

Pelvic floor dysfunction: prevention and non- surgical management

[K] Dietary factors for the management of symptoms

NICE guideline NG210

Evidence review underpinning recommendations 1.6.9 and 1.6.10 as well as a research recommendation in the NICE guideline

December 2021

Final

These evidence reviews were developed by the National Guideline Alliance which is a part of the Royal College of Obstetricians and Gynaecologists

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Dietary factors for the management of symptoms

Review question

What dietary factors can increase or decrease symptoms of pelvic floor dysfunction?

Introduction

Pelvic floor dysfunction is characterised by symptoms associated with both the bladder and the bowel, as such dietary intake is likely to influence these symptoms. Hypotheses exist relating to how various foods and beverages could either detrimentally or beneficially effect symptoms, for example it is assumed caffeine intake will worsen urinary urge incontinence; however, the evidence is lacking. We aim to systematically review how different dietary factors either improve or worsen symptoms associated with pelvic floor dysfunction.

Summary of the protocol

See **Table 1** for a summary of the Population, Intervention, Comparison and Outcome (PICO) characteristics of this review.

Table 1: Summary of the protocol (PICO table)

Population	Women and young women (aged 12 years and older) with symptoms associated with pelvic floor dysfunction
Intervention	Any study which specifically examines a change in dietary factors with the aim of determining how this modification influences symptoms associated with pelvic floor dysfunction.
Comparison	<ul style="list-style-type: none">• Any of the above• No treatment/no change
Outcome	<p>Critical</p> <ul style="list-style-type: none">• Subjective change in the following symptoms:<ul style="list-style-type: none">○ urinary incontinence,○ emptying disorders of the bladder,○ faecal incontinence,○ emptying disorders of the bowel,○ pelvic organ prolapse,○ sexual dysfunction○ chronic pelvic pain syndromes• Health related quality of life <p>Important</p> <ul style="list-style-type: none">• Adherence to intervention• Adverse events leading to withdrawal/discontinuation• Anxiety and depression (validated tools only)

For further details see the review protocol in appendix A.

Methods and process

This evidence review was developed using the methods and process described in [Developing NICE guidelines: the manual](#). Methods specific to this review question are described in the review protocol in appendix A and the methods document (supplementary document 1).

Declarations of interest were recorded according to [NICE's conflicts of interest policy](#).

Clinical evidence

Included studies

Three randomised controlled trials (RCTs) were included for this review (Dowd 1996, Swithinbank 2005, Wells 2014). Two were cross-over RCTs, whereby participants completed each of the dietary interventions (Swithinbank 2005, Wells 2014).

One study looked at fluid manipulation (increase, decrease or maintain fluid intake) in women with urinary incontinence (Dowd 1996), 1 study restricted caffeine whilst also increasing or decreasing decaffeinated fluid intake in women with urodynamic stress incontinence and detrusor over activity (Swithinbank 2005) and 1 study provided either caffeinated or decaffeinated products to women with symptoms of overactive bladder (Wells 2014).

Even though implied (considering the exclusion criteria in the studies), none of the included studies explicitly specified that the symptoms were directly associated with pelvic floor dysfunction.

No evidence was identified for any other symptoms associated with pelvic floor dysfunction.

The included studies are summarised in Table 2.

See the literature search strategy in appendix B and study selection flow chart in appendix C.

Excluded studies

Studies not included in this review are listed, and reasons for their exclusion are provided in appendix K.

Summary of studies included in the evidence review

Summaries of the studies that were included in this review are presented in Table 2.

Table 2: Summary of included studies.

Study	Population	Intervention	Comparison	Outcomes
Dowd 1996 RCT USA	N=58, women with urinary incontinence N = 32 completed the study, and included for analysis Age: 70.25 years (range 52-89)	<u>Increased fluid</u> Increase fluid intake by 500 cc for 5 weeks <u>Decreased fluid</u> Decrease intake by 300 cc for 5 weeks	<u>Maintain fluid</u> Maintain intake levels the same as baseline for 5 weeks	<ul style="list-style-type: none"> Urinary incontinence episodes
Swithinbank 2005	N=69 women with urodynamically proven stress	<u>Baseline levels</u>	<u>Caffeine restriction</u> (week 2)	<ul style="list-style-type: none"> Voiding frequency

Study	Population	Intervention	Comparison	Outcomes
Cross over trial UK	incontinence (USI) or idiopathic DO (IDO) Age: mean 54.8 years (range 31-76)	Maintain usual intake levels (week 1)	<u>Increase</u> fluids to 3 litres daily (20 cups) (week 3 or 4) <u>Decrease</u> decaffeinated fluids to 750ml (5 cups) (week 3 or 4)	<ul style="list-style-type: none"> • 24hr pad weight increase • No. of daily wetting episodes
Wells 2014 Double-blind, cross over trial UK	N=15, women with overactive bladder (OAB) symptoms N = 11 completed the study ITT analysis conducted Age: 52 years (range 27-79years)	<u>Caffeinated</u> Consume caffeinated drinks in period 1 and decaffeinated drinks in period 2 Each period was for 14 days with a 14 day washout between periods	<u>Decaffeinated</u> Consume decaffeinated drinks in period 1 and caffeinated drinks in period 2	<ul style="list-style-type: none"> • Urgency • Frequency • Volume • Incontinence • ICIQ-OAB • ICIQ-OABqol

ICIQ-OAB: International Consultation on Incontinence–Overactive Bladder Module; ICIQ-OABqol: International Consultation on Incontinence–Overactive Bladder Module quality of life; IDO: idiopathic detrusor over activity USI: urodynamically proven stress incontinence; ITT: Intention to treat analysis; RCT: randomised controlled trial

See the full evidence tables in appendix D and the forest plots in appendix E.

Quality assessment of studies included in the evidence review

See the evidence profiles in appendix F.

Economic evidence

Included studies

A single economic search was undertaken for all topics included in the scope of this guideline but no economic studies were identified which were applicable to this review question. See the literature search strategy in appendix B and economic study selection flow chart in appendix G.

Excluded studies

Studies not included in this review are listed, and reasons for their exclusion are provided in appendix K.

Economic model

No economic modelling was undertaken for this review because the committee agreed that other topics were higher priorities for economic evaluation as any interventions recommended were unlikely to have a significant cost.

Brief summary of evidence

Restricted caffeine intake

- Very low quality evidence suggested that restricting caffeine intake improved some of the symptoms of urinary incontinence but did not appear to effect voiding frequency or urinary urgency.

Restricted caffeine and increased fluid intake

- Very low quality evidence suggested that restricting caffeine intake while also increasing fluid intake worsened some of the symptoms of urinary incontinence and increased urinary urgency and voiding frequency.

Restricted caffeine and decreased fluid intake

- Very low quality evidence suggested that restricting caffeine intake while also reducing fluid intake improved some of the symptoms of urinary incontinence and reduced urinary urgency and voiding frequency.

Decaffeinated products

- Low quality evidence indicated that drinking decaffeinated products improved urinary urgency, voiding frequency and incontinence outcomes in women with overactive bladder as compared to drinking caffeinated products.

The committee's discussion of the evidence

Interpreting the evidence

The outcomes that matter most

The committee agreed that improvement in symptoms of pelvic floor dysfunction and health related quality of life were the most critical outcomes for this review question. These outcomes are likely to have the most impact on the woman's life, and the interventions included should specifically target the management of these symptoms. Anxiety and depression were considered important outcomes; as pelvic floor dysfunction often has a psychological impact. Other important outcomes were adherence to the intervention and adverse events leading to withdrawal / discontinuation as these outcomes were considered the most relevant to determining if, and potentially why the intervention was or was not successful.

The quality of the evidence

The quality of evidence for this review was assessed using GRADE and ranged from very low to low quality. Only two of the included studies provided outcome data which could be analysed, therefore no GRADE was conducted on the Dowd 1996 paper (the extracted data for this are simply shown in the evidence table; however, it should be noted that this paper was considered at high risk of bias, and the data should be regarded with caution). The outcomes ranged from very low to moderate quality. The most frequent issue with the evidence for outcomes related to risk of bias within the included studies, whereby randomisation was not always clear, there were concerns with potential deviations from the intended protocols, high attrition and there was high risk of selective reporting. Additionally, the evidence was downgraded for imprecision – this was because all the results were reported as medians and interquartile ranges.

There was no evidence about the impact of dietary interventions on faecal incontinence, emptying disorders of the bowel, pelvic organ prolapse, sexual dysfunction, chronic pelvic

pain syndromes, health related quality of life, adherence to intervention, adverse events and anxiety and depression.

Benefits and harms

Overall the evidence presented was limited, one study found drinking decaffeinated products improved outcomes in women with overactive bladder as compared to drinking caffeinated products. A second study suggested that changing fluid intake improved symptoms of urinary incontinence. These two studies supported the committee's opinion that women with urinary incontinence and overactive bladder should be encouraged to consider the amount of fluid they consume and modify their fluid intake (increasing if it is too low, decreasing if it is too high).

The committee discussed that one of the identified risk factors for pelvic floor dysfunction is constipation and that in their experience, addressing fluid intake can help prevent constipation by promoting an ideal stool consistency. However, they noted that whilst a good diet may also have a positive effects on stool consistency, the details of the management of constipation are outside the scope of the guideline. They noted that public health guidance is not entirely clear about what could be defined as an 'appropriate' level of fluid intake and definitions vary. They acknowledged that there are differences in fluid needs for example someone who is very physically active compared to someone who is inactive or also by environmental conditions. The committee therefore decided not to specifically define what fluid intake should be recommended but that advice should be tailored to each women to modify their fluid intake if it is too high or too low.

The committee also agreed that women should try to reduce their caffeine intake, as this can alleviate symptoms. No evidence on food intake was identified, and therefore the committee decided to make a research recommendation to inform future guidance.

Cost effectiveness and resource use

The recommendations cross refer to [Public Health England's Eatwell Guide](#) in explaining to women how a balanced diet can help with symptoms of pelvic floor dysfunction. They also cross refer to [recommendation 1.3.2 of the NICE guideline on faecal incontinence in adults](#) and advise women with symptoms of overactive bladder or urinary incontinence with pelvic floor dysfunction to reduce caffeine intake and modify other fluid intake. There are no new interventions for the NHS to implement on dietary factors for the management of pelvic floor dysfunction and the committee considered that information giving and advice can readily be incorporated into existing current practice. Clinicians will already be familiar with the practical details of lifestyle changes that can be made to promote pelvic floor health, and lifestyle changes are a common aspect of management for symptoms of pelvic floor dysfunction. Therefore, the committee agreed that these recommendations would not have a significant cost.

Other considerations

The committee discussed that a healthy balanced diet could improve symptoms since it could have an effect on bowel function and therefore cross referred to [Public Health England's Eatwell Guide](#). The committee also decided to refer to the NICE [Faecal Incontinence in Adults: management](#) guideline [CG49] because it includes relevant advice on maintaining a healthy bowel habit. When making this recommendation the committee were conscious that this guideline was specific to faecal incontinence in adults rather than faecal incontinence associated with pelvic floor dysfunction. However, they agreed that this advice would be beneficial and unlikely to cause significant harm.

Recommendations supported by this evidence review

This evidence review supports recommendations 1.6.9 and 1.6.10 as well as a research recommendation on changes in diet in the NICE guideline.

References

Dowd 1996

Dowd, T. T., Campbell, J. M., Jones, J. A. Fluid intake and urinary incontinence in older community-dwelling women. *Journal of Community Health Nursing*, 13(3), 179-186, 1996.

Swithinbank 2005

Swithinbank, L., Hashim, H., Abrams, P. The effect of fluid intake on urinary symptoms in women. *The Journal of urology*, 174(1), 187-189, 2005.

Wells 2014

Wells, M. J., Jamieson, K., Markham, T. C., Green, S. M., Fader, M. J. The effect of caffeinated versus decaffeinated drinks on overactive bladder: a double-blind, randomized, crossover study. *Journal of Wound Ostomy & Continence Nursing*, 41(4), 371-378, 2014.

Appendices

Appendix A – Review protocol

Review protocol for review question: What dietary factors can increase or decrease symptoms of pelvic floor dysfunction?

Table 3: Review protocol

ID	Field	Content
0.	PROSPERO registration number	This review was not uploaded to PROSPERO
1.	Review title	Dietary factors
2.	Review question	What dietary factors can increase or decrease symptoms of pelvic floor dysfunction?
3.	Objective	The objective of this review is to determine what dietary factors can influence the symptoms associated with pelvic floor dysfunction (including urinary incontinence, pelvic organ prolapse, emptying disorders of the bladder, faecal incontinence, emptying disorders of the bowel, sexual dysfunction and chronic pelvic pain syndromes). These dietary factors may improve symptoms or make them worse.
4.	Searches	<p>The following databases will be searched:</p> <ul style="list-style-type: none"> • Cochrane Database of Systematic Reviews (CDSR) • Cochrane Central Register of Controlled Trials (CENTRAL) • MEDLINE & Medline in Process • Embase • CINAHL or Emcare • PsycINFO <p>Searches will be restricted by:</p> <ul style="list-style-type: none"> • Date limit: 1980 onwards (see section 10 for justification) • English language • Human studies <p>Other searches:</p> <ul style="list-style-type: none"> • Inclusion lists of potentially relevant systematic reviews <p>The full search strategies for MEDLINE database will be published in the final review.</p>

ID	Field	Content
		For each search, the principal database search strategy is quality assured by a second information scientist using an adaptation of the PRESS 2015 Guideline Evidence-Based Checklist.
5.	Condition or domain being studied	The following symptoms will be addressed as long as they are associated with pelvic floor dysfunction: urinary incontinence, emptying disorders of the bladder, faecal incontinence, emptying disorders of the bowel, pelvic organ prolapse, sexual dysfunction and chronic pelvic pain syndromes.
6.	Population	<p>Inclusion</p> <ul style="list-style-type: none"> • Women and young women (aged 12 years and older) with symptoms associated with pelvic floor dysfunction <p>Exclusion</p> <ul style="list-style-type: none"> • Studies which include women with urinary incontinence, emptying disorders of the bladder, faecal incontinence, emptying disorders of the bowel, pelvic organ prolapse, sexual dysfunction and chronic pelvic pain syndromes which are not due to pelvic floor dysfunction will be excluded. For example women who have urinary incontinence due to a neurological condition or pelvic cancer will be excluded. During the screening stage, the reported inclusion/exclusion criteria of studies will be examined carefully. We do not anticipate studies on urinary incontinence, emptying disorders of the bladder or pelvic organ prolapse will explicitly state “<i>associated with pelvic floor dysfunction</i>” therefore this will be a pragmatic decision based on the description of the condition provided by the study authors. Some of these symptoms (for example urinary incontinence) are most often due to a failure in the pelvic floor and therefore unless the exclusion criteria states a different cause, these studies are likely to be included. However for studies on faecal incontinence, emptying disorders of the bowel, sexual dysfunction and pelvic pain the causes are more numerous. As such for these symptoms unless the study specifically states “<i>associated with pelvic floor dysfunction</i>” they will be excluded. If any ambiguity exists, at least two reviewers will make the final decision if to include or exclude the study. • Men • Babies and children
7.	Intervention	<ul style="list-style-type: none"> • We will include any study which specifically examines a change in dietary factors with the aim of determining how this modification influences symptoms associated with pelvic floor dysfunction. <p>Examples of changes to the diet may include (but not exclusively):</p> <ul style="list-style-type: none"> • Change in water intake • Change in fibre intake • Change in fruit and vegetables • Change in caffeine (tea/coffee/total caffeine)

ID	Field	Content
		<ul style="list-style-type: none"> • Change in alcohol • Change carbonated drinks (caffeinated/non-caffeinated) • Change in citrus fruit juices • Change in spicy foods • Change in artificial sweetener intake • Change in sugary intake • Change in fluid intake
8.	Comparator/	<ul style="list-style-type: none"> • Any of the above • No treatment/no change
9.	Types of study to be included	<ul style="list-style-type: none"> • Systematic reviews of RCTs • RCTs <p>If there is no RCT evidence then other studies designs will be considered, namely</p> <ul style="list-style-type: none"> • Non-randomised controlled studies • Comparative prospective cohort studies <p>The decision to include non RCT study designs will be determined for each of the listed symptoms associated with pelvic floor dysfunction. For example, if we identify an RCT on urinary incontinence but not on pelvic organ prolapse, then we will continue our search for observational studies for pelvic organ prolapse but we will not search for further study designs for urinary incontinence.</p> <p>The decision to include non RCT study designs was made to ensure all relevant symptoms associated with pelvic floor dysfunctions are given equal consideration. Additionally, interventions may influence the various symptoms differently, and it is important this is considered. Within each symptom category (for example faecal incontinence), the committee has agreed a subset of symptoms that are specifically associated with pelvic floor dysfunction, as such each symptom only includes those sub-symptoms which occur as a result of pelvic floor dysfunction (rather than anybody with faecal incontinence). The committee agreed these subsets of symptoms by examining the population search strategy. Therefore if lower level of evidence is identified it will only be relevant to symptoms that specifically result from pelvic floor dysfunction, rather than the entire population for which there could potentially have been a higher level of evidence.</p> <p>Potentially important confounders which should be considered include BMI, age, ethnicity, weight loss and physical activity. Appropriate adjustment for these confounders within the included studies will be considered during the GRADE process.</p>

ID	Field	Content
		<p>Any included RCT should attempt to maintain equivalent calorie intake across arms.</p> <p>Note: For further details, see the algorithm in appendix H, Developing NICE guidelines: the manual.</p>
10.	Other exclusion criteria	<ul style="list-style-type: none"> • Weight loss diets • Supplement interventions • For those studies altering specific drinks, there should be consideration of overall fluid intake • Studies which alter an individual’s meal time and/or fluid intake routine (the time that a person consumes their food/drink), will be excluded. • Studies with a mixed population (women with symptoms such as urinary incontinence which are associated with pelvic floor dysfunction and women with symptoms that are not associated with pelvic floor dysfunction) will be excluded, unless subgroup analysis for those women with symptoms associated with pelvic floor dysfunction has been reported • Conference abstracts will be excluded because these do not typically provide sufficient information to fully assess risk of bias • Only articles published after 1980 will be included. This was agreed by the committee as this is the date that the condition “pelvic floor dysfunction” was recognised to include agreed terminology on symptoms. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2815805/
11.	Context	<p>Studies which explicitly demonstrate a change in outcomes for symptoms associated with pelvic floor dysfunction will be prioritised for decision making in regards to recommendations, and these recommendations will apply to those receiving care in any healthcare settings (for example: community, primary or secondary care). However, the context of recommendations is likely broader than just the health care setting itself. Women who are not currently accessing services may benefit from the recommendations in order to make lifestyle changes which could improve symptoms they are experiencing.</p> <p>Specific recommendations for groups listed in the Equality Considerations section of the scope may be also be made as appropriate.</p>
12.	Primary outcomes (critical outcomes)	<ul style="list-style-type: none"> • Subjective change in the following symptoms: <ul style="list-style-type: none"> ○ urinary incontinence, ○ emptying disorders of the bladder, ○ faecal incontinence, ○ emptying disorders of the bowel, ○ pelvic organ prolapse, ○ sexual dysfunction

