	Combination of bladder training and pelvic muscle exercise	Bladder training	Self reported continence	(16/67) [10/68]	1.62 (0.79; 3.32)	0.09 (-0.04; 0.22)	No intention to treat. Open label. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.
Arvonen, 2001(150) N = 37, stress UI 4 month followup	Pelvic floor muscle training program	Pelvic floor muscle training program using weighted vaginal balls	Negative pad test	(5/19) [9/18]	0.53 (0.22; 1.27)	-0.24 (-0.54; 0.07)	No intention to treat. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.

		50-100 g					
Berghmans, 1996, (151) N = 40, urodynamic stress UI 3 month followup	Pelvic floor muscle training with electromyography biofeedback	Pelvic floor muscle training	Self reported continence	(5/20) [3/20]	1.67 (0.46; 6.06)	0.10 (-0.15; 0.35)	Intention to treat Single blind. Computer generated randomization stratified by seriousness of incontinence (grade 1 and 2) and by referral (general practitioner or urologist) with permuted blocks of 4. Allocation concealment not adequate. Baseline data confirmed adequacy of randomization. Sample size not justified.
Burns, 1993(100) N = 135, urodynamic stress UI 6 month followup	Biofeedback using vaginal electromyography probe	Usual care	Self reported continence	(9/40) [1/39]	8.78 (1.17; 66.04)	0.20 (0.06; 0.34)	No Intention to treat. Single-blind. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified
Janssen, 2001(106) N = 530, any UI 12 month followup	Individual pelvic floor muscle training and bladder training	Group pelvic floor muscle training bladder training	Self reported continence	(28/126) [57/404]	1.58 (1.05; 2.36)	0.08 (0.00; 0.16)	Intention to treat. Single blind. Stratified by type, severity and duration of incontinence frequency sampling randomization. Allocation concealment not adequate. Baseline data confirmed adequacy of randomization. Sample size not justified.
Lagro-Janssen, 1991(152) N = 66, urodynamic stress UI 3 month followup	Instructions in pelvic floor muscle training	No therapy	Self reported continence	(7/33) [1/33]	7.00 (0.91; 53.78)	0.18 (0.03; 0.33)	Intention to treat not stated. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.
Janssen, 2001(106) N = 530, any UI 12 month followup	Individual pelvic floor exercises 5 times/day and bladder training with delay voiding, training with 11 30	Group pelvic floor exercises 5 times/day and bladder training with delay	Self reported continence	(25/126) [53/404]	1.5 (1.0; 2.3)	0.07 (-0.01; 0.14)	Intention to treat. Single blind. Stratified by type, severity and duration of incontinence frequency sampling randomization. Allocation concealment not adequate. Baseline data confirmed adequacy of randomization. Sample size not

	minute sessions.	voiding, training with 9 2 hour sessions					justified.
Wyman, 1998(149) N = 204, urodynamic stress UI 6 month followup	Pelvic muscle exercise with biofeedback- assisted instruction	Bladder training	Self reported continence	(13/69) [10/68]	1.28 (0.60; 2.72)	0.04 (-0.08; 0.17)	No intention to treat. Open label. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.
Burgio, 2002(153) N = 222,urge or mixed UI 2 month followup	Biofeedback- assisted behavioral training implemented by nurse practitioners	Self- administered behavioral treatment using booklet to advise pelvic floor muscle training and bladder control	Self reported continence	(15/73) [11/75]	1.40 (0.69; 2.84)	0.06 (-0.06; 0.18)	Intention-to-treat. Open label. Randomization stratified by race, type, and severity of incontinence. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.
	Behavioral training without biofeedback pelvic floor muscle training	Self- administered behavioral treatment using booklet to advise pelvic floor muscle training and bladder control	Self reported continence	(15/74) [11/75]	1.38 (0.68; 2.81)	0.06 (-0.07; 0.18)	
Lagro-Janssen, 1992(99) N = 106, stress or urge UI 3 month followup	Pelvic floor muscle training alone (stress) or bladder training (urge) or its combination (mixed)	Usual care	Self reported continence	(10/54) [1/56]	10.37 (1.37; 78.28)	0.17 (0.06; 0.28)	Intention to treat not stated. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.
Goode, 2003(107)	Behavioral training	Self- administered	Self reported continence	(11/66) [10/67]	1.12 (0.51;	0.02 (-0.11;	Intention to treat. Open label. Computer-generated stratified by