ID	Field	Content
		<ul style="list-style-type: none"> ○ chronic pelvic pain syndromes ● Health related QOL <p>For primary outcomes listed, only validated tools will be included (for example: ICIQ-UI, ICIQ-VS, BFLUTS, KHQ, UDI, ISI, ePAQ, POPSS, PISQ, POPQ, FISQ, FIQL, GIQLI, PAC-QM, PAC –SYM, PDI, BPI)</p>
13.	Secondary outcomes (important outcomes)	<ul style="list-style-type: none"> ● Adherence to intervention ● Adverse events leading to withdrawal/discontinuation ● Anxiety and depression (validated tools only)
14.	Data extraction (selection and coding)	<p>All references identified by the searches and from other sources will be uploaded into STAR and de-duplicated.</p> <p>Titles and abstracts of the retrieved citations will be screened to identify studies that potentially meet the inclusion criteria outlined in the review protocol.</p> <p>Dual sifting will be performed on at least 10% of records; 90% agreement is required. Disagreements will be resolved via discussion between the two reviewers, and consultation with senior staff if necessary</p> <p>Full versions of the selected studies will be obtained for assessment. Studies that fail to meet the inclusion criteria once the full version has been checked will be excluded at this stage. Each study excluded after checking the full version will be listed, along with the reason for its exclusion.</p> <p>A standardised form will be used to extract data from studies. One reviewer will extract relevant data into a standardised form, and this will be quality assessed by a senior reviewer. Information to be extracted from studies includes: study type, study dates, location of study, funding, inclusion and exclusion criteria, participant characteristics, and details of the intervention and comparator.</p>
15.	Risk of bias (quality) assessment	<p>Quality assessment of individual studies will be performed using the following checklists</p> <ul style="list-style-type: none"> ● ROBIS tool for systematic reviews ● Cochrane RoB tool v.2 for RCTs and quasi-RCTs ● Cochrane ROBINS-I tool for non-randomised (clinical) controlled trials and cohort studies <p>The quality assessment will be performed by one reviewer and this will be quality assessed by a senior reviewer.</p>
16.	Strategy for data synthesis	<p>Depending on the availability of the evidence, the findings will be summarised narratively or quantitatively.</p> <p><u>Data Synthesis</u></p> <p>Where possible, pair wise meta-analyses will be conducted using Cochrane Review Manager software. A fixed effect meta-analysis will be conducted and data will be presented as risk ratios for dichotomous outcomes. Peto odds ratio will be used for outcomes with zero events. Mean differences or standardised mean differences will be calculated for continuous outcomes.</p>

ID	Field	Content
		<p><u>Heterogeneity</u></p> <p>Heterogeneity in the effect estimates of the individual studies will be assessed using the I^2 statistic. I^2 values of greater than 50% and 80% will be considered as significant and very significant heterogeneity, respectively. In the presence of heterogeneity sub-group analysis will be conducted</p> <ul style="list-style-type: none"> • According to risk of bias of individual studies • According to socio economic status of population included • By ethnicity of included populations <p>Exact subgroup analysis may vary depending on differences identified within included studies. If heterogeneity cannot be explained through subgroup analysis, then a random effects model will be used for meta-analysis. If heterogeneity remains above 80% reviewers will consider if meta-analysis is appropriate given the characteristics of included</p> <p><u>Minimal important differences (MIDs):</u></p> <p>For outcomes where validated tools are included (for example ICIQ), then the published MIDs will be used.</p> <p>Where no published MID is available, default MIDs will be used:</p> <ul style="list-style-type: none"> • For risk ratios: 0.8 and 1.25. • For continuous outcomes: <ul style="list-style-type: none"> ○ For one study: the MID is calculated as +/-0.5 times the baseline SD of the control arm. ○ For two studies: the MID is calculated as +/-0.5 times the mean of the SDs of the control arms at baseline. If baseline SD is not available, then SD at follow up will be used. ○ For three or more studies (meta-analysed): the MID is calculated by ranking the studies in order of SD in the control arms. The MID is calculated as +/- 0.5 times median SD. ○ For studies that have been pooled using SMD (meta-analysed): +0.5 and -0.5 in the SMD scale are used as MID boundaries. <p><u>Validity</u></p> <p>The confidence in the findings across all available evidence will be evaluated for each outcome using an adaptation of the 'Grading of Recommendations Assessment, Development and Evaluation (GRADE) toolbox' developed by the international GRADE working group: http://www.gradeworkinggroup.org/</p>
17.	Analysis of sub-groups	<u>Stratification</u>

ID	Field	Content		
		<p>All data will initially be pooled for overall analysis; however, if data is available, separate analysis will also be conducted on:</p> <ul style="list-style-type: none"> • Women who are pregnant • Women before and after gynaecological surgery • Women aged 65 or older • Women with physical disabilities • Women with cognitive impairment • According to those who do not identify themselves as women, but who have female pelvic organs • Single and multiple dietary interventions • Women according to potential differences in hormone levels (relating to the menstrual cycle) <p><i>Recommendations will apply to all those with pelvic floor dysfunction unless there is evidence of a difference in these stratified groups</i></p>		
18.	Type and method of review	<input checked="" type="checkbox"/>	Intervention	
		<input type="checkbox"/>	Diagnostic	
		<input type="checkbox"/>	Prognostic	
		<input type="checkbox"/>	Qualitative	
		<input type="checkbox"/>	Epidemiologic	
		<input type="checkbox"/>	Service Delivery	
		<input type="checkbox"/>	Other (please specify)	
19.	Language	English		
20.	Country	England		
21.	Anticipated or actual start date	TBC		
22.	Anticipated completion date	August 2021		
23.	Stage of review at time of this submission	Review stage	Started	Completed
		Preliminary searches	x	x
		Piloting of the study selection process	x	x
		Formal screening of search results against eligibility criteria	x	x

ID	Field	Content
		Data extraction x x
		Risk of bias (quality) assessment x x
		Data analysis x x
24.	Named contact	<p>5a. Named contact National Guideline Alliance</p> <p>5b Named contact e-mail PreventionofPOP@nice.org.uk</p> <p>5e Organisational affiliation of the review National Institute for Health and Care Excellence (NICE) and the National Guideline Alliance</p>
25.	Review team members	NGA technical team
26.	Funding sources/sponsor	This systematic review is being completed by the National Guideline Alliance, which is funded by NICE and hosted by the Royal College of Obstetricians and Gynaecologists. NICE funds the National Guideline Alliance to develop guidelines for those working in the NHS, public health, and social care in England.
27.	Conflicts of interest	All guideline committee members and anyone who has direct input into NICE guidelines (including the evidence review team and expert witnesses) must declare any potential conflicts of interest in line with NICE's code of practice for declaring and dealing with conflicts of interest. Any relevant interests, or changes to interests, will also be declared publicly at the start of each guideline committee meeting. Before each meeting, any potential conflicts of interest will be considered by the guideline committee Chair and a senior member of the development team. Any decisions to exclude a person from all or part of a meeting will be documented. Any changes to a member's declaration of interests will be recorded in the minutes of the meeting. Declarations of interests will be published with the final guideline.
28.	Collaborators	Development of this systematic review will be overseen by an advisory committee who will use the review to inform the development of evidence-based recommendations in line with section 3 of Developing NICE guidelines: the manual . Members of the guideline committee are available on the NICE website: https://www.nice.org.uk/guidance/indevelopment/gid-ng10123/
29.	Other registration details	
30.	Reference/URL for published protocol	[Give the citation and link for the published protocol, if there is one.]
31.	Dissemination plans	<p>NICE may use a range of different methods to raise awareness of the guideline. These include standard approaches such as:</p> <ul style="list-style-type: none"> • notifying registered stakeholders of publication • publicising the guideline through NICE's newsletter and alerts

ID	Field	Content	
		<ul style="list-style-type: none"> • issuing a press release or briefing as appropriate, posting news articles on the NICE website, using social media channels, and publicising the guideline within NICE. 	
32.	Keywords	<ul style="list-style-type: none"> • Pelvic floor dysfunction • Dietary interventions • Symptoms of pelvic floor dysfunction 	
33.	Details of existing review of same topic by same authors	Not applicable	
34.	Current review status	<input checked="" type="checkbox"/>	Ongoing
		<input checked="" type="checkbox"/>	Completed but not published
		<input type="checkbox"/>	Completed and published
		<input type="checkbox"/>	Completed, published and being updated
		<input type="checkbox"/>	Discontinued
35..	Additional information		
36.	Details of final publication	www.nice.org.uk	

BFLUTS: Bristol Female Lower Urinary Tract Symptoms Questionnaire; BMI: body mass index; BPI: Brief pain inventory; CDSR: Cochrane Database of Systematic Reviews; CENTRAL: Cochrane Central Register of Controlled Trials; CINAHL: Cumulative Index to Nursing and Allied Health Literature;; DARE: Database of Abstracts of Reviews of Effects; ePAQ: Electronic personal health questionnaire; FIQL: Faecal incontinence quality of life scale; FISl: Faecal incontinence severity index; GIQLI: Gastrointestinal quality of life index; GRADE: Grading of Recommendations Assessment, Development and Evaluation; HTA: Health Technology Assessment; ICIQ-UI: International Consultation on Incontinence Questionnaire- Urinary incontinence; ICIQ-VA: International Consultation on Incontinence questionnaire – vaginal symptoms; ISI: Incontinence symptom index; KHQ: Kings health questionnaire; MID: minimally important difference; NGA: National Guideline Alliance; NHS: National health service; NICE: National Institute for Health and Care Excellence; PAC-QL: patient assessment of constipation - quality of life; PAC-SYM: Patient assessment of constipation symptoms; PDI: Pain disability index; PISQ: Pelvic organ prolapse/urinary incontinence sexual questionnaire; POPQ: Pelvic organ prolapse quantification system; POP-SS: Pelvic organ prolapse symptom score; QOL: quality of life; RCT: randomised controlled trial; RoB: risk of bias; ROBINS-I: Risk Of Bias In Non-randomised Studies - of Interventions; SD: standard deviation; UDI: Urinary distress index

FINAL

Dietary factors for the management of symptoms

Dietary factors

Appendix B – Literature search strategies

Literature search strategies for review question: What dietary factors can increase or decrease symptoms of pelvic floor dysfunction?

Clinical Search

Database(s): Medline & Embase (Multifile) – OVID interface

Embase Classic+Embase 1947 to 2021 February 03; Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily 1946 to February 01, 2021
Date of last search: 4 February 2021

Multifile database codes: emczd = Embase Classic+Embase; ppez= MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily

#	Searches
1	exp Urinary Incontinence/ use ppez
2	Urinary Bladder, Overactive/ use ppez
3	Nocturia/ use ppez
4	exp Enuresis/ use ppez
5	exp urine incontinence/ use emczd
6	overactive bladder/ use emczd
7	bladder instability/ use emczd
8	nocturia/ use emczd
9	exp enuresis/ use emczd
10	((stress\$ or mix\$ or urg\$ or urin\$) adj5 incontinen\$).tw.
11	(bladder\$ adj5 (overactiv\$ or over activ\$ or over-activ\$ or instabilit\$ or hyper-reflex\$ or hyperreflex\$ or hyper reflex\$ or incontinen\$)).tw.
12	(detrusor\$ adj5 (overactiv\$ or over activ\$ or over-activ\$ or instabilit\$ or hyper-reflex\$ or hyperreflex\$ or hyper reflex\$)).tw.
13	((urgency adj2 frequency) or (frequency adj2 urgency)).tw.
14	((urin\$ or bladder\$) adj2 (urg\$ or frequen\$)).tw.
15	(nocturia\$ or enuresis\$).tw.
16	(SUI or OAB).tw.
17	or/1-16
18	exp Pelvic Organ Prolapse/ use ppez
19	exp pelvic organ prolapse/ use emczd
20	Rectocele/ use ppez
21	rectocele/ use emczd
22	(pelvic\$ adj3 organ\$ adj3 prolaps\$).tw.
23	(urinary adj3 bladder adj3 prolaps\$).tw.
24	((vagin\$ or urogenital\$ or genit\$ or uter\$ or viscer\$ or anterior\$ or posterior\$ or apical or pelvi\$ or vault\$ or urethr\$ or bladder\$ or cervi\$ or rectal or rectum) adj3 prolaps\$).tw.
25	(splanchnoptos\$ or visceroptos\$).tw.
26	(hernia\$ adj3 (pelvi\$ or vagin\$ or urogenital\$ or uter\$ or bladder\$ or urethr\$ or viscer\$)).tw.
27	(urethroc?ele\$ or enteroc?ele\$ or sigmoidoc?ele\$ or proctoc?ele\$ or rectoc?ele\$ or cystoc?ele\$ or rectoenteroc?ele\$ or cystourethroc?ele\$).tw.
28	or/18-27
29	Fecal Incontinence/ use ppez
30	feces incontinence/ use emczd
31	((faecal or fecal or faeces or feces or fecally or faecally or anal or anally or stool or stools or bowel or double or defecat\$ or defaecat\$) adj5 (incontinence or incontinent or urge\$ or leak or leaking or leakage or soiling or seeping or seepage or impacted or impaction)).tw.
32	or/29-31
33	Urinary Retention/ use ppez
34	Dysuria/ use ppez
35	urine retention/ use emczd
36	dysuria/ use emczd
37	(urin\$ adj3 (retention\$ or retain\$)).tw.
38	dysuria\$.tw.
39	(voiding adj (disorder\$ or dysfunction\$ or problem\$)).tw.
40	(empty\$ adj disorder\$ adj3 (bowel\$ or bladder\$ or vesical\$ or stool\$)).tw.
41	((urogeni\$ or anorec\$ or ano-rec\$ or ano rec\$) adj3 dysfunction\$).tw.
42	defecation disorder/ use emczd
43	*Constipation/ use ppez
44	*constipation/ use emczd

Dietary factors

#	Searches
45	Fecal Impaction/ use ppez
46	Feces Impaction/ use emczd
47	constipat\$.ti.
48	((difficult\$ or delay\$ or irregular\$ or infrequen\$ or pain\$) adj3 (defecat\$ or defaecat\$ or stool\$ or faecal or fecal or faeces or feces or fecally or faecally or bowel movement\$)).tw.
49	coprostasis.tw.
50	(obstruct\$ adj3 (defecat\$ or defaecat\$)).tw.
51	((defecat\$ or defaecat\$ or evacuat\$) adj3 (disorder\$ or dysfunction\$)).tw.
52	outlet\$ dysfunction\$ constipa\$.tw.
53	(dys?ynerg\$ adj (defecat\$ or defaecat\$)).tw.
54	(pelvi\$ adj3 dyskines\$).tw.
55	pelvi\$ outlet\$ obstruct\$.tw.
56	anismus\$.tw.
57	puborectal\$ contract\$.tw.
58	((rectal or rectum) adj3 urge\$).tw.
59	or/33-58
60	female sexual dysfunction/ use emczd
61	(female adj sex\$ adj (dysfunct\$ or satisf\$ or problem\$ or symptom\$ or arouse\$ or activit\$ or disorder\$)).tw.
62	Dyspareunia/ use ppez
63	dyspareunia/ use emczd
64	(sex\$ adj3 pain\$).tw.
65	(dyspareun\$ or anodyspareun\$).tw.
66	(obstruct\$ adj3 intercourse).tw.
67	(vagin\$ adj3 laxity\$).tw.
68	(vagin\$ adj wind).tw.
69	orgasm disorder/ use emczd
70	(female adj orgasm\$ adj (disorder\$ or deficienc\$ or dysfunction\$ or problem\$)).tw.
71	anorgasm\$.tw.
72	Vaginismus/ use ppez
73	vaginism/ use emczd
74	vaginismus\$.tw.
75	(vagin\$ adj penetrat\$ adj disorder\$).tw.
76	Vulvodynia/ use ppez
77	vulvodynia/ use emczd
78	vulvodynia\$.tw.
79	(vagin\$ adj dry\$).tw.
80	hypoactive sexual desire disorder/ use emczd
81	hypoactiv\$ sex\$ desire\$.tw.
82	sexual arousal disorder/ use emczd
83	(sex\$ adj arouse\$ adj disorder\$).tw.
84	(genitourin\$ adj syndrom\$ adj5 menopaus\$).tw.
85	or/60-84
86	Pelvic Pain/ use ppez
87	pelvic pain/ use emczd
88	((pelvi\$ or lumbopelvi\$ or lumbo-pelvi\$ or genito-pelvi\$ or genitopelvi\$) adj3 pain\$).tw.
89	(pubi\$ adj3 (pain\$ or dysfunction\$)).tw.
90	(pudend\$ adj3 neuralg\$).tw.
91	proctalgia\$.tw.
92	(tension\$ adj myalgia\$).tw.
93	or/86-92
94	Pelvic Floor/ use ppez
95	Pelvic Floor Disorders/ use ppez
96	pelvis floor/ use emczd
97	pelvic floor disorder/ use emczd
98	(pelvi\$ adj (floor\$ or diaphragm\$) adj3 (dysfunction\$ or disorder\$ or fail\$ or impair\$ or incompeten\$ or insufficien\$ or dyssynerg\$ or symptom\$ or laxity or change\$ or care\$ or health\$ or wellbeing\$ or well-being\$ or prevent\$ or rehabilitat\$)).tw.
99	(pelvi\$ adj (dysfunction\$ or disorder\$ or fail\$ or impair\$ or incompeten\$ or insufficien\$ or dyssynerg\$ or symptom\$ or laxity or care\$ or health\$ or wellbeing\$ or well-being\$ or prevent\$ or rehabilitat\$)).tw.
100	or/94-99
101	exp Diet Therapy/ use ppez
102	diet therapy/ use emczd
103	(diet\$ adj3 (modif\$ or manipul\$ or therap\$ or intervention\$ or strateg\$ or program\$ or management or scheme\$ or group\$ or pathway\$ or intake\$ or consum\$)).tw.
104	or/101-103
105	*Drinking/ use ppez
106	*drinking/ use emczd
107	*fluid intake/ use emczd
108	((fluid\$ or water\$ or liquid\$) adj3 (intake\$ or consum\$)).tw.
109	or/105-108

Dietary factors

#	Searches
110	Coffee/ use ppez
111	coffee/ use emczd
112	Tea/ use ppez
113	tea/ use emczd
114	Caffeine/ use ppez
115	caffeine/ use emczd
116	((tea\$ or coffee\$ or caffein\$) adj3 (intake\$ or consum\$)).tw.
117	or/110-116
118	Carbonated Beverages/ use ppez
119	carbonated beverage/ use emczd
120	caffeinated beverage/ use emczd
121	((carbonat\$ or caffein\$ or noncaffein\$ or non-caffein\$ or decaffein\$ or de-caffein\$ or artificial\$ sweeten\$ or irritat\$) adj2 (drink\$ or beverage\$ or soda)).tw.
122	(energy adj drink\$).tw.
123	or/118-122
124	Alcohol Drinking/ use ppez
125	alcohol consumption/ use emczd
126	drinking behavior/ use emczd
127	(alcohol\$ adj3 (intake\$ or consum\$)).tw.
128	or/124-127
129	Citrus/ use ppez
130	citrus/ use emczd
131	"Fruit and Vegetable Juices"/ use ppez
132	fruit juice/ use emczd
133	(citrus adj fruit\$).tw.
134	(fruit\$ adj juice\$).tw.
135	((citrus\$ or orange\$ or lemon\$ or grapefruit\$ or lime\$) adj3 juice\$).tw.
136	or/129-135
137	*Dietary Fiber/ use ppez
138	*dietary fiber/ use emczd
139	((fibre or fiber) adj3 (supplement\$ or intake\$ or consum\$)).tw.
140	((high-fibre or high-fiber or high fibre or high fiber or fibre-rich or fiber-rich or fibre rich or fiber rich) adj diet\$).tw.
141	or/137-140
142	Fruit/ use ppez
143	fruit/ use emczd
144	Vegetables/ use ppez
145	vegetable/ use emczd
146	(fruit\$ adj2 vegetable\$).tw.
147	((fruit\$ or vegetable\$) adj3 (intake\$ or consum\$)).tw.
148	or/142-147
149	Spice/ use ppez
150	spice/ use emczd
151	((spice or spices or spicy) adj3 (intake\$ or consum\$)).tw.
152	((spice or spices or spicy) adj5 (food\$ or diet)).tw.
153	or/149-152
154	Sugar/ use ppez
155	sugar/ use emczd
156	Artificial Sweetener/ use ppez
157	artificial sweetener/ use emczd
158	((sugar or sugary or sweetener\$) adj3 (intake\$ or consum\$)).tw.
159	((sugar or sugary) adj5 (food\$ or diet)).tw.
160	or/154-159
161	104 or 109 or 117 or 123 or 128 or 136 or 141 or 148 or 153 or 160
162	(17 or 28 or 32 or 59 or 85 or 93 or 100) and 161
163	limit 162 to english language
164	limit 163 to yr="1980 -Current" [General Exclusions filter applied]

Database(s): Cochrane Library – Wiley interface

Cochrane Database of Systematic Reviews, Issue 2 of 12, February 2021; **Cochrane Central Register of Controlled Trials**, Issue 2 of 12, February 2021

Date of last search: 4 February 2021

#	Searches
#1	MeSH descriptor: [Urinary Incontinence] explode all trees
#2	MeSH descriptor: [Urinary Bladder, Overactive] this term only
#3	MeSH descriptor: [Nocturia] this term only
#4	MeSH descriptor: [Enuresis] explode all trees
#5	((stress* or mix* or urg* or urin*) NEAR/5 incontinen*)):ti,ab,kw
#6	((bladder* NEAR/5 (overactiv* or over activ* or over-activ* or instabil* or hyper-reflex* or hyperreflex* or hyper reflex* or incontinen*)):ti,ab,kw

Dietary factors

#	Searches
#7	((detrusor* NEAR/5 (overactiv* or over activ* or over-activ* or instabilit* or hyper-reflex* or hyperreflex* or hyper reflex*)):ti,ab,kw
#8	((urgency NEAR/2 frequency) or (frequency NEAR/2 urgency)):ti,ab,kw
#9	((urin* or bladder*) NEAR/2 (urg* or frequen*)):ti,ab,kw
#10	((nocturia* or enuresis*)):ti,ab,kw
#11	((SUI or OAB)):ti,ab,kw
#12	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11
#13	MeSH descriptor: [Pelvic Organ Prolapse] explode all trees
#14	MeSH descriptor: [Rectocele] this term only
#15	((pelvic* NEAR/3 organ* NEAR/3 prolaps*)):ti,ab,kw
#16	((urinary NEAR/3 bladder NEAR/3 prolaps*)):ti,ab,kw
#17	((vagin* or urogenital* or genit* or uter* or viscer* or anterior* or posterior* or apical or pelvi* or vault* or urethr* or bladder* or cervi* or rectal or rectum) NEAR/3 prolaps*)):ti,ab,kw
#18	((splachnoptos* or visceroptos*)):ti,ab,kw
#19	((hernia* NEAR/3 (pelvi* or vagin* or urogenital* or uter* or bladder* or urethr* or viscer*)):ti,ab,kw
#20	((urethroc?ele* or enteroc?ele* or sigmoidoc?ele* or proctoc?ele* or rectoc?ele* or cystoc?ele* or rectoenteroc?ele* or cystourethroc?ele*)):ti,ab,kw
#21	#13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20
#22	MeSH descriptor: [Fecal Incontinence] this term only
#23	((faecal or fecal or faeces or feces or fecally or faecally or anal or anally or stool or stools or bowel or double or defecat* or defaecat*) NEAR/5 (incontinence or incontinent or urge* or leak or leaking or leakage or soiling or seeping or seepage or impacted or impaction)):ti,ab,kw
#24	#22 OR #23
#25	MeSH descriptor: [Urinary Retention] this term only
#26	MeSH descriptor: [Dysuria] this term only
#27	((urin* NEAR/3 (retention* or retain*)):ti,ab,kw
#28	(dysuria*):ti,ab,kw
#29	((voiding NEXT (disorder* or dysfunction* or problem*)):ti,ab,kw
#30	((empty* NEXT disorder* NEAR/3 (bowel* or bladder* or vesical* or stool*)):ti,ab,kw
#31	((urogeni* or anorec* or ano-rec* or ano rec*) NEAR/3 dysfunction*)):ti,ab,kw
#32	MeSH descriptor: [Constipation] this term only
#33	MeSH descriptor: [Fecal Impaction] this term only
#34	(constipat*):ti
#35	((difficult* or delay* or irregular* or infrequen* or pain*) NEAR/3 (defecat* or defaecat* or stool* or faecal or fecal or faeces or feces or fecally or faecally or bowel movement*)):ti,ab,kw
#36	(coprostitis):ti,ab,kw
#37	((obstruct* NEAR/3 (defecat* or defaecat*)):ti,ab,kw
#38	((defecat* or defaecat* or evacuat*) NEAR/3 (disorder* or dysfunction*)):ti,ab,kw
#39	(outlet* dysfunction* constipa*):ti,ab,kw
#40	((dys?ynerg* NEXT (defecat* or defaecat*)):ti,ab,kw
#41	((pelvi* NEAR/3 dyskines*)):ti,ab,kw
#42	(pelvi* outlet* obstruct*):ti,ab,kw
#43	(anismus*):ti,ab,kw
#44	(puborectal* contract*):ti,ab,kw
#45	((rectal or rectum) NEAR/3 urge*)):ti,ab,kw
#46	#25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45
#47	((female NEXT sex* NEXT (dysfunct* or satisf* or problem* or symptom* or arouse* or activit* or disorder*)):ti,ab,kw
#48	MeSH descriptor: [Dyspareunia] this term only
#49	((sex* NEAR/3 pain*)):ti,ab,kw
#50	(dyspareun* or anodyspareun*):ti,ab,kw
#51	((obstruct* NEAR/3 intercourse)):ti,ab,kw
#52	((vagin* NEAR/3 laxity*)):ti,ab,kw
#53	((vagin* NEXT wind)):ti,ab,kw
#54	((female NEXT orgasm* NEXT (disorder* or deficienc* or dysfunction* or problem*)):ti,ab,kw
#55	(anorgasm*):ti,ab,kw
#56	MeSH descriptor: [Vaginismus] this term only
#57	(vaginismus*):ti,ab,kw
#58	((vagin* NEXT penetrat* NEXT disorder*)):ti,ab,kw
#59	MeSH descriptor: [Vulvodynia] this term only
#60	(vulvodynia*):ti,ab,kw
#61	((vagin* NEXT dry*)):ti,ab,kw
#62	(hypoactiv* NEXT sex* NEXT desire*):ti,ab,kw
#63	((sex* NEXT arouse* NEXT disorder*)):ti,ab,kw
#64	((genitourin* NEXT syndrom* NEAR/5 menopaus*)):ti,ab,kw
#65	#47 OR #48 OR #49 OR #50 OR #51 OR #52 OR #53 OR #54 OR #55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62 OR #63 OR #64
#66	MeSH descriptor: [Pelvic Pain] this term only
#67	((pelvi* or lumbopelvi* or lumbo-pelvi* or genito-pelvi* or genitopelvi*) NEAR/3 pain*)):ti,ab,kw
#68	((pubi* NEAR/3 (pain* or dysfunction*)):ti,ab,kw

Dietary factors

#	Searches
#69	((pudend* NEAR/3 neuralg*)):ti,ab,kw
#70	(proctalgia*):ti,ab,kw
#71	((tension* NEXT myalgia*)):ti,ab,kw
#72	#66 OR #67 OR #68 OR #69 OR #70 OR #71
#73	MeSH descriptor: [Pelvic Floor] this term only
#74	MeSH descriptor: [Pelvic Floor Disorders] this term only
#75	((pelvi* adj (floor* or diaphragm*) NEAR/3 (dysfunction* or disorder* or fail* or impair* or incompeten* or insufficien* or dyssynerg* or symptom* or laxity or change* or care* or health* or wellbeing* or well-being* or prevent* or rehabilitat*)):ti,ab,kw
#76	((pelvi* NEXT (dysfunction* or disorder* or fail* or impair* or incompeten* or insufficien* or dyssynerg* or symptom* or laxity or care* or health* or wellbeing* or well-being* or prevent* or rehabilitat*)):ti,ab,kw
#77	#73 OR #74 OR #75 OR #76
#78	MeSH descriptor: [Diet Therapy] explode all trees
#79	((diet* NEAR/3 (modif* or manipul* or therap* or intervention* or strateg* or program* or management or scheme* or group* or pathway* or intake* or consum*)):ti,ab,kw
#80	MeSH descriptor: [Drinking] this term only
#81	((fluid* or water* or liquid*) NEAR/3 (intake* or consum*)):ti,ab,kw
#82	MeSH descriptor: [Coffee] this term only
#83	MeSH descriptor: [Tea] this term only
#84	MeSH descriptor: [Caffeine] this term only
#85	((tea* or coffee* or caffein*) NEAR/3 (intake* or consum*)):ti,ab,kw
#86	MeSH descriptor: [Carbonated Beverages] this term only
#87	((carbonat* or caffein* or noncaffein* or non-caffein* or decaffein* or de-caffein* or artificial* sweeten* or irritat*) NEAR/2 (drink* or beverage* or soda)):ti,ab,kw
#88	((energy NEXT drink*)):ti,ab,kw
#89	MeSH descriptor: [Alcohol Drinking] this term only
#90	((alcohol* NEAR/3 (intake* or consum*)):ti,ab,kw
#91	MeSH descriptor: [Citrus] this term only
#92	MeSH descriptor: [Fruit and Vegetable Juices] this term only
#93	((citrus NEXT fruit*)):ti,ab,kw
#94	((fruit* NEXT juice*)):ti,ab,kw
#95	((citrus* or orange* or lemon* or grapefruit* or lime*) NEAR/3 juice*)):ti,ab,kw
#96	MeSH descriptor: [Dietary Fiber] this term only
#97	((fibre or fiber) NEAR/3 (supplement* or intake* or consum*)):ti,ab,kw
#98	((high-fibre or high-fiber or high fibre or high fiber or fibre-rich or fiber-rich or fibre rich or fiber rich) NEXT diet*)):ti,ab,kw
#99	MeSH descriptor: [Fruit] this term only
#100	MeSH descriptor: [Vegetables] this term only
#101	((fruit* NEAR/2 vegetable*)):ti,ab,kw
#102	((fruit* or vegetable*) NEAR/3 (intake* or consum*)):ti,ab,kw
#103	MeSH descriptor: [Spices] this term only
#104	((spice or spices or spicy) NEAR/3 (intake* or consum*)):ti,ab,kw
#105	((spice or spices or spicy) NEAR/5 (food* or diet)):ti,ab,kw
#106	MeSH descriptor: [Sugars] this term only
#107	MeSH descriptor: [Sweetening Agents] this term only
#108	((sugar or sugary or sweetener*) NEAR/3 (intake* or consum*)):ti,ab,kw
#109	((sugar or sugary) NEAR/5 (food* or diet)):ti,ab,kw
#110	#78 OR #79 OR #80 OR #81 OR #82 OR #83 OR #84 OR #85 OR #86 OR #87 OR #88 OR #89 OR #90 OR #91 OR #92 OR #93 OR #94 OR #95 OR #96 OR #97 OR #98 OR #99 OR #100 OR #101 OR #102 OR #103 OR #104 OR #105 OR #106 OR #107 OR #108 OR #109
#111	(#12 OR #21 OR #24 OR #46 OR #65 OR #72 OR #77) AND #110

Database(s): Database of Abstracts of Reviews of Effects (DARE); HTA Database – CRD interface

Date of last search: 4 February 2021

#	Searches
1	MeSH DESCRIPTOR Urinary Incontinence EXPLODE ALL TREES IN DARE,HTA
2	MeSH DESCRIPTOR Urinary Bladder, Overactive IN DARE,HTA
3	MeSH DESCRIPTOR Nocturia IN DARE,HTA
4	MeSH DESCRIPTOR Enuresis EXPLODE ALL TREES IN DARE,HTA
5	((stress* or mix* or urg* or urin*) NEAR5 incontinen*)) IN DARE, HTA
6	((bladder* NEAR5 (overactiv* or over activ* or over-activ* or instabilit* or hyper-reflex* or hyperreflex* or hyper reflex* or incontinen*))) IN DARE, HTA
7	((detrusor* NEAR5 (overactiv* or over activ* or over-activ* or instabilit* or hyper-reflex* or hyperreflex* or hyper reflex*))) IN DARE, HTA
8	((urgency NEAR2 frequency) or (frequency NEAR2 urgency))) IN DARE, HTA
9	((urin* or bladder*) NEAR2 (urg* or frequen*))) IN DARE, HTA
10	((nocturia* or enuresis*)) IN DARE, HTA
11	((SUI or OAB)) IN DARE, HTA

Dietary factors

#	Searches
12	MeSH DESCRIPTOR Pelvic organ prolapse EXPLODE ALL TREES IN DARE,HTA
13	MeSH DESCRIPTOR Rectocele IN DARE,HTA
14	((pelvic* NEAR3 organ* NEAR3 prolaps*)) IN DARE, HTA
15	((urinary NEAR3 bladder NEAR3 prolaps*)) IN DARE, HTA
16	((vagin* or urogenital* or genit* or uter* or viscer* or anterior* or posterior* or apical or pelvi* or vault* or urethr* or bladder* or cervi* or rectal or rectum) NEAR3 prolaps*)) IN DARE, HTA
17	((splanchnoptos* or visceroptos*)) IN DARE, HTA
18	((hernia* NEAR3 (pelvi* or vagin* or urogenital* or uter* or bladder* or urethr* or viscer*))) IN DARE, HTA
19	((urethro?ele* or enteroc?ele* or sigmoidoc?ele* or proctoc?ele* or rectoc?ele* or cystoc?ele* or rectoenteroc?ele* or cystourethro?ele*)) IN DARE, HTA
20	MeSH DESCRIPTOR Fecal Incontinence IN DARE,HTA
21	((faecal or fecal or faeces or feces or fecally or faecally or anal or anally or stool or stools or bowel or double or defecat* or defaecat*) NEAR5 (incontinence or incontinent or urge* or leak or leaking or leakage or soiling or seeping or seepage or impacted or impaction))) IN DARE, HTA
22	MeSH DESCRIPTOR Urinary Retention IN DARE,HTA
23	((urin* NEAR3 (retention* or retain*))) IN DARE, HTA
24	((dysuria*)) IN DARE, HTA
25	((voiding NEXT (disorder* or dysfunction* or problem*))) IN DARE, HTA
26	((empty* NEXT disorder* NEAR3 (bowel* or bladder* or vesical* or stool*))) IN DARE, HTA
27	((urogeni* or anorec* or ano-rec* or ano rec*) NEAR3 dysfunction*)) IN DARE, HTA
28	MeSH DESCRIPTOR Constipation IN DARE,HTA
29	MeSH DESCRIPTOR Fecal Impaction IN DARE,HTA
30	((constipat*):TI IN DARE, HTA
31	((difficult* or delay* or irregular* or infrequen* or pain*) NEAR3 (defecat* or defaecat* or stool* or faecal or fecal or faeces or feces or fecally or faecally or bowel movement*)) IN DARE, HTA
32	((coprostitis)) IN DARE, HTA
33	((obstruct* NEAR3 (defecat* or defaecat*))) IN DARE, HTA
34	((defecat* or defaecat* or evacuat*) NEAR3 (disorder* or dysfunction*)) IN DARE, HTA
35	((outlet* NEXT dysfunction* NEXT constipa*)) IN DARE, HTA
36	((dys?ynerg* NEXT (defecat* or defaecat*))) IN DARE, HTA
37	((pelvi* NEAR3 dyskines*)) IN DARE, HTA
38	((pelvi* NEXT outlet* NEXT obstruct*) IN DARE, HTA
39	((anismus*)) IN DARE, HTA
40	((puborectal* contract*)) IN DARE, HTA
41	((rectal or rectum) NEAR3 urge*)) IN DARE, HTA
42	((female NEXT sex* NEXT (dysfunct* or satisf* or problem* or symptom* or arous* or activit* or disorder*))) IN DARE, HTA
43	MeSH DESCRIPTOR Dyspareunia IN DARE,HTA
44	((sex* NEAR3 pain*)) IN DARE, HTA
45	((dyspareun* or anodyspareun*)) IN DARE, HTA
46	((obstruct* NEAR3 intercourse)) IN DARE, HTA
47	((vagin* NEAR3 laxity*)) IN DARE, HTA
48	((vagin* NEXT wind)) IN DARE, HTA
49	((female NEXT orgasm* adj (disorder* or deficienc* or dysfunction* or problem*))) IN DARE, HTA
50	((anorgasm*)) IN DARE, HTA
51	MeSH DESCRIPTOR Vaginismus IN DARE,HTA
52	((vaginismus*)) IN DARE, HTA
53	((vagin* NEXT penetrat* NEXT disorder*)) IN DARE, HTA
54	MeSH DESCRIPTOR vulvodynia IN DARE,HTA
55	((vulvodynia*)) IN DARE, HTA
56	((vagin* NEXT dry*)) IN DARE, HTA
57	((hypoactiv* NEXT sex* NEXT desire*)) IN DARE, HTA
58	((sex* NEXT arous* NEXT disorder*)) IN DARE, HTA
59	((genitourin* NEXT syndrom* NEAR5 menopaus*)) IN DARE, HTA
60	MeSH DESCRIPTOR Pelvic Pain IN DARE,HTA
61	((pelvi* or lumbopelvi* or lumbo-pelvi* or genito-pelvi* or genitopelvi*) NEAR3 pain*)) IN DARE, HTA
62	((pubi* NEAR3 (pain* or dysfunction*))) IN DARE, HTA
63	((podend* NEAR3 neuralg*)) IN DARE, HTA
64	((proctalgia*)) IN DARE, HTA
65	((tension* NEXT myalgia*)) IN DARE, HTA
66	MeSH DESCRIPTOR Pelvic Floor IN DARE,HTA
67	MeSH DESCRIPTOR Pelvic Floor Disorders IN DARE,HTA
68	((pelvi* NEXT (floor* or diaphragm*) NEAR3 (dysfunction* or disorder* or fail* or impair* or incompeten* or insufficien* or dyssynerg* or symptom* or laxity or change* or care* or health* or wellbeing* or well-being* or prevent* or rehabilitat*))) IN DARE, HTA
69	((pelvi* NEXT (dysfunction* or disorder* or fail* or impair* or incompeten* or insufficien* or dyssynerg* or symptom* or laxity or care* or health* or wellbeing* or well-being* or prevent* or rehabilitat*))) IN DARE, HTA
70	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR

Dietary factors

#	Searches
	#43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52 OR #53 OR #54 OR #55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62 OR #63 OR #64 OR #65 OR #66 OR #67 OR #68 OR #69
71	MeSH DESCRIPTOR Diet Therapy EXPLODE ALL TREES IN DARE,HTA
72	((diet* NEAR3 (modif* or manipul* or therap* or intervention* or strateg* or program* or management or scheme* or group* or pathway* or intake* or consum*)) IN DARE, HTA
73	MeSH DESCRIPTOR Drinking IN DARE,HTA
74	((fluid* or water* or liquid*) NEAR3 (intake* or consum*)) IN DARE, HTA
75	MeSH DESCRIPTOR Coffee IN DARE,HTA
76	MeSH DESCRIPTOR Tea IN DARE,HTA
77	MeSH DESCRIPTOR Caffeine IN DARE,HTA
78	((tea* or coffee* or caffein*) NEAR3 (intake* or consum*)) IN DARE, HTA
79	MeSH DESCRIPTOR Carbonated Beverages IN DARE,HTA
80	((carbonat* or caffein* or noncaffein* or non-caffein* or decaffein* or de-caffein* or artificial* sweeten* or irritat*) NEAR2 (drink* or beverage* or soda)) IN DARE, HTA
81	((energy NEXT drink*)) IN DARE, HTA
82	MeSH DESCRIPTOR Alcohol Drinking IN DARE,HTA
83	((alcohol* NEAR3 (intake* or consum*)) IN DARE, HTA
84	MeSH DESCRIPTOR Citrus IN DARE,HTA
85	MeSH DESCRIPTOR Fruit and Vegetable Juices IN DARE,HTA
86	((citrus NEXT fruit*)) IN DARE, HTA
87	((fruit* NEXT juice*)) IN DARE, HTA
88	((citrus* or orange* or lemon* or grapefruit* or lime*) NEAR3 juice*) IN DARE, HTA
89	MeSH DESCRIPTOR Dietary Fiber IN DARE,HTA
90	((fibre or fiber) NEAR3 (supplement* or intake* or consum*)) IN DARE, HTA
91	((high-fibre or high-fiber or high fibre or high fiber or fibre-rich or fiber-rich or fibre rich or fiber rich) NEXT diet*) IN DARE, HTA
92	MeSH DESCRIPTOR Fruit IN DARE,HTA
93	MeSH DESCRIPTOR Vegetables IN DARE,HTA
94	((fruit* NEAR2 vegetable*)) IN DARE, HTA
95	((fruit* or vegetable*) NEAR3 (intake* or consum*)) IN DARE, HTA
96	MeSH DESCRIPTOR Spices IN DARE,HTA
97	((spice or spices or spicy) NEAR3 (intake* or consum*)) IN DARE, HTA
98	((spice or spices or spicy) NEAR5 (food* or diet)) IN DARE, HTA
99	MeSH DESCRIPTOR Sweetening agents IN DARE,HTA
100	((sugar or sugary or sweetener*) NEAR3 (intake* or consum*)) IN DARE, HTA
101	((sugar or sugary) NEAR5 (food\$ or diet)) IN DARE, HTA
102	#71 OR #72 OR #73 OR #74 OR #75 OR #76 OR #77 OR #78 OR #79 OR #80 OR #81 OR #82 OR #83 OR #84 OR #85 OR #86 OR #87 OR #88 OR #89 OR #90 OR #91 OR #92 OR #93 OR #94 OR #95 OR #96 OR #97 OR #98 OR #99 OR #100 OR #101
103	#70 AND #102

Database(s): EMCare – OVID interface

Date of last search: 4 February 2021

#	Searches
1	exp urine incontinence/
2	overactive bladder/
3	bladder instability/
4	nocturia/
5	enuresis/
6	exp enuresis/
7	((stress\$ or mix\$ or urg\$ or urin\$) adj5 incontinen\$).tw.
8	(bladder\$ adj5 (overactiv\$ or over activ\$ or over-activ\$ or instabilit\$ or hyper-reflex\$ or hyperreflex\$ or hyper reflex\$ or incontinen\$)).tw.
9	(detrusor\$ adj5 (overactiv\$ or over activ\$ or over-activ\$ or instabilit\$ or hyper-reflex\$ or hyperreflex\$ or hyper reflex\$)).tw.
10	((urgency adj2 frequency) or (frequency adj2 urgency)).tw.
11	((urin\$ or bladder\$) adj2 (urg\$ or frequen\$)).tw.
12	(nocturia\$ or enuresis\$).tw.
13	(SUI or OAB).tw.
14	or/1-13
15	exp pelvic organ prolapse/
16	rectocele/
17	(pelvic\$ adj3 organ\$ adj3 prolaps\$).tw.
18	(urinary adj3 bladder adj3 prolaps\$).tw.
19	((vagin\$ or urogenital\$ or genit\$ or uter\$ or viscer\$ or anterior\$ or posterior\$ or apical or pelvi\$ or vault\$ or urethr\$ or bladder\$ or cervi\$ or rectal or rectum) adj3 prolaps\$).tw.
20	(splanchnoptos\$ or visceroptos\$).tw.
21	(hernia\$ adj3 (pelvi\$ or vagin\$ or urogenital\$ or uter\$ or bladder\$ or urethr\$ or viscer\$)).tw.
22	(urethro?ele\$ or enteroc?ele\$ or sigmoidoc?ele\$ or proctoc?ele\$ or rectoc?ele\$ or cystoc?ele\$ or rectoenteroc?ele\$ or cystourethro?ele\$).tw.

Dietary factors

#	Searches
23	or/15-22
24	feces incontinence/
25	((faecal or fecal or faeces or feces or fecally or faecally or anal or anally or stool or stools or bowel or double or defecat\$ or defaecat\$) adj5 (incontinence or incontinent or urge\$ or leak or leaking or leakage or soiling or seeping or seepage or impacted or impaction)).tw.
26	24 or 25
27	urine retention/
28	dysuria/
29	(urin\$ adj3 (retention\$ or retain\$)).tw.
30	dysuria\$.tw.
31	(voiding adj (disorder\$ or dysfunction\$ or problem\$)).tw.
32	(empty\$ adj disorder\$ adj3 (bowel\$ or bladder\$ or vesical\$ or stool\$)).tw.
33	((urogeni\$ or anorec\$ or ano-rec\$ or ano rec\$) adj3 dysfunction\$).tw.
34	defecation disorder/
35	*constipation/
36	feces impaction/
37	constipat\$.ti.
38	((difficult\$ or delay\$ or irregular\$ or infrequen\$ or pain\$) adj3 (defecat\$ or defaecat\$ or stool\$ or faecal or fecal or faeces or feces or fecally or faecally or bowel movement\$)).tw.
39	coprostitis.tw.
40	(obstruct\$ adj3 (defecat\$ or defaecat\$)).tw.
41	((defecat\$ or defaecat\$ or evacuat\$) adj3 (disorder\$ or dysfunction\$)).tw.
42	outlet\$ dysfunction\$ constipa\$.tw.
43	(dys?ynerg\$ adj (defecat\$ or defaecat\$)).tw.
44	(pelvi\$ adj3 dyskines\$).tw.
45	pelvi\$ outlet\$ obstruct\$.tw.
46	anismus\$.tw.
47	puborectal\$ contract\$.tw.
48	((rectal or rectum) adj3 urge\$).tw.
49	or/27-48
50	female sexual dysfunction/
51	(female adj sex\$ adj (dysfunct\$ or satisf\$ or problem\$ or symptom\$ or arouse\$ or activit\$ or disorder\$)).tw.
52	dyspareunia/
53	(sex\$ adj3 pain\$).tw.
54	(dyspareun\$ or anodyspareun\$).tw.
55	(obstruct\$ adj3 intercourse).tw.
56	(vagin\$ adj3 laxity\$).tw.
57	(vagin\$ adj wind\$).tw.
58	orgasm disorder/
59	(female adj orgasm\$ adj (disorder\$ or deficienc\$ or dysfunction\$ or problem\$)).tw.
60	anorgasm\$.tw.
61	vaginism/
62	vaginismus\$.tw.
63	(vagin\$ adj penetrat\$ adj disorder\$).tw.
64	vulvodinia/
65	vulvodinia\$.tw.
66	(vagin\$ adj dry\$).tw.
67	hypoactive sexual desire disorder/
68	hypoactiv\$ sex\$ desire\$.tw.
69	sexual arousal disorder/
70	(sex\$ adj arouse\$ adj disorder\$).tw.
71	(genitourin\$ adj syndrom\$ adj5 menopaus\$).tw.
72	or/50-71
73	pelvic pain/
74	((pelvi\$ or lumbopelvi\$ or lumbo-pelvi\$ or genito-pelvi\$ or genitopelvi\$) adj3 pain\$).tw.
75	(pubi\$ adj3 (pain\$ or dysfunction\$)).tw.
76	(pudend\$ adj3 neuralg\$).tw.
77	proctalgia\$.tw.
78	(tension\$ adj myalgia\$).tw.
79	or/73-78
80	pelvis floor/
81	pelvic floor disorder/
82	(pelvi\$ adj (floor\$ or diaphragm\$) adj3 (dysfunction\$ or disorder\$ or fail\$ or impair\$ or incompeten\$ or insufficien\$ or dyssynerg\$ or symptom\$ or laxity or change\$ or care\$ or health\$ or wellbeing\$ or well-being\$ or prevent\$ or rehabilitat\$)).tw.
83	(pelvi\$ adj (dysfunction\$ or disorder\$ or fail\$ or impair\$ or incompeten\$ or insufficien\$ or dyssynerg\$ or symptom\$ or laxity or care\$ or health\$ or wellbeing\$ or well-being\$ or prevent\$ or rehabilitat\$)).tw.
84	or/80-83
85	diet therapy/

Dietary factors

#	Searches
86	(diet\$ adj3 (modif\$ or manipul\$ or therap\$ or intervention\$ or strateg\$ or program\$ or management or scheme\$ or group\$ or pathway\$ or intake\$ or consum\$)).tw.
87	*drinking/
88	*fluid intake/
89	((fluid\$ or water\$ or liquid\$) adj3 (intake\$ or consum\$)).tw.
90	coffee/
91	tea/
92	caffeine/
93	((tea\$ or coffee\$ or caffein\$) adj3 (intake\$ or consum\$)).tw.
94	carbonated beverage/
95	((carbonat\$ or caffein\$ or noncaffein\$ or non-caffein\$ or decaffein\$ or de-caffein\$ or artificial\$ sweeten\$ or irritat\$) adj2 (drink\$ or beverage\$ or soda)).tw.
96	(energy adj drink\$).tw.
97	alcohol consumption/
98	drinking behavior/
99	(alcohol\$ adj3 (intake\$ or consum\$)).tw.
100	Citrus/
101	fruit juice/
102	(citrus adj fruit\$).tw.
103	(fruit\$ adj juice\$).tw.
104	((citrus\$ or orange\$ or lemon\$ or grapefruit\$ or lime\$) adj3 juice\$).tw.
105	*dietary fiber/
106	((fibre or fiber) adj3 (supplement\$ or intake\$ or consum\$)).tw.
107	((high-fibre or high-fiber or high fibre or high fiber or fibre-rich or fiber-rich or fibre rich or fiber rich) adj diet\$).tw.
108	fruit/
109	vegetable/
110	(fruit\$ adj2 vegetable\$).tw.
111	((fruit\$ or vegetable\$) adj3 (intake\$ or consum\$)).tw.
112	spice/
113	((spice or spices or spicy) adj3 (intake\$ or consum\$)).tw.
114	((spice or spices or spicy) adj5 (food\$ or diet)).tw.
115	sugar/
116	sweetening agent/
117	((sugar or sugary or sweetener\$) adj3 (intake\$ or consum\$)).tw.
118	((sugar or sugary) adj5 (food\$ or diet)).tw.
119	or/85-118
120	(14 or 23 or 26 or 49 or 72 or 79 or 84) and 119
121	limit 120 to english language
122	limit 121 to yr="1980 -Current" [General Exclusions filter applied]

Database(s): PsycINFO 1806 to January Week 4 2021 – OVID interface

Date of last search: 4 February 2021

#	Searches
1	exp Urinary Incontinence/
2	((stress\$ or mix\$ or urg\$ or urin\$) adj5 incontinen\$).tw.
3	(bladder\$ adj5 (overactiv\$ or over activ\$ or over-activ\$ or instabilit\$ or hyper-reflex\$ or hyperreflex\$ or hyper reflex\$ or incontinen\$)).tw.
4	(detrusor\$ adj5 (overactiv\$ or over activ\$ or over-activ\$ or instabilit\$ or hyper-reflex\$ or hyperreflex\$ or hyper reflex\$)).tw.
5	((urgency adj2 frequency) or (frequency adj2 urgency)).tw.
6	((urin\$ or bladder\$) adj2 (urg\$ or frequen\$)).tw.
7	(nocturia\$ or enuresis\$).tw.
8	(SUI or OAB).tw.
9	(pelvic\$ adj3 organ\$ adj3 prolaps\$).tw.
10	(urinary adj3 bladder adj3 prolaps\$).tw.
11	((vagin\$ or urogenital\$ or genit\$ or uter\$ or viscer\$ or anterior\$ or posterior\$ or apical or pelvi\$ or vault\$ or urethr\$ or bladder\$ or cervi\$ or rectal or rectum) adj3 prolaps\$).tw.
12	(splachnoptos\$ or visceroptos\$).tw.
13	(hernia\$ adj3 (pelvi\$ or vagin\$ or urogenital\$ or uter\$ or bladder\$ or urethr\$ or viscer\$)).tw.
14	(urethroc?ele\$ or enteroc?ele\$ or sigmoidoc?ele\$ or proctoc?ele\$ or rectoc?ele\$ or cystoc?ele\$ or rectoenteroc?ele\$ or cystourethroc?ele\$).tw.
15	exp Fecal Incontinence/
16	((faecal or fecal or faeces or feces or fecally or faecally or anal or anally or stool or stools or bowel or double or defecat\$ or defaecat\$) adj5 (incontinence or incontinent or urge\$ or leak or leaking or leakage or soiling or seeping or seepage or impacted or impaction)).tw.
17	(urin\$ adj3 (retention\$ or retain\$)).tw.
18	dysuria\$.tw.
19	(voiding adj (disorder\$ or dysfunction\$ or problem\$)).tw.
20	(empty\$ adj disorder\$ adj3 (bowel\$ or bladder\$ or vesical\$ or stool\$)).tw.
21	((urogeni\$ or anorec\$ or ano-rec\$ or ano rec\$) adj3 dysfunction\$).tw.