N = 200, stress UI 2 month followup	(biofeedback-assisted pelvic floor muscle training, home exercises, bladder control strategies, and self-monitoring with bladder diaries)	behavioral training administered with a self-help booklet			2.45)	0.14)	types and severity of incontinence and race randomization with block size of 6. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.
Burns, 1993(100) N = 135, urodynamic stress UI 6 month followup	Pelvic muscle exercise with increased intensity	Usual care	Self reported continence	(7/43) [1/39]	6.35 (0.82; 49.32)	0.14 (0.02; 0.26)	No Intention to treat. Single-blind. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified
Goode, 2003(107) N = 200, stress UI 2 month followup	Behavioral training (biofeedback-assisted pelvic floor muscle training, home exercises, bladder control strategies, self-monitoring with bladder diaries) and pelvic floor electrical stimulation	Self-administered behavioral training administered with a self-help booklet	Self reported continence	(10/67) [10/67]	1.00 (0.45; 2.24)	0.00 (-0.12; 0.12)	Intention to treat. Open label. Computer-generated stratified by types and severity of incontinence and race randomization with block size of 6. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.
Elser, 1999(144) N = 204, stress UI or detrusor instability 3 month followup	Pelvic floor muscle training combined with bladder training	Bladder training	Self reported continence+ negative stress test	(10/68) [17/68]	0.59 (0.29; 1.19)	-0.10 (-0.24; 0.03)	No intention to treat Open label. Stratified by severity of urinary incontinence, urodynamic diagnosis, and treatment site randomization. Allocation concealment not reported. Baseline data did not confirm adequacy of randomization. Sample size justified.
Fantl, 1991(86) N = 131,	Bladder training included participant	Usual care	Self reported continence	(8/65) [2/66]	4.06 (0.90; 18.41)	0.09 (0.00; 0.18)	No intention to treat. Open label Randomization stratified by urodynamic incontinence. Allocation

urodynamic UI 1.5 month followup	education, voiding schedule, and positive reinforcement						concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.
Arvonen, 2001(150) N = 37, stress UI 4 month followup	Pelvic floor muscle training program	Pelvic floor muscle training program using weighted vaginal balls 50-100 g	Self reported continence	(0/19) [4/18]	0.11 (0.01; 1.83)	-0.22 (-0.43; - 0.02)	No intention to treat. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.
Wells, 1991(135) N = 157, stress UI 6 month followup	Pelvic floor muscle training	Phenylpropano lamine hydrochloride (50 mg/day- 50 mg 2 times/day)	Negative stress test	(77/82) [70/75]	1.01 (0.93; 1.09)	0.01 (-0.07; 0.08)	No Intention to treat. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified
Janssen, 2001(106) N = 530, any UI 9 month followup	Individual pelvic floor muscle training and bladder training	Group pelvic floor muscle training and bladder training	Improved continence at 3 months	(118/126) [347/404]	1.09 (1.03; 1.16)	0.08 (0.02; 0.13)	Intention to treat. Single blind. Stratified by type, severity and duration of incontinence frequency sampling randomization. Allocation concealment not adequate. Baseline data confirmed adequacy of randomization. Sample size not justified.
Improvement in UI							
Subak, 2005(138) N = 48, any UI 3 month followup	Weight reduction intervention	Delayed weight reduction intervention	Improved incontinent episodes/ week	(22/24) [0/24]	45.00 (2.89; 701.8 5)		Intention to treat. Single blind (investigators assessing outcomes and statistical analysts). Randomization was stratified by type of incontinence, with randomly permuted blocks of 4. Allocation concealment adequate. Baseline data confirmed adequacy of randomization. Sample size justified.
Goode, 2003(107) N = 200, stress UI 2 month followup	Behavioral training (biofeedback- assisted pelvic floor muscle training, home	Self- administered behavioral training administered with a self-	>50% reduction in weekly incontinence episodes	(58/67) [38/67]	1.53 (1.21; 1.92)	0.30 (0.15; 0.44)	Intention to treat. Open label. Computer-generated stratified by types and severity of incontinence and race randomization with block size of 6. Allocation concealment unclear. Baseline data confirmed adequacy of