Dietary factors

#	Searches
22	exp Constipation/
23	constipat\$.ti.
24	((difficult\$ or delay\$ or irregular\$ or infrequen\$ or pain\$) adj3 (defecat\$ or defaecat\$ or stool\$ or faecal or fecal or faeces or feces or fecally or faecally or bowel movement\$)).tw.
25	coprostitis.tw.
26	(obstruct\$ adj3 (defecat\$ or defaecat\$)).tw.
27	((defecat\$ or defaecat\$ or evacuat\$) adj3 (disorder\$ or dysfunction\$)).tw.
28	outlet\$ dysfunction\$ constipa\$.tw.
29	(dys?ynerg\$ adj (defecat\$ or defaecat\$)).tw.
30	(pelvi\$ adj3 dyskines\$).tw.
31	pelvi\$ outlet\$ obstruct\$.tw.
32	anismus\$.tw.
33	puborectal\$ contract\$.tw.
34	((rectal or rectum) adj3 urge\$).tw.
35	exp Female Sexual Dysfunction/
36	(female adj sex\$ adj (dysfunct\$ or satisf\$ or problem\$ or symptom\$ or arous\$ or activit\$ or disorder\$)).tw.
37	exp Dyspareunia/
38	(sex\$ adj3 pain\$).tw.
39	(dyspareun\$ or anodyspareun\$).tw.
40	(obstruct\$ adj3 intercourse).tw.
41	(vagin\$ adj3 laxity\$).tw.
42	(vagin\$ adj wind).tw.
43	(female adj orgasm\$ adj (disorder\$ or deficienc\$ or dysfunction\$ or problem\$)).tw.
44	anorgasm\$.tw.
45	exp Vaginismus/
46	vaginismus\$.tw.
47	(vagin\$ adj penetrat\$ adj disorder\$).tw.
48	vulvodynia\$.tw.
49	(vagin\$ adj dry\$).tw.
50	exp Inhibited Sexual Desire/
51	hypoactiv\$ sex\$ desire\$.tw.
52	(sex\$ adj arous\$ adj disorder\$).tw.
53	(genitourin\$ adj syndrom\$ adj5 menopaus\$).tw.
54	((pelvi\$ or lumbopelvi\$ or lumbo-pelvi\$ or genito-pelvi\$ or genitopelvi\$) adj3 pain\$).tw.
55	(pubi\$ adj3 (pain\$ or dysfunction\$)).tw.
56	(pudend\$ adj3 neuralg\$).tw.
57	proctalgia\$.tw.
58	(tension\$ adj myalgia\$).tw.
59	(pelvi\$ adj (floor\$ or diaphragm\$) adj3 (dysfunction\$ or disorder\$ or fail\$ or impair\$ or incompeten\$ or insufficien\$ or dyssynerg\$ or symptom\$ or laxity or change\$ or care\$ or health\$ or wellbeing\$ or well-being\$ or prevent\$ or rehabilitat\$)).tw.
60	(pelvi\$ adj (dysfunction\$ or disorder\$ or fail\$ or impair\$ or incompeten\$ or insufficien\$ or dyssynerg\$ or symptom\$ or laxity or care\$ or health\$ or wellbeing\$ or well-being\$ or prevent\$ or rehabilitat\$)).tw.
61	or/1-60
62	(diet\$ adj3 (modif\$ or manipul\$ or therap\$ or interventio\$ or strateg\$ or program\$ or management or scheme\$ or group\$ or pathway\$ or intake\$ or consum\$)).tw.
63	Fluid Intake/
64	((fluid\$ or water\$ or liquid\$) adj3 (intake\$ or consum\$)).tw.
65	exp "beverages (nonalcoholic)"/
66	Caffeine/
67	((tea\$ or coffee\$ or caffen\$) adj3 (intake\$ or consum\$)).tw.
68	((carbonat\$ or caffen\$ or noncaffein\$ or non-caffein\$ or decaffein\$ or de-caffein\$ or artificial\$ sweeten\$ or irritat\$) adj2 (drink\$ or beverage\$ or soda)).tw.
69	(energy adj drink\$).tw.
70	alcohol drinking patterns/
71	Drinking Behavior/
72	(alcohol\$ adj3 (intake\$ or consum\$)).tw.
73	(citrus adj fruit\$).tw.
74	(fruit\$ adj juice\$).tw.
75	((citrus\$ or orange\$ or lemon\$ or grapefruit\$ or lime\$) adj3 juice\$).tw.
76	((fibre or fiber) adj3 (supplement\$ or intake\$ or consum\$)).tw.
77	((high-fibre or high-fiber or high fibre or high fiber or fibre-rich or fiber-rich or fibre rich or fiber rich) adj diet\$).tw.
78	(fruit\$ adj2 vegetable\$).tw.
79	((fruit\$ or vegetable\$) adj3 (intake\$ or consum\$)).tw.
80	((spice or spices or spicy) adj3 (intake\$ or consum\$)).tw.
81	((spice or spices or spicy) adj5 (food\$ or diet)).tw.
82	((sugar or sugary or sweetener\$) adj3 (intake\$ or consum\$)).tw.
83	((sugar or sugary) adj5 (food\$ or diet)).tw.
84	or/62-83
85	61 and 84

Dietary factors

#	Searches
86	limit 85 to (english language and yr="1980 -Current") [General Exclusions filter applied]

Economic Search

One global search was conducted for economic evidence across the guideline.

Database(s): NHS Economic Evaluation Database (NHS EED); HTA Database – CRD interface

Date of last search: 3 February 2021

#	Searches
1	MeSH DESCRIPTOR Pelvic Floor IN NHSEED,HTA
2	MeSH DESCRIPTOR Pelvic Floor Disorders IN NHSEED,HTA
3	MeSH DESCRIPTOR Urinary Bladder, Overactive IN NHSEED,HTA
4	(((pelvi* NEXT (floor* or diaphragm*) NEAR3 (dysfunction* or disorder* or fail* or impair* or incompeten* or insufficien* or dyssynerg* or symptom* or laxity or change* or care* or health* or wellbeing* or well-being* or prevent* or rehabilitat* or weak* or hypertonic* or overactiv* or over activ* or over-activ*)))) IN NHSEED, HTA
5	MeSH DESCRIPTOR Urinary Incontinence EXPLODE ALL TREES IN NHSEED,HTA
6	MeSH DESCRIPTOR Urinary Bladder, Overactive IN NHSEED,HTA
7	(((stress* or mix* or urg* or urin*) NEAR5 incontinen*)) IN NHSEED, HTA
8	(((bladder* NEAR5 (overactiv* or over activ* or over-activ* or instabilit* or hyper-reflex* or hyperreflex* or hyper reflex* or incontinen*)))) IN NHSEED, HTA
9	(((detrusor* NEAR5 (overactiv* or over activ* or over-activ* or instabilit* or hyper-reflex* or hyperreflex* or hyper reflex*)))) IN NHSEED, HTA
10	(((urgency NEAR2 frequency) or (frequency NEAR2 urgency)))) IN NHSEED, HTA
11	(((urin* or bladder*) NEAR2 (urg* or frequen*)))) IN NHSEED, HTA
12	(((SUI or OAB))) IN NHSEED, HTA
13	MeSH DESCRIPTOR Pelvic Organ Prolapse EXPLODE ALL TREES IN NHSEED,HTA
14	MeSH DESCRIPTOR Rectocele IN NHSEED,HTA
15	(((pelvic* NEAR3 organ* NEAR3 prolaps*))) IN NHSEED, HTA
16	(((urinary NEAR3 bladder NEAR3 prolaps*))) IN NHSEED, HTA
17	(((vagin* or urogenital* or genit* or uter* or viscer* or anterior* or posterior* or apical or pelvi* or vault* or urethr* or bladder* or cervi* or rectal or rectum) NEAR3 prolaps*))) IN NHSEED, HTA
18	(((splanchnoptos* or visceroptos*))) IN NHSEED, HTA
19	(((hernia* NEAR3 (pelvi* or vagin* or urogenital* or uter* or bladder* or urethr* or viscer*))) IN NHSEED, HTA
20	(((urethro?ele* or enteroc?ele* or sigmoidoc?ele* or proctoc?ele* or rectoc?ele* or cystoc?ele* or rectoenteroc?ele* or cystourethro?ele*))) IN NHSEED, HTA
21	MeSH DESCRIPTOR Fecal Incontinence IN NHSEED,HTA
22	(((faecal or fecal or faeces or feces or fecally or faecally or anal or anally or stool or stools or bowel or double or defecat* or defaecat*) NEAR5 (incontinence or incontinent or urge* or leak or leaking or leakage or soiling or seeping or seepage or impacted or impaction)))) IN NHSEED, HTA
23	MeSH DESCRIPTOR Urinary Retention IN NHSEED,HTA
24	(((urin* NEAR3 (retention* or retain*))) IN NHSEED, HTA
25	(((voiding NEXT (disorder* or dysfunction* or problem*))) IN NHSEED, HTA
26	(((empty* NEXT disorder* NEAR3 (bowel* or bladder* or vesical* or stool*))) IN NHSEED, HTA
27	(((urogeni* or anorec* or ano-rec* or ano rec*) NEAR3 dysfunction*)) IN NHSEED, HTA
28	MeSH DESCRIPTOR Fecal Impaction IN NHSEED,HTA
29	(((difficult* or delay* or irregular* or infrequen* or pain*) NEAR3 (defecat* or defaecat* or stool* or faecal or fecal or faeces or feces or fecally or faecally or bowel movement*))) IN NHSEED, HTA
30	(((obstruct* NEAR3 (defecat* or defaecat*))) IN NHSEED, HTA
31	(((defecat* or defaecat* or evacuat*) NEAR3 (disorder* or dysfunction*))) IN NHSEED, HTA
32	(((outlet* NEXT dysfunction* NEXT constipa*))) IN NHSEED, HTA
33	(((dys?ynerg* NEXT (defecat* or defaecat*))) IN NHSEED, HTA
34	(((pelvi* NEAR3 dyskines*))) IN NHSEED, HTA
35	(((pelvi* NEXT outlet* NEXT obstruct*))) IN NHSEED, HTA
36	(((anismus*))) IN NHSEED, HTA
37	(((puborectal* NEXT contract*))) IN NHSEED, HTA
38	(((rectal or rectum) NEAR3 urge*))) IN NHSEED, HTA
39	(((female NEXT sex* NEXT (dysfunc* or satisf* or problem* or symptom* or arous* or activit* or disorder*))) IN NHSEED, HTA
40	(((obstruct* NEAR3 intercourse))) IN NHSEED, HTA
41	(((vagin* NEAR3 laxity*))) IN NHSEED, HTA
42	(((vagin* NEXT wind))) IN NHSEED, HTA
43	MeSH DESCRIPTOR Vaginismus IN NHSEED,HTA
44	(((vaginismus*))) IN NHSEED, HTA
45	(((vagin* NEXT penetrat* NEXT disorder*))) IN NHSEED, HTA
46	(#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45) IN NHSEED, HTA

Dietary factors

Database(s): Medline & Embase (Multifile) – OVID interface

Embase Classic+Embase 1947 to 2021 February 01; **Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily** 1946 to February 01, 2021
Date of last search: 3 February 2021

Multifile database codes: emczd = Embase Classic+Embase; ppez= MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily

#	Searches
1	Pelvic Floor/ use ppez
2	Pelvic Floor Disorders/ use ppez
3	pelvis floor/ use emczd
4	pelvic floor disorder/ use emczd
5	(pelvi\$ adj (floor\$ or diaphragm\$) adj3 (dysfunction\$ or disorder\$ or fail\$ or impair\$ or incompeten\$ or insufficien\$ or dyssynerg\$ or symptom\$ or laxity or change\$ or care\$ or health\$ or wellbeing\$ or well-being\$ or prevent\$ or rehabilitat\$ or weak\$ or hypertonic\$ or overactiv\$ or over activ\$ or over-activ\$)).tw.
6	(pelvi\$ adj (dysfunction\$ or disorder\$ or fail\$ or impair\$ or incompeten\$ or insufficien\$ or dyssynerg\$ or symptom\$ or laxity or care\$ or health\$ or wellbeing\$ or well-being\$ or prevent\$ or rehabilitat\$ or weak\$ or hypertonic\$ or overactiv\$ or over activ\$ or over-activ\$)).tw.
7	or/1-6
8	exp *Urinary Incontinence/ use ppez
9	*Urinary Bladder, Overactive/ use ppez
10	exp *urine incontinence/ use emczd
11	*overactive bladder/ use emczd
12	*bladder instability/ use emczd
13	((stress\$ or mix\$ or urg\$ or urin\$) adj5 incontinen\$).ti.
14	(bladder\$ adj5 (overactiv\$ or over activ\$ or over-activ\$ or instabilit\$ or hyper-reflex\$ or hyperreflex\$ or hyper reflex\$ or incontinen\$)).ti.
15	(detrusor\$ adj5 (overactiv\$ or over activ\$ or over-activ\$ or instabilit\$ or hyper-reflex\$ or hyperreflex\$ or hyper reflex\$)).ti.
16	((urgency adj2 frequency) or (frequency adj2 urgency)).ti.
17	((urin\$ or bladder\$) adj2 (urg\$ or frequen\$)).ti.
18	(SUI or OAB).ti.
19	or/8-18
20	exp *Pelvic Organ Prolapse/ use ppez
21	exp *pelvic organ prolapse/ use emczd
22	*Rectocele/ use ppez
23	*rectocele/ use emczd
24	(pelvic\$ adj3 organ\$ adj3 prolaps\$).ti.
25	(urinary adj3 bladder adj3 prolaps\$).ti.
26	((vagin\$ or urogenital\$ or genit\$ or uter\$ or viscer\$ or anterior\$ or posterior\$ or apical or pelvi\$ or vault\$ or urethr\$ or bladder\$ or cervi\$ or rectal or rectum) adj3 prolaps\$).ti.
27	(splachnoptos\$ or visceroptos\$).ti.
28	(hernia\$ adj3 (pelvi\$ or vagin\$ or urogenital\$ or uter\$ or bladder\$ or urethr\$ or viscer\$)).ti.
29	(urethro?ele\$ or enteroc?ele\$ or sigmoidoc?ele\$ or proctoc?ele\$ or rectoc?ele\$ or cystoc?ele\$ or rectoenteroc?ele\$ or cystourethro?ele\$).ti.
30	or/20-29
31	*Fecal Incontinence/ use ppez
32	*feces incontinence/ use emczd
33	((faecal or fecal or faeces or feces or fecally or faecally or anal or anally or stool or stools or bowel or double or defecat\$ or defaecat\$) adj5 (incontinence or incontinent or urge\$ or leak or leaking or leakage or soiling or seeping or seepage or impacted or impaction)).ti.
34	or/31-33
35	Urinary Retention/ use ppez
36	urine retention/ use emczd
37	(urin\$ adj3 (retention\$ or retain\$)).tw.
38	(voiding adj (disorder\$ or dysfunction\$ or problem\$)).tw.
39	(empty\$ adj disorder\$ adj3 (bowel\$ or bladder\$ or vesical\$ or stool\$)).tw.
40	((urogeni\$ or anorec\$ or ano-rec\$ or ano rec\$) adj3 dysfunction\$).tw.
41	defecation disorder/ use emczd
42	Fecal Impaction/ use ppez
43	Feces Impaction/ use emczd
44	((difficult\$ or delay\$ or irregular\$ or infrequen\$ or pain\$) adj3 (defecat\$ or defaecat\$ or stool\$ or faeces or feces or bowel movement\$)).tw.
45	(obstruct\$ adj3 (defecat\$ or defaecat\$)).tw.
46	((defecat\$ or defaecat\$ or evacuat\$) adj3 (disorder\$ or dysfunction\$)).tw.
47	outlet\$ dysfunction\$ constipa\$.tw.
48	(dys?ynerg\$ adj (defecat\$ or defaecat\$)).tw.
49	(pelvi\$ adj3 dyskines\$).tw.
50	pelvi\$ outlet\$ obstruct\$.tw.

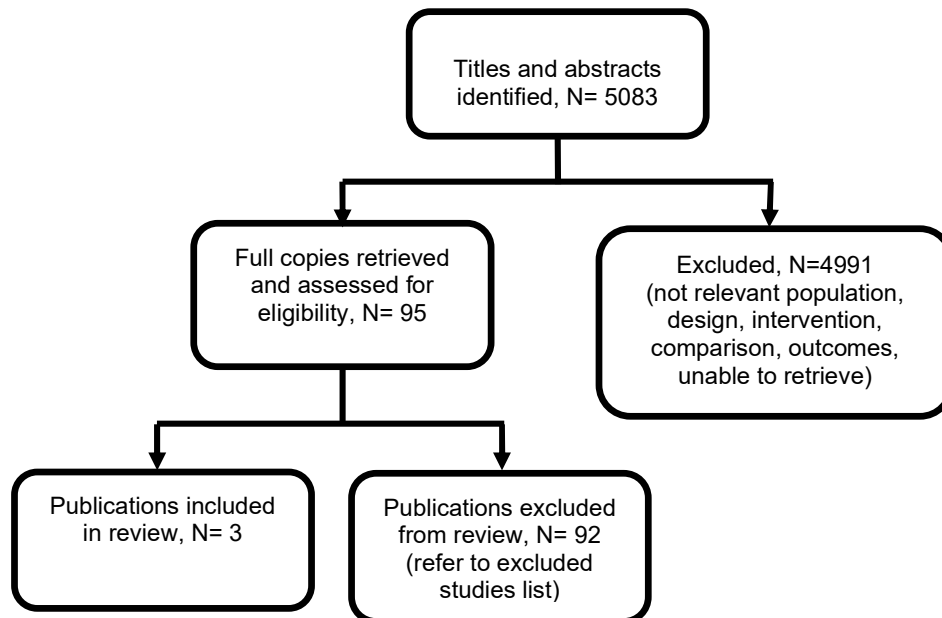
Dietary factors

#	Searches
51	anismus\$.tw.
52	puborectal\$ contract\$.tw.
53	((rectal or rectum) adj3 urge\$.tw.
54	or/35-53
55	female sexual dysfunction/ use emczd
56	(female adj sex\$ adj (dysfunct\$ or satisf\$ or problem\$ or symptom\$ or arous\$ or activit\$ or disorder\$)).tw.
57	(obstruct\$ adj3 intercourse).tw.
58	(vagin\$ adj3 laxity\$.tw.
59	(vagin\$ adj wind).tw.
60	Vaginismus/ use ppez
61	vaginism/ use emczd
62	vaginismus\$.tw.
63	(vagin\$ adj penetrat\$ adj disorder\$.tw.
64	or/55-63
65	7 or 19 or 30 or 34 or 54 or 64
66	Economics/ use ppez
67	Value of life/ use ppez
68	exp "Costs and Cost Analysis"/ use ppez
69	exp Economics, Hospital/ use ppez
70	exp Economics, Medical/ use ppez
71	Economics, Nursing/ use ppez
72	Economics, Pharmaceutical/ use ppez
73	exp "Fees and Charges"/ use ppez
74	exp Budgets/ use ppez
75	health economics/ use emczd
76	exp economic evaluation/ use emczd
77	exp health care cost/ use emczd
78	exp fee/ use emczd
79	budget/ use emczd
80	funding/ use emczd
81	budget*.ti,ab.
82	cost*.ti.
83	(economic* or pharmaco?economic*).ti.
84	(price* or pricing*).ti,ab.
85	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
86	(financ* or fee or fees).ti,ab.
87	(value adj2 (money or monetary)).ti,ab.
88	or/66-87
89	65 and 88
90	limit 89 to english language

Appendix C – Clinical evidence study selection

Study selection for: What dietary factors can increase or decrease symptoms of pelvic floor dysfunction?

Figure 1: Study selection flow chart



Appendix D –Evidence tables

Evidence tables for review question: What dietary factors can increase or decrease symptoms of pelvic floor dysfunction?

Table 4: Evidence tables

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
<p>Full citation Dowd, T. T., Campbell, J. M., Jones, J. A., Fluid intake and urinary incontinence in older community-dwelling women, Journal of community health nursing, 13, 179-86, 1996</p> <p>Ref Id 1120445</p> <p>Country/ies where the study was carried out US</p> <p>Study type Randomised controlled trial</p> <p>Aim of the study The study had two objectives; 1) to determine if increasing fluid intake resulted in fewer UI episodes and 2) to determine a</p>	<p>Sample size total recruited =58</p> <p>Total included who completed diaries = 32 (analysis was conducted on these women)</p> <p>Characteristics Mean age: 70 years (range 52 to 89) Weight: not stated, 59.5% had normal BMI, 15.6% were overweight, 25% were obese</p> <p>Mean UI duration: 7.8 years</p> <p>Total fluid intake: 1,831 cc per day Coffee intake: 431 cc per day UI episodes: 0.6 per day Number of times using the toilet: 8.5 per day</p> <p>Inclusion criteria</p> <ul style="list-style-type: none"> women aged over 50 years UI for a minimum of 6 months 	<p>Interventions Maintain fluid group (n=20) Increase fluid group (n=10) Decrease fluid group (n= 18)</p>	<p>Details Women were asked to take detailed recordings of their fluid intake using measuring cups and glasses, and instructed how to use urine collection hats.</p> <p>Women were also asked to keep input and output diaries for 5 weeks.</p> <p>First week of data collection served as a baseline measure, after this the women either maintained this, increased by 500cc (but not to increase more than 2,400cc/day) or to decrease by 300 cc (not to less than 1000 cc/day)</p>	<p>Results Daily UI episodes</p> <p>Maintain group Week 1: 0.48 Week 2: 0.71 Week 3: 0.81 Week 4: 0.57 Week 5: 0.48</p> <p>Increase group Week 1: 0.6 Week 2: 0.61 Week 3: 0.67 Week 4: 0.5 Week 5: 0.55</p> <p>Decrease group Week 1: 0.54 Week2: 0.26 Week 3: 0.17 Week 4 0.14 Week 5: 0.07</p>	<p>Limitations Limitations were assessed using the revised Cochrane risk-of-bias tool for randomised trials (RoB2).</p> <p>Domain 1- randomisation: Some concerns 1.1: No information 1.2: No information 1.3: No information</p> <p>Domain 2a- Deviations from intended interventions (effect of assignment to interventions): Some concerns 2.1: Probably yes (no information given; however due to the nature of the intervention, is likely the participants knew which group they were in). 2.2. Probably yes 2.3. No information</p> <p>Domain - Risk of bias due to missing outcome data: Low risk 3.1. No, data only included for those who completed diaries 3.2. No, it is unclear if those who did not complete the</p>

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
<p>relationship between caffeine intake and UI episodes</p> <p>Study dates Not stated</p> <p>Source of funding The Kidney Foundation of Summit County, Akron Ohio</p>	<ul style="list-style-type: none"> scored over 20 on the Mini-Mental State English speaking independent in self-care <p>Exclusion criteria Not explicitly stated, although those who did not adequately complete input and output diaries were excluded</p>				<p>diaries would have had different outcome data</p> <p>3.3. Probably no, the missing outcome data is due to incomplete collection of data rather than participants health status</p> <p>Domain 4 - Measurement of the outcome: High risk</p> <p>4.1. No, input and output diaries were used to collect data, alongside measuring cups</p> <p>4.2. Probably no, women were provided with instructions on collection. Errors should be evenly distributed across groups</p> <p>4.3. Probably yes, no information given, but likely the women were aware of their group allocation due to the nature of the study</p> <p>4.4. Yes, if the women had pre-conceived ideas about fluid intake, their measurement could be unintentionally biased</p> <p>4.5 No information, there is no discussion about the women's belief on fluid or caffeine intake</p> <p>Domain 5- Selection of the reported result: Some concerns</p> <p>5.1. No information, no details on data analysis plan</p> <p>5.2. Probably no</p> <p>5.3. Probably no</p> <p>Domain 6- Overall judgment of bias: High risk</p>

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
<p>Full citation Swithinbank,L., Hashim,H., Abrams,P., The effect of fluid intake on urinary symptoms in women, Journal of Urology, 174, 187-189, 2005</p> <p>Ref Id 144217</p> <p>Country/ies where the study was carried out UK</p> <p>Study type Randomised controlled cross-over trial</p> <p>Aim of the study To determine the effect of caffeine restriction and fluid manipulation in the treatment of women with urodynamic stress incontinence and idiopathic detrusor over-activity.</p> <p>Study dates Not stated</p>	<p>Sample size Total recruited n=84 Total include who completed the study n=69 (analysis was conducted on these women)</p> <p>Characteristics Mean age 54.8 years (range 31-76) Urodynamic stress incontinence n=39 Idiopathic detrusor overactivity n=30</p> <p>Inclusion criteria</p> <ul style="list-style-type: none"> • Urodynamic diagnosis of lower urinary tract symptoms • No previous treatment <p>Exclusion criteria Women with a urinary tract infection, hepatic, cardiac or renal disease, diabetes mellitus, receiving antidepressants, anticholinergics or diuretics. The study lasted 4 weeks, including a baseline week (week 1), followed by 3 weeks of caffeine restriction. In the first week of caffeine restriction (week 2) women were asked to drink normally. During weeks 3 and 4 women increased decaffeinated fluids to 3 l daily (20 cups) (week 3 or 4) or decreased decaffeinated fluids to 750 ml (5 cups) daily (week 3 or 4). Women were randomized in the order in which they increased and decreased fluids. Urine osmolality was measured at 3 times during the</p>	<p>Interventions Week 1: Baseline week Week 2: Caffeine restriction and drink normally Week 3 or Week 4: Caffeine restriction and to increase decaffeinated fluids to 3 litres / 20 cups daily Week 3 or Week 4: Caffeine restriction and to decrease decaffeinated fluids to 750 ml / 5 cups daily</p>	<p>Details Women kept daily diaries on episodes of urgency and leakage. A 24-hour pad test was completed at the end of each week with women keeping to their usual exercise levels. Also at the end of each week they completed a shortened version of the Bristol Female Lower Urinary Tract Symptoms symptom questionnaire.</p>	<p>Results USI group (n=39) Voiding Frequency (median IQR) Baseline: 7.2 (6.2-8.4) Caffeine free: 7.0 (5.9-8.9) Caffeine free + increasing fluids: 8.3 (7-10.9) Caffeine free + decrease fluids: 6.3 (5-7.1)</p> <p>24hr pad weight increase (g) (median IQR) Baseline: 7.6 (3.3-18.3) Caffeine free: 7.1 (2.7-12.1) Caffeine free + increasing fluids: 7.9 (4-19.7) Caffeine free + decrease fluids: 6.9 (3.1-13.9)</p> <p>No. of daily wetting episodes (median IQR) Baseline: 1.6 (0.6-2.8) Caffeine free: 0.8 (0.1-1.9) Caffeine free + increasing fluids: 0.7 (0.3-3.0) Caffeine free + decrease fluids: 0.5 (0.2-2.1)</p>	<p>Limitations Limitations were assessed using the revised Cochrane risk-of-bias tool for randomised trials (RoB2).</p> <p>Domain 1- randomisation: Some concerns 1.1: No information, the study simply states "women were randomised" 1.2: No information 1.3: No information</p> <p>Domain 2- Deviations from intended interventions (effect of assignment to interventions): Some concerns 2.1: Yes, women either increased or decreased their fluid intake 2.2. Probably yes, no information of whether those providing the intervention were aware of allocation; however, again due to the nature of the study, it is likely they were 2.3. No information</p> <p>Domain 3- Missing outcome data: High risk 3.1. No, data was provided for the 69 women who completed the trial, not the 110 recruited 3.2. No, no details as to why the women dropped out, so it is unclear if these were related to the intervention 3.3. No information 3.4 No information</p>

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Source of funding Not stated	last day of each week to assess compliance.			<p>IDO group (n=30)</p> <p>No of urgency episodes (median IQR) Baseline: 5.2 (3-7.7) Caffeine free: 5.4 (2.8-8.7) Caffeine free + increasing fluids: 7.6 (3.9-9.4) Caffeine free + decrease fluids: 4.3 (2.6-5.7)</p> <p>Voiding Frequency (median IQR) Baseline: 9.0 (7.8-10.9) Caffeine free: 8.9 (7.4-11.1) Caffeine free + increasing fluids: 10.8 (9.3-14.4) Caffeine free + decrease fluids: 7.7 (6.7-9.3)</p> <p>24hr pad weight increase (g) (median IQR) Baseline: 5.9 (3.4-13.5) Caffeine free: 5.6 (3.9-10.4) Caffeine free + increasing fluids: 12.1 (4.4-26) Caffeine free + decrease fluids: 4.4 (3.1-15.5)</p>	<p>Domain 4 - Measurement of the outcome: High risk</p> <p>4.1. No, pad tests, diaries and questionnaires used were appropriate to the outcome</p> <p>4.2. Probably no - no details provided but it is unlikely there would be unequal measurement errors across groups</p> <p>4.3. Probably yes, no information, but the women likely knew if they were increasing or decreasing fluid intake, and most measures were subjective.</p> <p>4.4. Probably yes, the women may have held belief's regarding the effect of fluid intake</p> <p>4.5. No information, there is no information about women's beliefs in relation to fluid intake</p> <p>Domain 5- Selection of the reported result: Some concerns</p> <p>5.1. No information</p> <p>5.2. Probably no, only appropriate outcomes measured, by one defined method</p> <p>5.3. Probably no</p> <p>Domain 6- Overall judgment of bias: High risk</p>

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
				No. of daily wetting episodes (median IQR) Baseline: 0.9 (0.4-2.0) Caffeine free: 0.6 (0.2-1.8) Caffeine free + increasing fluids: 1.1 (0.2-3.0) Caffeine free + decrease fluids: 0.5 (0.2-1.2)	
Full citation Wells, M. J., Jamieson, K., Markham, T. C., Green, S. M., Fader, M. J., The effect of caffeinated versus decaffeinated drinks on overactive bladder: a double-blind, randomized, crossover study, Journal of Wound, Ostomy, & Continence NursingJ Wound Ostomy Continence Nurs, 41, 371-8, 2014 Ref Id 1121167 Country/ies where the study was carried out UK Study type Randomised controlled cross-over trial	Sample size Total recruited n=15 Total included who completed the study n= 11 (analysis was conducted on these women) Characteristics Mean age: 52 years; range 27-79 years Inclusion criteria <ul style="list-style-type: none"> • Women over 18 years • Newly diagnosed OAB symptoms • reported frequency of 7 or more voids per day and 2 at night (9 or more voided per 24 hours) • self-rated urgency and/or urge UI • consumption of 2 or more caffeinated drinks per day 	Interventions 14 day initial run-in period 14 day caffeinated tea/coffee period or randomised to 14 day decaffeinated tea/coffee period 14 day wash out 14 day complete the other condition (caffeinated or decaffeinated tea/coffee period) Tea and coffee were provided in unmarked packaging for the intervention periods	Details Decaffeinated tea and coffee products were issued for the run-in period, and participants were asked to reduce their usual number of caffeinated drinks by 1 per day and replace it with the decaffeinated drinks provided. Participants were asked not to drink caffeinated drinks other than those provided by the study and to record consumption of any caffeine-containing products during the 2 intervention periods and washout period. A list of over-the-counter medications was provided and participants requested to avoid their purchase; if this was not possible, they were asked to make a note of the type, quantity, and date taken. A 3-day bladder diary was used to record fluid intake (size and type of drink), urine output (ml), time of voiding (to	Results Each participant completed each condition (n=11). Data is median IQR Urgency episodes /3days Caffeine period: 27 (22-28.5); Decaffeinated period: 21 (18.5-25.5) Frequency episodes /3days Caffeine period: 27 (22-31.5); Decaffeinated period: 22 (19.5-31) Volume ml/void median of /3days Caffeine period: 201 (172-247); Decaffeinated period: 193 (154-255) Incontinence episodes /3days	Limitations Limitations were assessed using the revised Cochrane risk-of-bias tool for randomised trials (RoB2). Domain 1- randomisation: Some concerns 1.1: Yes, random number generator 1.2: NI, allocation sequence, enrolment and assignment of participants were carried out by a single researcher. Unclear if the researcher was independent/not involved in the analysis/ if they had knowledge of forthcoming allocation/ no information on the concealment process. 1.3: NI (no baseline data provided, unclear if there were any differences) Domain 2a- Deviations from intended interventions (effect of assignment to interventions): Low risk

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
<p>Aim of the study To investigate the effect of drinking caffeinated versus decaffeinated fluids on symptoms of OAB in adult women and to appraise the methods for a future larger scale study</p> <p>Study dates July 2006 to October 2008</p> <p>Source of funding Burdett Trust for Nursing 2009</p>	<p>(minimum caffeine content of 60 mg per 24 hours).</p> <p>Exclusion criteria</p> <ul style="list-style-type: none"> • symptoms of stress incontinence • oestrogen- containing oral contraceptive prescription • caffeine-containing or caffeine metabolism interfering medications • post void residual >100 ml • history of frequent urinary tract infections • pregnancy • inability to complete a 3-day bladder diary • reported smoking habit. 		<p>calculate frequency), urgency (1-5 scale), and incontinence over a 3-day period toward the end of the run-in, period 1, period 2, and the washout period. Secondary outcome measures included the International Consultation on Incontinence Modular Questionnaire– Overactive Bladder Module (ICIQ-OAB) and International Consultation of Incontinence Modular Questionnaire– Overactive Bladder–Quality of Life (ICIQ-OABqol) questionnaires, and the Caffeine Withdrawal Visual Analogue Scales (CW-VAS). Women were asked to complete the questionnaires based on their bladder activity in the previous 2 weeks toward the end of the run-in, period 1, period 2, and the washout period. The CW-VAS were completed every day throughout the trial to evaluate caffeine withdrawal symptoms. Participant compliance was determined by the measurement of the caffeine content of saliva samples as compared to a measurement obtained at baseline.</p>	<p>Caffeine period: 1 (0-4); Decaffeinated period: 0 (0-2.5)</p> <p>ICIQ-OAB overall score Caffeine period: 6 (5.5-9.0); Decaffeinated period: 4 (3.5-5.5)</p> <p>ICIQ-OABqol overall score Caffeine period: 69 (54-75.5); Decaffeinated period: 50 (44.5-57)</p> <p>2 of the 11 participants who completed the study did not comply with caffeine substitution at the time points were measured</p>	<p>2.1: No, double blind study 2.2: No, double blind study Domain 2b- Deviations from intended interventions: Low risk 2.6: Yes, intention to treat analysis 2.7: Probably no, drop out of 21.4%, 1 participant did not receive the allocated intervention due to intolerance to caffeine reduction, 2/11 (18%) were non-compliant and had additional caffeine when in the decaffeinated group</p> <p>Domain 3- Missing outcome data: Low risk 3.1. No, 3/15 drop outs (21.4%) due to ill health 3.2. No, no analysis undertaken to correct for bias from resulting missing data 3.3. Probably no, discontinued due to ill health, not associated with the study itself</p> <p>Domain 4 - Measurement of the outcome: Low risk 4.1. Probably no, majority validated tools, unclear validity/completeness of self recording of fluid intake/output etc. 4.2. Probably no, outcome measurement/ ascertainment would not have differed between the groups 4.3. No information on the assessor blinding of outcomes. Investigators were only stated to have not been informed</p>

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
					<p>which products were caffeinated.</p> <p>4.4. Probably no, the investigator assessed outcomes such as. adherence, doesn't involve judgement, result of a saliva test.</p> <p>Domain 5- Selection of the reported result: Some concerns</p> <p>5.1. No information no published protocol to check for selective outcome reporting, caffeine withdrawal visual scale only reported as a narrative, no data given.</p> <p>5.2. No, no selective bias in multiple outcome measurements</p> <p>5.3. No, data presented as expected.</p> <p>Domain 6- Overall judgment of bias: Some concerns</p>

GRADE: Grading of Recommendations Assessment, Development and Evaluation; ICIQ-OAB: International Consultation on Incontinence Questionnaire- Overactive bladder; ICIQ-OABqol: International Consultation on Incontinence Questionnaire- Overactive bladder, quality of life; IDO: Idiopathic detrusor over-activity; IQR: Interquartile range; OAB: Overactive bladder; RCT: Randomised controlled trial; SD: standard deviation; UI: Urinary incontinence; USI: urodynamic stress incontinence.

Appendix E – Forest plots

Forest plots for review question: What dietary factors can increase or decrease symptoms of pelvic floor dysfunction?

No meta-analysis was conducted for this review question and so there are no forest plots.

Appendix F – GRADE tables

GRADE tables for review question: What dietary factors can increase or decrease symptoms of pelvic floor dysfunction?

Table 5: Clinical evidence profile for comparison baseline caffeine intake versus caffeine restricted intake

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Caffeine restricted	Baseline level	Relative (95% CI)	Absolute		
Voiding frequency (USI population) (follow-up mean 7 days; Better indicated by lower values)												
1 Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	39	39	-	Median 0.2 lower, median(IQR): Baseline: 7.2 (6.2-8.4), Caffeine free: 7.0 (5.9-8.9)	VERY LOW	CRITICAL
24hr pad weight increase (g) (USI population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	39	39	-	Median 0.5 lower, median(IQR): Baseline: 7.6 (3.3-18.3), Caffeine free: 7.1 (2.7-12.1)	VERY LOW	CRITICAL
No. of daily wetting episodes (USI population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	39	39	-	Median 0.8 lower, median(IQR): Baseline: 1.6 (0.6-2.8), Caffeine free: 0.8 (0.1-1.9)	VERY LOW	CRITICAL
No. of urgency episodes (IDO population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	30	30	-	Median 0.2 higher, median(IQR): Baseline: 5.2 (3-7.7), Caffeine free: 5.4 (2.8-8.7)	VERY LOW	CRITICAL
Voiding frequency (IDO population) (follow-up mean 7 days; Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Caffeine restricted	Baseline level	Relative (95% CI)	Absolute		
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	30	30	-	Median 0.1 lower, median(IQR): Baseline: 9.0 (7.8-10.9), Caffeine free: 8.9 (7.4-11.1)	VERY LOW	CRITICAL
24hr pad weight increase (g) (IDO population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	30	30	-	Median 0.3 lower, median(IQR): Baseline: 5.9 (3.4-13.5), Caffeine free: 5.6 (3.9-10.4)	VERY LOW	CRITICAL
No. of daily wetting episodes (IDO population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	30	30	-	Median 0.3 lower, median(IQR): Baseline: 0.9 (0.4-2.0), Caffeine free: 0.6 (0.2-1.8)	VERY LOW	CRITICAL

CI: confidence interval; IDO: Idiopathic detrusor over-activity; IQR: interquartile range; USI: urodynamic stress incontinence.