	exercises, bladder control strategies, and self-monitoring with bladder diaries) and pelvic floor electrical stimulation	help booklet					randomization. Sample size justified.
Janssen, 2001(106) N = 530, any UI 9 month followup	Individual pelvic floor muscle training and bladder training	Group pelvic floor muscle training and bladder training	Improved continence at 9 months	(107/126) [315/404]	1.09 (1.00; 1.19)	0.07 (0.00; 0.14)	Intention to treat. Single blind. Stratified by type, severity and duration of incontinence frequency sampling randomization. Allocation concealment not adequate. Baseline data confirmed adequacy of randomization. Sample size not justified.
Lagro-Janssen, 1991(152) N = 66, urodynamic stress UI 3 month followup	Instructions in pelvic floor muscle training	No therapy	Improved continence	(28/33) [0/33]	57.00 (3.62; 896.3 8)	0.85 (0.72; 0.98)	Intention to treat not stated. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.
Goode, 2002(154) N = 70, urodynamic bladder dysfunction, urge UI 2 month followup	Sessions of biofeedback-assisted behavioral training by nurse practitioners	Usual care	Improved continence	(27/33) [19/37]	1.59 (1.12; 2.27)	0.30 (0.10; 0.51)	No Intention to treat. Single blind. Randomization and allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size not justified.
Goode, 2003(107) N = 200, stress UI 2 month followup	Behavioral training (biofeedback-assisted pelvic floor muscle training, home exercises,	Self-administered behavioral training administered with a self-help booklet	>50% reduction in weekly incontinence episodes	(53/66) [38/67]	1.42 (1.11; 1.80)	0.24 (0.08; 0.39)	Intention to treat. Open label. Computer-generated stratified by types and severity of incontinence and race randomization with block size of 6. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.

	bladder control strategies, and self-monitoring with bladder diaries)						
Fantl, 1991(86) N = 131, urodynamic UI 1.5 month followup	Bladder training included participant education; voiding schedule and positive reinforcement	Usual care	>50% reduction in urinary incontinence episodes	(49/65) [16/66]	3.11 (1.99; 4.87)	0.51 (0.36; 0.66)	No intention to treat. Open label Randomization stratified by urodynamic incontinence. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.
Lagro-Janssen, 1991(152) N = 66, urodynamic stress UI 3 month followup	Instructions in pelvic floor muscle training	No therapy	Improvement in psychological impact of urinary incontinence	(23/33) [0/33]	47.00 (2.97; 742.97)	0.70 (0.53; 0.86)	Intention to treat not stated. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.
Lagro-Janssen, 1992(99) N = 106, stress or urge UI 3 month followup	Pelvic floor muscle training alone (stress) or bladder training (urge) or its combination (mixed)	Usual care	Improved continence	(40/54) [2/56]	20.74 (5.27; 81.63)	0.71 (0.58; 0.83)	Intention to treat not stated. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.
Subak, 2005(138) N = 48, any UI 3 month followup	Weight reduction intervention	Delayed weight reduction intervention	Reduction in urge incontinent episodes a week	(17/24) [3/24]	5.67 (1.91; 16.84)	0.58 (0.36; 0.81)	Intention to treat. Single blind (investigators assessing outcomes and statistical analysts). Randomization was stratified by type of incontinence, with randomly permuted blocks of 4. Allocation concealment adequate. Baseline data confirmed adequacy of randomization. Sample size justified.
Berghmans, 1996, (151) N = 40, urodynamic stress UI 3 month	Pelvic floor muscle training with electromyography biofeedback	Pelvic floor muscle exercise	Improved continence	(14/20) [14/20]	1.00 (0.67; 1.50)	0.00 (-0.28; 0.28)	Intention to treat Single blind. Computer generated randomization stratified by seriousness of incontinence (grade 1 and 2) and by referral (general practitioner or urologist) with permuted blocks of 4.