1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

2 Subjective assessment

Table 6: Clinical evidence profile for comparison baseline caffeine intake versus caffeine restricted and increased fluid intake

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Caffeine restricted + increase fluids	Baseline	Relative (95% CI)	Absolute		
Voiding frequency (USI population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	39	39	-	Median 1.1 higher, median(IQR): Baseline: 7.2 (6.2-8.4), Caffeine free + increasing fluids: 8.3 (7-10.9)	VERY LOW	CRITICAL

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Caffeine restricted + increase fluids	Baseline	Relative (95% CI)	Absolute		
24hr pad weight increase (USI population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	39	39	-	Median 0.3 higher, median(IQR): Baseline: 7.6 (3.3-18.3), Caffeine free + increasing fluids: 7.9 (4-19.7)	VERY LOW	CRITICAL
No. of daily wetting episodes (USI population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	39	39	-	Median 0.9 lower, median(IQR): Baseline: 1.6 (0.6-2.8), Caffeine free + increasing fluids: 0.7 (0.3-3.0)	VERY LOW	CRITICAL
No. of urgency episodes (IDO population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	30	30	-	Median 2.4 higher, median(IQR): Baseline: 5.2 (3-7.7), Caffeine free + increasing fluids: 7.6 (3.9-9.4)	VERY LOW	CRITICAL
Voiding frequency (IDO population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	30	30	-	Median 1.8 higher, median(IQR): Baseline: 9.0 (7.8-10.9), Caffeine free + increasing fluids: 10.8 (9.3-14.4)	VERY LOW	CRITICAL
24hr pad weight increase (g) (IDO population) (follow-up mean 7 days; Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Caffeine restricted + increase fluids	Baseline	Relative (95% CI)	Absolute		
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	30	30	-	Median 6.2 higher, median(IQR): Baseline: 5.9 (3.4-13.5), Caffeine free + increasing fluids: 12.1 (4.4-26)	VERY LOW	CRITICAL
No. of daily wetting episodes (IDO population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	30	30	-	Median 0.2 higher, median(IQR): Baseline: 0.9 (0.4-2.0), Caffeine free + increasing fluids: 1.1 (0.2-3.0)	VERY LOW	CRITICAL

CI: confidence interval; IDO: Idiopathic detrusor over-activity; IQR: interquartile range; USI: urodynamic stress incontinence.

1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

2 Subjective assessment

Table 7: Clinical evidence profile for comparison baseline caffeine intake versus caffeine restricted and decreased fluid intake

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Caffeine free + decrease fluids	Baseline	Relative (95% CI)	Absolute		
Voiding frequency (USI population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	39	39	-	Median 0.9 lower, median(IQR): Baseline: 7.2 (6.2-8.4), Caffeine free + decrease fluids: 6.3 (5-7.1)	VERY LOW	CRITICAL
24hr pad weight increase (g) (USI population) (follow-up mean 7 days; Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Caffeine free + decrease fluids	Baseline	Relative (95% CI)	Absolute		
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	39	39	-	Median 0.7 lower, median(IQR): Baseline: 7.6 (3.3-18.3), Caffeine free + decrease fluids: 6.9 (3.1-13.9)	VERY LOW	CRITICAL
No. of daily wetting episodes (USI population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	39	39	-	Median 1.1 lower, median(IQR): Baseline: 1.6 (0.6-2.8), Caffeine free + decrease fluids: 0.5 (0.2-2.1)	VERY LOW	CRITICAL
No. of urgency episodes (IDO population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	30	30	-	Median 0.9 lower, median(IQR): Baseline: 5.2 (3-7.7), Caffeine free + decrease fluids: 4.3 (2.6-5.7)	VERY LOW	CRITICAL
Voiding frequency (IDO population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	30	30	-	Median 1.3 lower, median(IQR): Baseline: 9.0 (7.8-10.9), Caffeine free + decrease fluids: 7.7 (6.7-9.3)	VERY LOW	CRITICAL
24hr pad weight increase (g) (IDO population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	30	30	-	Median 1.5 lower, median(IQR): Baseline: 5.9 (3.4-13.5), Caffeine free + decrease fluids: 4.4 (3.1-15.5)	VERY LOW	CRITICAL
No. of daily wetting episodes (IDO population) (follow-up mean 7 days; Better indicated by lower values)												
Swithinbank 2005	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	30	30	-	Median 0.4 lower, median(IQR): Baseline: 0.9 (0.4-2.0), Caffeine free + decrease fluids: 0.5 (0.2-1.2)	VERY LOW	CRITICAL

CI: confidence interval; IDO: Idiopathic detrusor over-activity; IQR: interquartile range; USI: urodynamic stress incontinence.

1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

2 Subjective assessment

Table 8: Clinical evidence profile for comparison caffeinated product intake versus decaffeinated product intake

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Caffeine	Decaff (OAB population)	Relative (95% CI)	Absolute		
Urgency (episodes/3 days) (follow-up mean 14 days; Better indicated by lower values)												
Wells 2014	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	11	11	-	Median 6 lower, median(IQR): Caffeine period: 27 (22-28.5); Decaffeinated period: 21 (18.5-25.5)	LOW	CRITICAL
Frequency (episodes/3 days) (follow-up mean 14 days; Better indicated by lower values)												
Wells 2014	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	11	11	-	Median 5 lower, median(IQR): Caffeine period: 27 (22-31.5); Decaffeinated period: 22 (19.5-31)	LOW	CRITICAL
Volume (ml per void) (follow-up mean 14 days; Better indicated by lower values)												
Wells 2014	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	11	11	-	Median 8 lower, median(IQR): Caffeine period: 201 (172-247); Decaffeinated period: 193 (154-255)	LOW	CRITICAL
Incontinence (episodes/3 days) (follow-up mean 14 days; Better indicated by lower values)												
Wells 2014	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	11	11	-	Median 1 lower, median(IQR): Caffeine period: 1 (0-4); Decaffeinated period: 0 (0-2.5)	LOW	CRITICAL
ICIQ-OAB (follow-up mean 14 days; Better indicated by lower values)												
Wells 2014	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	11	11	-	Median 2 lower, median(IQR): Caffeine period: 6 (5.5-9.0); Decaffeinated period: 4 (3.5-5.5)	LOW	CRITICAL
ICIQ-OABqol (follow-up mean 14 days; Better indicated by lower values)												
Wells 2014	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	11	11	-	Median 19 lower, median(IQR): Caffeine period: 69 (54-75.5); Decaffeinated period: 50 (44.5-57)	LOW	CRITICAL

CI: confidence interval; IQR: interquartile range

FINAL

Dietary factors for the management of symptoms

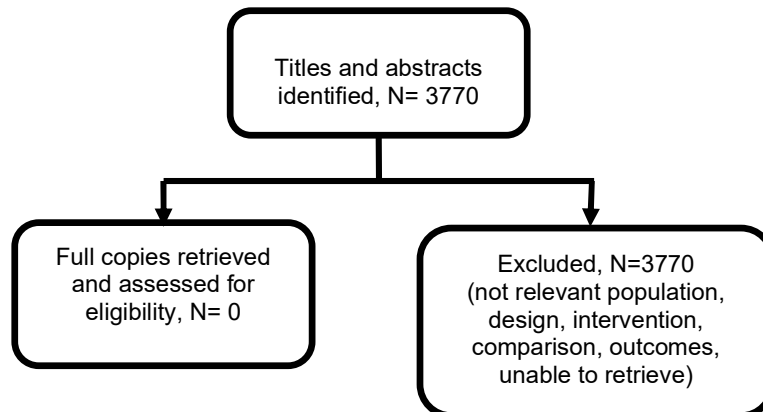
- 1 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2*
- 2 Subjective assessment*

Appendix G – Economic evidence study selection

Economic evidence study selection for review question: What dietary factors can increase or decrease symptoms of pelvic floor dysfunction?

No economic evidence was identified which was applicable to this review question.

Figure 2: Study selection flow chart



Appendix H – Economic evidence tables

Economic evidence tables for review question: What dietary factors can increase or decrease symptoms of pelvic floor dysfunction?

No evidence was identified which was applicable to this review question.

Appendix I – Economic evidence profiles

Economic evidence profiles for review question: What dietary factors can increase or decrease symptoms of pelvic floor dysfunction?

No economic evidence was identified which was applicable to this review question.

Appendix J – Economic analysis

Economic evidence analysis for review question: What dietary factors can increase or decrease symptoms of pelvic floor dysfunction?

No economic analysis was conducted for this review question.

Appendix K – Excluded studies

Excluded studies for review question: What dietary factors can increase or decrease symptoms of pelvic floor dysfunction?

Clinical studies

Table 9: Excluded studies and reasons for their exclusion (RCTs)

Study	Reason for Exclusion
Application of Probiotics Combined With Soluble Dietary Fiber in Middle-aged and Elderly Patients With Chronic Constipation, Chinese journal of gastroenterology, 24, 95-98, 2019	Article in Chinese
Allen, M. S., Walter, E. E., Health-Related Lifestyle Factors and Sexual Dysfunction: A Meta-Analysis of Population-Based Research, Journal of sexual medicine, 15, 458-475, 2018	Systematic review - included studies not relevant (all observational)
Bliss, D. Z., Jung, H. J., Savik, K., Lowry, A., LeMoine, M., Jensen, L., Werner, C., Schaffer, K., Supplementation with dietary fiber improves fecal incontinence, Nursing research, 50, 203-13, 2001	Not associated with PFD, data on women not give separately from men
Bliss, D. Z., Savik, K., Jung, H. J., Whitebird, R., Lowry, A., Symptoms associated with dietary fiber supplementation over time in individuals with fecal incontinence, Nursing research, 60, S58-67, 2011	Not associated with PFD, data on women not give separately from men
Bliss, D. Z., Savik, K., Jung, H. J., Whitebird, R., Lowry, A., Sheng, X., Dietary fiber supplementation for fecal incontinence: a randomized clinical trial, Research in nursing & health, 37, 367-78, 2014	Not associated with PFD, women data not given separately
Bordman, R., Jackson, B., Below the belt: Approach to chronic pelvic pain, Canadian Family Physician, 52, 1556-1562, 2006	Review
Bradley, C. S., Erickson, B. A., Messersmith, E. E., Pelletier-Cameron, A., Lai, H. H., Kreder, K. J., Yang, C. C., Merion, R. M., Bavendam, T. G., Kirkali, Z., Symptoms of Lower Urinary Tract Dysfunction Research, Network, Evidence of the Impact of Diet, Fluid Intake, Caffeine, Alcohol and Tobacco on Lower Urinary Tract Symptoms: A Systematic Review, Journal of urology, 198, 1010-1020, 2017	Systematic review, includes checked for eligibility
Bryant, C. M., Dowell, C. J., Fairbrother, G., Caffeine reduction education to improve urinary symptoms, British Journal of Nursing Br J Nurs, 11, 560-5, 2002	Not associated with PFD, women data not given separately
Callan, L., Thompson, D. L., Netsch, D., Does Increasing or Decreasing the Daily Intake of Water/Fluid by Adults Affect Overactive Bladder Symptoms?, Journal of Wound, Ostomy, & Continence Nursing J Wound Ostomy Continence Nurs, 42, 614-20, 2015	Systematic review, includes checked for eligibility
Carmignani, L. O., Pedro, A. O., Montemor, E. B., Arias, V. A., Costa-Paiva, L. H., Pinto-Neto, A. M., Effects of a soy-based dietary supplement compared with low-dose hormone therapy on the urogenital system: a randomized, double-blind, controlled clinical trial, Menopause, 22, 741-9, 2015	Population not PFD - (women with vaginal dryness)
Colavita, K., Andy, U. U., Role of diet in fecal incontinence: a systematic review of the literature, International urogynecology journal, 27, 1805-1810, 2016	Systematic Review, studies checked for relevance
Cremon, C., Wrona, D., Barbaro, M. R., Fuschi, D., Villafranca, C., Casciola, R., Pagliara, A., Rotondo, L., Montanari, D., Capelli, E., et al., The effect of Zespri green kiwifruit on	Incorrect comparison

Study	Reason for Exclusion
digestive functions in constipated patients: a randomized, controlled, single-blind, cross over study, <i>Neurogastroenterology and motility</i> , 31, 2019	
Ctri,, A clinical trial to study the effects of traditional treatments in patients with pelvic organ prolapse, http://www.who.int/trialsearch/Trial2.aspx?TrialID=CTRI/2013/04/003563 , 2013	Clinical trial registration - no published studies attached to registration
Eady, S. L., Wallace, A. J., Butts, C. A., Hedderley, D., Drummond, L., Ansell, J., Gearry, R. B., The effect of 'Zesy002' kiwifruit (<i>Actinidia chinensis</i> var. <i>chinensis</i>) on gut health function: a randomised cross-over clinical trial, <i>Journal of Nutritional Science</i> , 8, e18, 2019	Incorrect comparison intervention
Ernst, M., Gonka, J., Povcher, O., Kim, J., Diet Modification for Overactive Bladder: an Evidence-Based Review, <i>Current Bladder Dysfunction Reports</i> , 10, 25-30, 2015	Narrative literature review
Esposito, K., Ciotola, M., Giugliano, F., Schisano, B., Autorino, R., Iuliano, S., Vietri, M. T., Cioffi, M., De Sio, M., Giugliano, D., Mediterranean diet improves sexual function in women with the metabolic syndrome, <i>International journal of impotence research</i> , 19, 486-91, 2007	Sexual dysfunction is due to metabolic syndrome not pelvic floor dysfunction
Fjerbaek, A., Sondergaard, L., Andreasen, J., Glavind, K., Treatment of urinary incontinence in overweight women by a multidisciplinary lifestyle intervention, <i>Archives of Gynecology and Obstetrics</i> , 301, 525-532, 2020	Incorrect study design
Gomelsky, A., Dmochowski, R.R., Treatment of mixed urinary incontinence in women, <i>Current Opinion in Obstetrics and Gynecology</i> , 23, 371-375, 2011	Narrative literature review
Hashim, H., Abrams, P., How should patients with an overactive bladder manipulate their fluid intake?, <i>BJU international</i> , 102, 62-6, 2008	Not PFD, female data not reported separately
Holroyd-Leduc, J. M., Straus, S. E., Management of Urinary Incontinence in Women: Scientific Review, <i>Journal of the American Medical Association</i> , 291, 986-995, 2004	Narrative literature review
Huaman, J. W., Mego, M., Bendezu, A., Monrroy, H., Samino, S., Accarino, A., Saperas, E., Azpiroz, F., Correction of Dyssynergic Defecation, but Not Fiber Supplementation, Reduces Symptoms of Functional Dyspepsia in Patients With Constipation in a Randomized Trial, <i>Clinical Gastroenterology & Hepatology Clin Gastroenterol Hepatol</i> , 18, 2463-2470.e1, 2020	Incorrect population (includes men)
Imamura, M., Williams, K., Wells, M., McGrother, C., Lifestyle interventions for the treatment of urinary incontinence in adults, <i>Cochrane Database of Systematic Reviews</i> , 2015	Systematic Review - includes checked for relevance
Jprn, Umin, THE ROLE OF LIFE STYLE AND DIET MODIFICATIONS ON TREATMENT OF CHRONIC PELVIC PAIN SYNDROME, http://www.who.int/trialsearch/Trial2.aspx?TrialID=JPRN-UMIN000005456 , 2011	Clinical trial registration - no published studies attached to registration
Jung, S. J., Oh, M. R., Park, S. H., Chae, S. W., Effects of rice-based and wheat-based diets on bowel movements in young Korean women with functional constipation, <i>European Journal of Clinical Nutrition Eur J Clin Nutr</i> , 74, 1565-1575, 2020	Incorrect comparison
Kellogg-Spadt, S., Manos, E., Krychman, M., Dweck, A., Parish, S. J., Effects of ristela supplementation on female sexual satisfaction: an open-label trial, <i>Menopause (New York, N.Y.)</i> , 26, 1467-1474, 2019	Incorrect study design

Study	Reason for Exclusion
Kommers, M. J., Silva Rodrigues, R. A., Miyajima, F., Zavala Zavala, A. A., Ultramari, Vrlm, Fett, W. C. R., Balogun, S. O., de Oliveira, R. G., Fett, C. A., Effects of Probiotic Use on Quality of Life and Physical Activity in Constipated Female University Students: a Randomized, Double-Blind Placebo-Controlled Study, <i>Journal of alternative and complementary medicine (New York, N.Y.)</i> , 25, 1163â€ 1171, 2019	Incorrect population
Kosilov, K. V., Loparev, S. A., Ivanovskaya, M. A., Kosilova, L. V., Caffeine as a Probable Factor for Increased Risk of OAB Development in Elderly People, <i>Current urology</i> , 9, 124-131, 2016	Mixed population, no separate outcome data for women only
Lauti, M., Scott, D., Thompson-Fawcett, M. W., Fibre supplementation in addition to loperamide for faecal incontinence in adults: a randomized trial, <i>Colorectal disease</i> , 10, 553-62, 2008	Not PFD, female data not reported separately
Manonai, J., Songchitsomboon, S., Chanda, K., Hong, J.H., Komindr, S., The effect of a soy-rich diet on urogenital atrophy: a randomized, cross-over trial, <i>Maturitas</i> , 54, 135-140, 2006	Population not PFD - urogenital atrophy
Markland, A. D., Burgio, K. L., Whitehead, W. E., Richter, H. E., Wilcox, C. M., Redden, D. T., Beasley, T. M., Goode, P. S., Loperamide Versus Psyllium Fiber for Treatment of Fecal Incontinence: The Fecal Incontinence Prescription (Rx) Management (FIRM) Randomized Clinical Trial, <i>Diseases of the Colon & Rectum/Dis Colon Rectum</i> , 58, 983-93, 2015	Not associated with PFD, women data not reported separately
Moore, K.N., Saltmarche, A., Query, B., Urinary incontinence. Non-surgical management by family physicians, <i>Canadian Family Physician</i> , 49, 602-610, 2003	Narrative literature review
Nambiar, A. K., Bosch, R., Cruz, F., Lemack, G. E., Thiruchelvam, N., Tubaro, A., Bedretdinova, D. A., Ambuhl, D., Farag, F., Lombardo, R., Schneider, M. P., Burkhard, F. C., EAU Guidelines on Assessment and Nonsurgical Management of Urinary Incontinence [Figure presented], <i>European Urology</i> , 73, 596-609, 2018	Systematic review, references checked for relevance
Nct., Comparing the Effectiveness of Two Dietary Interventions for Fecal Incontinence, https://clinicaltrials.gov/show/nct02828384 , 2016	No published results/ Full text available
Nct., Overactive Bladder (OAB) Drink Advice Study, https://clinicaltrials.gov/show/NCT00982241 , 2009	Clinical trial registration - no published studies attached to registration
Olivera, C. K., Meriwether, K., El-Nashar, S., Grimes, C. L., Chen, C. C., Orejuela, F., Antosh, D., Gleason, J., Kim-Fine, S., Wheeler, T., McFadden, B., Balk, E. M., Murphy, M., Systematic Review Group for the Society of Gynecological Surgeons, Nonantimuscarinic treatment for overactive bladder: a systematic review, <i>American Journal of Obstetrics & Gynecology</i> , 215, 34-57, 2016	Systematic review, included studies checked for relevance
Palma, I. A. F., Staack, A., Impact of Caffeine on Overactive Bladder Symptoms, <i>Current Bladder Dysfunction Reports</i> , 11, 2016	systematic review - studies checked for relevance
Park, S. J., Yoon, H. N., Shim, B. S., Prevention of relapse with the cranberry juice in chronic pelvic pain syndrome, <i>Korean journal of urology</i> , 46, 63â€ 67, 2005	Language - not English
Robinson, D., Hanna-Mitchell, A., Rantell, A., Thiagamoorthy, G., Cardozo, L., Are we justified in suggesting change to caffeine, alcohol, and carbonated drink intake in lower urinary	Narrative literature review