followup							Allocation concealment not adequate. Baseline data confirmed adequacy of randomization. Sample size not justified.
Lagro-Janssen, 1991(152) N = 66, urodynamic stress UI 3 month followup	Instructions in pelvic floor muscle training	No therapy	Improvement in psychological impact of urinary incontinence	(23/33) [0/33]	47.00 (2.97; 742.9 7)	0.70 (0.54; 0.86)	Intention to treat not stated. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.
McFall, 2000(103) N = 145, any UI 3 month followup	Community-based intervention: bladder training, managing the urge to urinate, and pelvic muscle exercises	Usual care	>50% reduction in reduction in urinary incontinence episodes	(44/72) [28/73]	1.59 (1.13; 2.25)	0.23 (0.07; 0.39)	No intention to treat. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. No justification for sample size.
Burns, 1993 (100) N = 135, urodynamic stress UI 6 month followup	Electromyography biofeedback and pelvic floor muscle training	Usual care	Improved continence	(24/40) [2/39]	11.70 (2.96; 46.20)	0.55 (0.38; 0.72)	No Intention to treat. Single-blind. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified
Burns,1990 (155) N = 128, stress or mixed UI 2 month followup	Biofeedback with vaginal electromyography probe and visual control	Usual care	Self reported reduction in urine loss	(24/40) [0/40]	49.00 (3.08; 779.0 7)	0.60 (0.45; 0.75)	Intention to treat not stated. Single blind. Randomization with permuted blocks of 10. Allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.
Subak, 2005(138) N = 48, any UI 3 month followup	Weight reduction intervention	Delayed weight reduction intervention	Improvement in total incontinent episodes/ week	(14/24) [4/24]	3.50 (1.35; 9.11)	0.42 (0.17; 0.66)	Intention to treat. Single blind (investigators assessing outcomes and statistical analysts). Randomization was stratified by type of incontinence, with randomly permuted blocks of 4. Allocation concealment adequate. Baseline data confirmed adequacy of randomization. Sample size justified.

Goode, 2003(107) N = 200, stress UI 2 month followup	Behavioral training (biofeedback-assisted pelvic floor muscle training, home exercises, bladder control strategies, and self-monitoring with bladder diaries) and pelvic floor electrical stimulation	Self-administered behavioral training administered with a self-help booklet	>75% reduction in weekly incontinence episodes	(40/67) [30/67]	1.33 (0.96; 1.86)	0.15 (-0.02; 0.32)	Intention to treat. Open label. Computer-generated stratified by types and severity of incontinence and race randomization with block size of 6. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.
Burgio, 2002(153) N = 222, urge or mixed UI 2 month followup	Pelvic floor muscle training	Self-administered behavioral treatment using a self-help booklet	Urinary incontinence does not restrict daily activities	(43/74) [31/75]	1.4 (1.0; 2.0)	0.17 (0.01; 0.33)	Intention-to-treat. Open label. Randomization stratified by race, type, and severity of incontinence. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.
Arvonen, 2001(150) N = 37, stress UI 4 month followup	Pelvic floor muscle training program	Pelvic floor muscle training program using weighted vaginal balls 50-100g	Improved continence	(11/19) [7/18]	1.49 (0.74; 2.98)	0.19 (-0.13; 0.51)	No intention to treat. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.
Goode, 2003(107) N = 200, stress UI 2 month followup	Behavioral training (biofeedback-assisted pelvic floor muscle training, home exercises, bladder control strategies, and self-monitoring	Self-administered behavioral training administered with a self-help booklet	>75% reduction in weekly incontinence episodes	(38/66) [30/67]	1.29 (0.92; 1.80)	0.13 (-0.04; 0.30)	Intention to treat. Open label. Computer-generated stratified by types and severity of incontinence and race randomization with block size of 6. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.

	with bladder diaries)						
Diokno, 2004(96) N = 359, continent women (0-5 days of incontinent episodes in the previous year) 12 month followup	Behavioral modification program: pelvic floor muscle training, bladder training	Usual care	Improved continence	(92/164) [80/195]	1.37 (1.10; 1.70)	0.15 (0.05; 0.25)	Intention to treat not stated. Single blind (nurse examiner). Randomizations in blocks of 16 women to provide balanced recruitment between groups. Allocation concealment adequate. Results adjusted to baseline differences. Sample size not justified.
Burns, 1993(100) N = 135, urodynamic stress UI 6 month followup	Pelvic floor muscle training	Usual care	Improved continence	(23/43) [2/39]	10.43 (2.63; 41.39)	0.48 (0.32; 0.65)	No Intention to treat. Single-blind. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified
Burns, 1990(155) N = 128, stress or mixed UI 2 month followup	Kegel pelvic floor muscle training	Usual care	Self reported reduction in urine loss	(21/38) [0/40]	45.21 (2.83; 720.96)	0.55 (0.39; 0.71)	No Intention to treat not stated. Single blind. Randomization with permuted blocks of 10. Allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.
Subak, 2002(156) N = 152, any UI 1.5 month followup	Sessions on bladder training by nurse educators and followed individualized voiding schedules	Usual care	Improved continence	(39/77) [11/75]	3.41 (1.89; 6.15)	0.35 (0.22; 0.49)	No Intention to treat. Single blind. Computer based randomization. Allocation concealment unclear. Baseline confirmed adequacy of randomization. Sample size justified.
Burgio, 2002(153) N = 222, urge or mixed UI 2 month followup	Biofeedback-assisted behavioral training implemented by nurse	Self-administered behavioral treatment using a self-help booklet	Urinary incontinence does not restrict daily activities Improved continence as	(36/73) [31/75] (33/73) [20/75]	1.19 (0.84; 1.70) 1.70 (1.08;	0.08 (-0.08; 0.24) 0.19 (0.03;	Intention-to-treat. Open label. Randomization stratified by race, type, and severity of incontinence. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.