Study	Reason for Exclusion
tract disease? Report from the ICI-RS 2015, Neurourology & UrodynamicsNeurorol Urodyn, 36, 876-881, 2017	
Schimpf, M. O., Smith, A. R., Miller, J. M., Fluids affecting bladder urgency and lower urinary symptoms (FABULUS): methods and protocol for a randomized controlled trial, International Urogynecology Journal, 31, 1033-1040, 2020	Protocol only, no results
Schnelle, J. F., Leung, F. W., Rao, S. S., Beuscher, L., Keeler, E., Clift, J. W., Simmons, S., A controlled trial of an intervention to improve urinary and fecal incontinence and constipation, Journal of the American Geriatrics Society, 58, 1504-11, 2010	Not PFD, female data not reported separately
Sesti, F., Capozzolo, T., Pietropolli, A., Collalti, M., Bollea, M. R., Piccione, E., Dietary therapy: a new strategy for management of chronic pelvic pain, Nutrition Research Reviews, 24, 31-8, 2011	Narrative literature review
Shariati, A., Maceda, J. S., Hale, D. S., High-fiber diet for treatment of constipation in women with pelvic floor disorders, Obstetrics and gynecology, 111, 908-913, 2008	Non randomised, non-comparative
Sloane, K., Carey, M., The effectiveness of dietary intervention in the management of women with faecal incontinence, Http://www.anzctr.org.au/actrn12605000612617.aspx , 2005	Clinical trial registration - no published studies attached to registration
Subak, L. L., Wing, R., West, D. S., Franklin, F., Vittinghoff, E., Creasman, J. M., Richter, H. E., Myers, D., Burgio, K. L., Gorin, A. A., Macer, J., Kusek, J. W., Grady, D., Pride Investigators, Weight loss to treat urinary incontinence in overweight and obese women, New England journal of medicine, 360, 481-90, 2009	Study included in 7.1 under weight loss, no specific dietary changes
Thompson-Fawcett, M., Fibre supplementation in addition to loperamide for faecal incontinence in adults: a randomised trial, Http://isrctn.org/isrctn63627007 , 2007	Trial registration - published study screened for inclusion
Turawa, E. B., Musekiwa, A., Rohwer, A. C., Interventions for preventing postpartum constipation, Cochrane Database of Systematic Reviews, 2020	Prevention rather than treatment
Wehbe, S. A., Fariello, J. Y., Whitmore, K., Minimally invasive therapies for chronic pelvic pain syndrome, Current urology reports, 11, 276-85, 2010	Narrative literature review
Whitebird, R. R., Bliss, D. Z., Hase, K. A., Savik, K., Community-based recruitment and enrollment for a clinical trial on the sensitive issue of fecal incontinence: The Fiber Study, Research in Nursing and Health, 29, 233-243, 2006	Recruitment discussion of a potentially relevant study
Wing, R. R., West, D. S., Grady, D., Creasman, J. M., Myers, D., Burgio, K. L., Franklin, F., Gorin, A. A., Vittinghoff, E., Macer, J., Kusek, J. W., Subak, L. L., Weight loss improves urinary incontinence in overweight & obese women through 18 months, Journal of Pelvic Medicine and Surgery, 14 (4), 224, 2008	Weight loss study, included in 7.1
Wood, L. N., Markowitz, M. A., Parameshwar, P. S., Hannemann, A. J., Ogawa, S. L., Anger, J. T., Eilber, K. S., Is it Safe to Reduce Water Intake in the Overactive Bladder Population? A Systematic Review, Journal of urology, 200, 375-381, 2018	Systematic review - studies checked for relevance
Zimmern, P., Litman, H. J., Mueller, E., Norton, P., Goode, P., Urinary Incontinence Treatment, Network, Effect of fluid management on fluid intake and urge incontinence in a trial for overactive bladder in women, BJU international, 105, 1680-5, 2010	Intervention not relevant (behavioural therapy)

Table 10: Excluded studies and reasons for their exclusion (non-RCTs)

Study	Reason for Exclusion
Chakravarthy, V., Tolbert, M., Garcia, C., Miller, J., Overactive bladder and caffeine: Comparing women with and without mental health diagnoses [Erratum: 2010; 4(2): 94], International Journal of Urological Nursing, 4, 13-21, 2010	Case control study
Choi, E. P. H., Chin, W. Y., Lam, C. L. K., Wan, E. Y. F., Chan, A. K. C., Chan, K. H. Y., Evaluation of the effectiveness of nurse-led continence care treatments for Chinese primary care patients with lower urinary tract symptoms, Plos one, 10, 2015	Mixed population (male/female). Mixed mode of intervention.
Dallosso, H. M., McGrother, C. W., Matthews, R. J., Donaldson, M. M., Leicestershire, M. R. C. Incontinence Study Group, Nutrient composition of the diet and the development of overactive bladder: a longitudinal study in women, Neurourology & UrodynamicsNeurourol Urodyn, 23, 204-10, 2004	Diet and its relationship with the onset of overactive and stress incontinence in women not increase/decrease symptoms of PFD.
Dallosso, H. M., McGrother, C. W., Matthews, R. J., Donaldson, M. M., Leicestershire, M. R. C. Incontinence Study Group, The association of diet and other lifestyle factors with overactive bladder and stress incontinence: a longitudinal study in women, BJU International, 92, 69-77, 2003	Diet and its relationship with the onset of overactive and stress incontinence in women not increase/decrease symptoms of PFD.
Dallosso, H., Matthews, R., McGrother, C., Donaldson, M., Diet as a risk factor for the development of stress urinary incontinence: a longitudinal study in women, European Journal of Clinical Nutrition, 58, 920-6, 2004	Diet and its relationship with the onset of overactive and stress incontinence in women not increase/decrease symptoms of PFD.
Devore, E. E., Minassian, V. A., Grodstein, F., Factors associated with persistent urinary incontinence, American Journal of Obstetrics and Gynecology, 209, 145.e1-145.e6, 2013	Case (UI) vs control (no UI) study. Risk factors for UI, no intervention. Doesn't look at increase/decrease symptoms.
Egilmez, M. T., The risk factor and the severity of symptoms relation in women with overactive bladder, Journal of Clinical and Analytical Medicine, 6, 2015	Cross sectional study. Risk factors and Overactive bladder.
Elkadry, E., Functional urinary incontinence in women, Journal of Pelvic Medicine and Surgery, 12, 1-13, 2006	Narrative review, covering causes and management of urinary incontinence
Fjerbaek, A., Sondergaard, L., Andreasen, J., Glavind, K., Treatment of urinary incontinence in overweight women by a multidisciplinary lifestyle intervention, Archives of Gynecology and Obstetrics, 301, 525-532, 2020	Incorrect study design (single arm)
Gleason, J. L., Richter, H. E., Redden, D. T., Goode, P. S., Burgio, K. L., Markland, A. D., Caffeine and urinary incontinence in US women, International Urogynecology Journal, 24, 295-302, 2013	Cross sectional study
Gray, M., Caffeine and urinary continence, Journal of Wound, Ostomy, & Continence NursingJ Wound Ostomy Continence Nurs, 28, 66-9, 2001	Literature review
Gray, M., Overactive bladder, Journal of Wound, Ostomy and Continence Nursing, 32, S1-S5, 2005	Literature review
Gray, M., Krissovich, M., Does fluid intake influence the risk for urinary incontinence, urinary tract infection, and bladder cancer?, Journal of Wound, Ostomy, & Continence NursingJ Wound Ostomy Continence Nurs, 30, 126-31, 2003	Literature review

Study	Reason for Exclusion
James, Jack E., Sawczuk, Dianne, Merrett, Stephen, The effect of chronic caffeine consumption on urinary incontinence in psychogeriatric inpatients, <i>Psychology & Health</i> , 3, 297-305, 1989	Population does not meet the inclusion criteria: study includes both men and women and no separate analysis was conducted on women
Jirovec, Mary M., Factors associated with urine control in elderly nursing home residents with chronic memory problems, <i>Dissertation Abstracts International</i> , 46, 1116-1117, 1985	Thesis, full text not published in English. Abstract in English shows the thesis explores factors (physical, psychosocial and environmental) associated with UI
Johnson, T. M., 2nd, Sattin, R. W., Parmelee, P., Fultz, N. H., Ouslander, J. G., Evaluating potentially modifiable risk factors for prevalent and incident nocturia in older adults, <i>Journal of the American Geriatrics Society</i> , 53, 1011-6, 2005	Cross sectional and longitudinal. No description of PFD. Mixed population.
Jura, Y. H., Townsend, M. K., Curhan, G. C., Resnick, N. M., Grodstein, F., Caffeine intake, and the risk of stress, urgency and mixed urinary incontinence, <i>Journal of Urology</i> , 185, 1775-80, 2011	Study design does not meet the inclusion criteria: non-comparative study
Kincade, J. E., Dougherty, M. C., Carlson, J. R., Wells, E. C., Hunter, G. S., Busby-Whitehead, J., Factors related to urinary incontinence in community-dwelling women, <i>Urologic nursing</i> , 27, 307-317, 2007	Cross sectional data analysis on baseline data of two RCTs
Kissane, L. M., Martin, K. D., Meyer, I., Richter, H. E., Effect of an antimuscarinic on fecal incontinence in women with double in continence, <i>International Urogynecology Journal</i> , 30 (1 Supplement), S253-S254, 2019	Incorrect intervention and study design
Kurgan, A., Health help. Fluid + fiber = frequency, <i>Home care provider</i> , 1, 30, 1996	Summary report
Lee, A. H., Hirayama, F., Alcohol consumption and female urinary incontinence: a community-based study in Japan, <i>International Journal of Urology</i> , 19, 143-8, 2012	Cross sectional study
Malone, P. S. J., The management of urinary incontinence, <i>Archives of Disease in Childhood</i> , 77, 175-178, 1997	Incorrect study design. Review/commentary.
Maserejian, N. N., Kupelian, V., Miyasato, G., McVary, K. T., McKinlay, J. B., Are physical activity, smoking and alcohol consumption associated with lower urinary tract symptoms in men or women? Results from a population based observational study, <i>Journal of Urology</i> , 188, 490-5, 2012	Study design does not meet the inclusion criteria: non-comparative cohort study.
Miller, J. M., Garcia, C. E., Hortsch, S. B., Guo, Y., Schimpf, M. O., Does Instruction to Eliminate Coffee, Tea, Alcohol, Carbonated, and Artificially Sweetened Beverages Improve Lower Urinary Tract Symptoms?: A Prospective Trial, <i>Journal of Wound, Ostomy, & Continence Nursing</i> , 43, 69-79, 2016	Study design does not meet the inclusion criteria: non comparative study, three phase follow up study
Nakano, K., Takahashi, T., Tsunoda, A., Matsui, H., Shimizu, Y., Dietary trends in patients with fecal incontinence compared with the National Health and Nutrition Survey, <i>Journal of the Anus Rectum & Colon</i> , 3, 69-72, 2019	Intervention is not relevant: the study compares dietary intake of people with faecal incontinence to those in a national health survey
Nakano, K., Takahashi, T., Tsunoda, A., Shimizu, Y., Effects of Dietary Guidance without Dietary Fiber Supplements on the Symptoms, Quality of Life, and Dietary Intake in Patients with Fecal Incontinence, <i>Journal of the Anus Rectum & Colon</i> , 4, 128-136, 2020	Incorrect study design and population
Newman, D. K., What's new: the AHCPR guideline update on urinary incontinence, <i>Ostomy Wound Management</i> , 42, 46-50, 52-4, 56 passim, 1996	Comments on the guideline. No full text. See Reviewer comments on full guideline.

Study	Reason for Exclusion
Pires, J. F., Guerreiro, C. S., Carolino, E., Effect of soluble fiber in elderly with constipation, <i>Clinical Nutrition ESPEN</i> , 40, 636, 2020	Abstract only
Ribas, Y., Munoz-Duyos, A., Conservative treatment of severe defecatory urgency and fecal incontinence: minor strategies with major impact, <i>Techniques in coloproctology</i> , 22, 673-682, 2018	Population does not meet the inclusion criteria: Study includes both men and women and does not conduct separate analysis on women
Schneider, T., Marschall-Kehrel, D., Hanisch, J.U., Michel, M.C., Do gender, age or lifestyle factors affect responses to antimuscarinic treatment in overactive bladder patients?, <i>International Journal of Clinical Practice</i> , 64, 1287-1293, 2010	Safety and efficacy of darifenacin and the effect of risk factors.
Selig, H., Boyle, J., Dietary intervention. Bowel care and maintenance in long-term care, <i>Canadian Nurse</i> , 97, 28-33, 2001	Study design does not meet the inclusion criteria, this is a non-comparative study. Population includes men and women, no separate analysis was conducted on women only
Shariati, A., Maceda, J. S., Hale, D. S., High-fiber diet for treatment of constipation in women with pelvic floor disorders, <i>Obstetrics and gynecology</i> , 111, 908-913, 2008	Non comparative study
Smallwood, R., Bran and bowel habit, <i>Medical Journal of Australia</i> , 141, 447-9, 1984	Literature Review
Soda, T., Masui, K., Okuno, H., Terai, A., Ogawa, O., Yoshimura, K., Efficacy of nondrug lifestyle measures for the treatment of nocturia, <i>Journal of Urology</i> , 184, 1000-4, 2010	Study design does not meet the inclusion criteria: non-comparative study
Staller, K., Song, M., Grodstein, F., Whitehead, W. E., Matthews, C. A., Kuo, B., Chan, A. T., Increased Long-term Dietary Fiber Intake Is Associated With a Decreased Risk of Fecal Incontinence in Older Women, <i>Gastroenterology</i> , 155, 661-667.e1, 2018	Looking at risk of developing FI with fibre intake, not its affect on symptoms.
Staller, K., Song, M., Whitehead, W. E., Matthews, C., Grodstein, F., Kuo, B., Chan, A. T., A Prospective Study of Long-Term Intake of Dietary Fiber and Risk of Fecal Incontinence in Older Women, <i>Gastroenterology</i> , 154 (6 Supplement 1), S-547, 2018	Conference abstract
Tomlinson, B. U., Dougherty, M. C., Pendergast, J. F., Boyington, A. R., Coffman, M. A., Pickens, S. M., Dietary caffeine, fluid intake and urinary incontinence in older rural women, <i>International urogynecology journal</i> , 10, 22-8, 1999	Intervention does not meet the inclusion criteria- self-monitoring, bladder training and pelvic muscle exercises
Townsend, M. K., Devore, E. E., Resnick, N. M., Grodstein, F., Acidic fruit intake in relation to incidence and progression of urinary incontinence, <i>International Urogynecology Journal</i> , 24, 605-12, 2013	Study design does not meet the inclusion criteria: non-comparative study
van Gerwen, M., Knuistingh Neven, A., Caffeine and urinary incontinence, <i>Huisarts en Wetenschap</i> , 57, 556, 2014	Study published in German
Waetjen, L. E., Leung, K., Crawford, S. L., Huang, M. H., Gold, E. B., Greendale, G. A., Study of Women's Health Across the Nation, Relationship between dietary phytoestrogens and development of urinary incontinence in midlife women, <i>Menopause</i> , 20, 428-36, 2013	No UI at baseline. Looking at the risk of developing UI not the effect on symptoms of UI.
Wyman, J. F., Elswick, R. K., Wilson, M. S., Fantl, J. A., Relationship of fluid intake to voluntary micturitions and urinary incontinence in women, <i>Neurourology and Urodynamics</i> , 10, 463-473, 1991	Study design does not meet the inclusion criteria: retrospective review

Economic studies

No economic evidence was identified for this review.

Appendix L – Research recommendations

Research recommendations for review question: What dietary factors can increase or decrease symptoms of pelvic floor dysfunction?

Research question

What changes in diet can improve symptoms associated with pelvic floor dysfunction?

Why this is important

Lifestyle modification, including diet is an important part of the management of medical conditions. Changing dietary behaviours has been shown to significantly impact on an individual's health, for example in relation to type 2 diabetes and coronary heart disease. However, the role of diet in the management of pelvic floor dysfunction is uncertain. Currently there is little evidence on the effect of dietary intake on the symptoms associated with pelvic floor dysfunction. For these reasons, research on this topic is required, to allow recommendations for advice about dietary modifications to be developed.

Table 11: Research recommendation rationale

Research question	
Why is this needed	
Importance to 'patients' or the population	Dietary modification is often suggested to people with pelvic floor dysfunction. However, there is very limited evidence to guide which dietary interventions are associated with symptomatic improvement. Without this information, people may modify their diet in a manner which serves no useful purpose for the management of pelvic floor dysfunction.
Relevance to NICE guidance	The relative absence of evidence regarding this topic currently restricts NICE guidance from making recommendations regarding dietary modification in pelvic floor dysfunction. The outcome of this research would allow such recommendations to be developed and become part of NICE guidance.
Relevance to the NHS	Dietary modification is an intervention with relatively low cost and may reduce the need for interventions with higher cost impacts on the NHS. It may be that the recommendations could be combined with existing dietary advice.
National priorities	Diet modifications to reduce the prevalence of ill health is a key national priority.
Current evidence base	There is current evidence regarding fluid intake and pelvic floor dysfunction and limited evidence regarding caffeine in the condition. There is very little evidence about the effect of modification on the type and amount of food.
Equality	None known
Feasibility	This will present challenges as it will not be a simple single-change intervention, such as starting a medication. However there have been numerous studies looking at diet, modification of diet and other types of illnesses.
Other comments	

Table 12: Research recommendation modified PICO table

Criterion	Explanation
Population	<p>Over 18 with pre-existing pelvic floor dysfunction capable of understanding and responding to dietary modification advice</p> <ul style="list-style-type: none"> • Including younger participants • The included population must be able to adhere to the intervention • Identifying any psychological predictors of who can engage with the intervention
Intervention	<p>Advice on dietary modification including :</p> <ul style="list-style-type: none"> • Low fat diet for people with a high BMI • Fibre intake best for managing constipation • Optimum fluid intake • Reduced salt intake • Reduced spicy food <p>The dietary modifications listed are often suggested to people with pelvic floor dysfunction. Using these as the intervention will help to identify if these are the correct modifications for symptomatic improvement</p>
Comparator	Usual care
Outcomes	Change in symptoms associated with pelvic floor dysfunction.
Study design	<p>RCT Or Prospective case-controlled cohort, with matched participants</p>
Timeframe	Intermediate points would allow determination of the likely length of intervention before an improvement is achieved. It may also offset some of the dropout in the long-term.
Additional information	It would be useful to compare the results of this study with dietary interventions currently advised for other diseases. This would show synergies between the existing advice and any new advice to help answer the question in the guideline.

RCT: Randomised controlled trial