	practitioners Pelvic floor muscle training with 10sec contractions and 10 sec relation for 45 min/day	to advise pelvic floor muscle training and bladder control	"much better" Improved continence as "much better"	(36/74) [20/75]	2.66 1.82 (1.17; 2.84)	0.34) 0.22 (0.07; 0.37)	
Bo,1999(80) N = 122, urodynamic stress UI 6 month followup	Pelvic floor muscle training at home and in groups with skilled physical therapists	Use of a continence guard	Urinary continence and almost continent	(12/29) [1/32]	13.24 (1.83; 95.63)	0.38 (0.19; 0.57)	Intention to treat. Single blind. Computer generated random numbers stratified by baseline leakage. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Baseline data confirmed adequacy of randomization. Sample size justified.
Aksac, 2003; (98) N = 50, stress UI 2 month followup	Pelvic floor muscle training with biofeedback	Usual care	Improvement in pad test	(5/20) [2/10]	1.25 (0.29; 5.35)	0.05 (-0.26; 0.36)	Intention to treat not stated. Randomization with choosing closed letters (patients had to pick up closed letters). Allocation concealment not adequate. Baseline data confirmed adequacy of randomization. Sample size not justified.
Wyman, 1998(149) N = 204, urodynamic stress UI 6 month followup	Pelvic muscle exercise with biofeedback- assisted instruction Combination of bladder training and pelvic muscle exercise	Bladder training	75-99% reduction in incontinence episodes/ week	(14/69) [9/68]	1.53 (0.71; 3.30)	0.07 (0.05; 0.20)	No intention to treat. Open label. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.
Wells, 1991(135) N = 157, stress UI 6 month followup	Pelvic floor muscle training	Phenylpropan olamine hydrochloride (50 mg/day- 50 mg 2 times/day)	Improved continence	(17/82) [29/75]	0.54 (0.32; 0.89)	-0.18 (-0.32; - 0.04)	No Intention to treat. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified
Aksac, 2003; (98) N = 50, stress	Pelvic floor muscle exercise (contractions for	Usual care	Improvement in stress urinary incontinence in	(4/20) [2/10]	1.0 (0.2; 4.6)	0.00 (-0.30; 0.30)	Intention to treat not stated. Randomization with choosing closed letters (patients had to pick up closed

UI
2 month
followup

10 seconds and relaxation for 20 seconds) via biofeedback (vaginal probe in electromyography pressure mode) 3 times/week

pad test

letters). Allocation concealment not adequate. Baseline data confirmed adequacy of randomization. Sample size not justified.

UI

Bo, 2005(105) N = 47, urodynamic stress UI 180 month followup	Intensive pelvic floor muscle training under the supervision of physical therapist	Home exercise groups	Stress UI	(19/21) [21/26]	1.12 (0.89; 1.41)	0.10 (-0.10; 0.29)	Intention to treat. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size justified.
Manonai, 2006(157) N = 42, at least one type of UI 3 month followup	Self-selected diet with low fat and low cholesterol foods and soy protein 25g in various forms of soy foods containing more than 50mg/day of isoflavones	Self selected diet with low fat and low cholesterol foods	% of women reporting urgency and mean scores after treatment % of women reporting frequency and mean scores after treatment	(21/36) [18/36] (18/36) [16/38]	1.2 (0.8; 1.8) 1.1 (0.7; 1.8)	0.08 (- 0.15; 0.31) 0.06 (0.17; 0.29)	No intention to treat. Single blind (physician and cytopathologist). Allocation concealment unclear. Baseline data provided with no analysis for incontinence rate. Sample size not justified.
McClurg, 2006(158) N = 30, multiple sclerosis and UI 24 month followup	Pelvic floor training and advice and electromyography biofeedback Pelvic floor training and advice with electromyography biofeedback + neuromuscular electrical stimulation	Pelvic floor training and advice Pelvic floor training and advice	UI UI	(5/10) [8/10] (5/10) [8/10]	0.63 (0.31; 1.25) 0.63 (0.31; 1.25)	-0.30 (-0.70; 0.10) -0.30 (-0.70; 0.10)	Intention to treat. Open label. Computer generated randomization list. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size not justified

Brown, 2006(95) N = 1,957, continent 34.8 month followup	Intensive lifestyle therapy to lose and maintain at least 7% of initial body weight through a low fat diet and to engage in moderate-intensity physical activity for at least 150 minutes each week	Placebo twice daily	Prevalence of stress UI after treatment Urge UI	(206/659 [242/650]) (156/659) [169/660]	0.85 (0.73; 0.99) 0.92 (0.77; 1.12)	-0.05 (-0.11; 0.003) -0.02 (-0.07; 0.03)	Intention to treat. Double-blind. Randomization was stratified by clinical center. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified for the primary outcome-diabetes prevention.
Manonai, 2006(157) N = 42, at least one type of UI 3 month followup	Self-selected diet with low-fat and low-cholesterol foods and soy protein (50 mg/day of isoflavones)	Self-selected diet with low-fat and low-cholesterol foods	Urge UI	(6/36) [8/36]	0.75 (0.29; 1.94)	-0.06 (-0.24; 0.13)	No intention to treat. Single blind (physician and cytopathologist). Allocation concealment unclear. Baseline data provided with no analysis for incontinence rate. Sample size not justified.
Bo, 2005(105) N = 47, urodynamic stress UI 180 month followup	Intensive pelvic floor muscle training under the supervision of physical therapist	Home exercise groups	Urge UI	(3/21) [10/26]	0.37 (0.12; 1.18)	-0.24 (-0.48; 0.00)	Intention to treat. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size justified.
Bo, 2000(159) N = 59, urodynamic stress UI 6 month followup	Pelvic floor muscle training	Untreated control group	UI with intercourse	(3/29) [13/30]	0.24 (0.08; 0.75)	-0.33 (-0.54; -0.12)	No Intention to treat. Open label. Computer generated randomization stratified by degree of leakage. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified
McFall, 2000(103) N = 145, any UI 3 month followup	Community-based intervention :bladder training, managing the urge to urinate,	Usual care	Self reported bothersomeness of urinary incontinence Use absorbent pads for urinary	(42/72) [62/73] (39/72) [56/73]	0.7 (0.6; 0.9) 0.7 (0.6; 0.9)	-0.27 (-0.41; -0.13) -0.23 (-0.38; -0.07)	No intention to treat. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. No justification for sample size.

	and performing pelvic muscle exercises		incontinence				
Manonai, 2006(157) N = 42, at least one type of UI 3 month followup	Self-selected diet with low fat and low cholesterol foods and soy protein 25g in various forms of soy foods containing more than 50mg/day of isoflavones	Self selected diet with low fat and low cholesterol foods	% of women reporting stress incontinence and mean scores after treatment	(18/36) [0/36]	37.0 (2.3; 591.5)	0.50 (0.33; 0.67)	No intention to treat. Single blind (physician and cytopathologist). Allocation concealment unclear. Baseline data provided with no analysis for incontinence rate. Sample size not justified.
Aukee, 2004, (87) N = 35, urodynamic stress UI 12 month followup	Pelvic floor training by physiotherapist 5 times/12 weeks with home biofeedback	Home program with given verbal and written instructions for home practice	Gynecologic surgery	(9) [5]	1.5 (0.6; 3.6)	0.16 (-0.16; 0.48)	Intention to treat. Open label. Randomization was performed by a random numbers table, in blocks of four. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size not justified.
Bo, 2000(159) N = 59, urodynamic stress UI 6 month followup	Pelvic floor muscle exercise with 8-12 maximum contractions in 3 series/day and 45 min/week group sessions	Untreated control group	Problem with interference with physical activity Problems because of avoiding places and situations Problems with interference with social life	(13/29) [24/30]	0.6 (0.4; 0.9)	-0.35 (-0.58; - 0.12)	No Intention to treat. Open label. Computer generated randomization stratified by degree of leakage. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified
Mørkved, 2002, (85) N = 103 urodynamic stress 6 months followup	Pelvic floor muscle training with 3 sets of 10 contractions 3 times/day, individually supervised by a	Pelvic floor muscle training with 3 sets of 10 contractions 3 times/day, individually	UI is Minor problem UI is Moderate problem	(17/53) [18/50]	0.89 (0.52; 1.53)	-0.04 (-0.22; 0.14)	Intention to treat. Single blind. Centralized but no computerized randomization stratified by results of a pad test with standardized bladder volume (20 g or less and more than 20 g of leakage). Allocation concealment not adequate.
				(8/53) [5/50]	1.51 (0.53; 4.31)	0.05 (-0.08; 0.18)	

physical therapist. supervised by
 At home, 3 sets of a physical
 10 high intensity therapist. At
 (close to home, 3 sets
 maximum) of 10 high
 intensity
 contractions per (close to
 day with a maximum)
 biofeedback contractions
 apparatus per day
 without
 biofeedback

Baseline data confirmed adequacy of
 randomization.
 Sample size justified.

Fantl, 1991(86) N = 131, urodynamic UI 1.5 month followup	Bladder training using 6 weekly visits included patient education; voiding schedule to have micturition from every 30-60 minutes to every 2.5-3 hours; and positive reinforcement.	Usual care	Self reported increase in episodes of urinary incontinence	(5/65) [28/66]	0.2 (0.1; 0.4)	-0.35 (-0.48; -0.21)	No intention to treat. Open label Randomization stratified by urodynamic incontinence. Allocation concealment unclear. Baseline data confirmed adequacy of randomization. Sample size justified.
Lagro-Janssen, 1992(99) N = 106, stress or urge UI 3 months followup	Pelvic floor exercises alone (stress) or bladder training (urge) or its combination (mixed)	Usual care	Self reported severe urinary incontinence	(4/54) [23/56]	0.2 (0.1; 0.5)	-0.34 (-0.48; -0.19)	Intention to treat not stated. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.
Arvonen, 2001(150) N = 37, stress UI month followup	Pelvic floor muscle training program with contractions/relaxations for 5 seconds 10 times 2 times/day	Pelvic floor muscle training program with contractions relaxations for 20/20 seconds 10	Leakage >50g	(1/19) [1/18]	0.9 (0.1; 14.0)	0.00 (-0.15; 0.14)	No intention to treat. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.

		times 2 times/day using weighted vaginal balls 50-100g					
Bo, 2005(105) N = 47, urodynamic stress UI 180 month followup	Intensive pelvic floor exercise with 8-12 maximum contractions for 6-8 seconds 3 series/day under the supervision of physical therapist for 6 months	Home exercise groups	Self reported severe and very severe urinary incontinence 15 years followup	(1/21) [7/26]	0.2 (0.0; 1.3)	-0.22 (-0.41; - 0.03)	Intention to treat. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size justified.
Lagro-Janssen, 1992(99) N = 106, stress or urge UI 3 months followup	Pelvic floor exercises alone (stress) or bladder training (urge) or its combination (mixed)	Usual care	Self reported deterioration in urinary incontinence	(1/54) [2/56]	0.5 (0.0; 5.6)	-0.02 (-0.08; 0.04)	Intention to treat not stated. Open label. Randomization and allocation concealment not reported. Baseline data confirmed adequacy of randomization. Sample size not justified.
Mørkved, 2002(85) N = 103 urodynamic stress 6 months 6 month followup	Pelvic floor muscle training with 3 sets of 10 contractions 3 times/day, individually supervised by a physical therapist. At home, 3 sets of 10 high intensity (close to maximum) contractions per day with a biofeedback apparatus	Pelvic floor muscle training with 3 sets of 10 contractions 3 times/day, individually supervised by a physical therapist. At home, 3 sets of 10 high intensity (close to maximum) contractions	UI is very problematic	(1/53) [3/50]	0.31 (0.03; 2.92)	-0.04 (-0.12; 0.03)	Intention to treat. Single blind. Centralized but no computerized randomization stratified by results of a pad test with standardized bladder volume (20g or less and more than 20 g of leakage). Allocation concealment not adequate. Baseline data confirmed adequacy of randomization. Sample size justified.

per day
without
biofeedback

* UI = urinary incontinence.