

FGID Table B (Updated 05/02/2016)

PUBMED 2013 – B1 Search criteria: (TITLE-ABS-KEY("functional dyspepsia")) AND (psych* or anx* or dep* or psychological or somatic or functional or personality or distress or stress or cog* or belief* or percept* or biofeedback). References also attained through screening of source references.

PUBMED 2014 – B2-B4 Search criteria e.g.: (TITLE-ABS-KEY("aerophagia")) AND (psychological intervention or hypnosis or relaxation or "behavior therapy" or "behaviour therapy" or "cognitive therapy" or "stress management" or "interpersonal therapy" or psychoanalysis or psychodynamic or CBT or mindful* or mind or hypnosis, or "psychological intervention" or biofeedback). References also attained through screening of source references.

Levels of evidence (I-IV) assessed in accordance with National Health and Medical Research Council (1999) guidelines [1]

FGID condition and diagnostic criteria		Demographics aspects of the condition		Medical treatment	Psychological aspects of the FGID			
FGID Condition:	Diagnostic criteria:	Prevalence:	Demographic characteristics:	Common medical treatment method:	Incidence of psychological conditions	Psychological predictors	Psychological intervention type	Efficacy of psychological and biofeedback interventions
B. Functional Gastroduodenal Disorders		<ul style="list-style-type: none"> • 11.6% (95% CI: 9.8-13.5) in Canada [2] • 25.4% diagnosed after excluding self-report; national average was 26.0% [3] 				<ul style="list-style-type: none"> • Absenteeism (III-2) [3] • Different psychobiological mechanisms may influence different gastroduodenal subtypes (IV) [4] 		

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B1. Functional dyspepsia 1/2	<p><i>Diagnostic criteria*</i></p> <p><i>Must include:</i></p> <p>1. <i>One or more</i> of the following:</p> <ul style="list-style-type: none"> a. Bothersome postprandial fullness b. Early satiation c. Epigastric pain d. Epigastric burning <p>AND</p> <p>2. No evidence of structural disease (including at upper endoscopy) that is likely to explain the symptoms</p> <p>* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis [5]</p> <ul style="list-style-type: none"> • Subtype / paradigm classification [6-17] • Glasgow Dyspepsia Severity Score [18] • Nepean Dyspepsia Index [19-21] • New disease specific questionnaires have been developed [22] • Reviews [22-69] • Psychosocial review [70] • Economic costs [71, 72] • Relationship with neuroticism [73] • Diagnosis difficult due to symptom overlap between NERD and FD [74] • 10 year longitudinal [75] • Mental distress [76] • Impact on QoL [77] • Misperceptions about FD [78] • Bowel habits [79] • Prevalence [80] • Health seeking comparison [81] • Symptoms [82] 	<ul style="list-style-type: none"> • 1.8% (95% CI: 1.0-2.6) in Canada [2] • 2.6% diagnosed after excluding self-report; US national average was 2.7% [3] • 4.3% (95% CI: 2.9-5.8) in AU (RII criteria; 8.5% [95% CI:7.4-9.5] RI criteria) [83] • 7.0% (95% CI: 4.9-9.6) in Mexico [84] • 7.7% in Korea [85] • 8.1% in Korea [86] • 8.5% in AU [87, 88] • 10.3% of patients with GERD in Montreal [89] • 10.6% in USA [90] • 11.5% in AU (95% CI: 9.6-14.6) [91] • 12.4% (men), 13.5% (women) in Norway [92] • 14.1% in Japan [93] • 16.1% in Malaysia [94] • 17% in Japan [95] • 19.8% in Scotland [96] • 21% (mean) in UK [97] • 23.5% (95% CI: 20.8-26.1) in China [98] • 23.8% (RI), 11.8% RII) in Taiwan [99] • 24.4% in Norway [100] • 26% in Sweden [101] • 29.2% in US [102] 	<ul style="list-style-type: none"> • Significantly more prevalent in the female gender [103, 104] • Male gender significant predictor [105, 106] • Significantly higher H.pylori infection in males aged 40-49 [93] • Dyspeptic symptoms were significantly less common in subjects with gastroptosis [107] • Symptoms may develop after an acute gastroenteritis [108] 	<ul style="list-style-type: none"> • 5HT1 receptor agonists (I) [109], (II) [110-113], (IV) [114] • Antacid (II) [115-117] • Antidepressant (I) [118], (II) [111, 119-129], (IV) [130] • Cimetidine (II) [115, 116] • Complementary and alternative medicine (II) [131, 132], (IV) [133] • Diet (III-2) [134], (IV) [135, 136] • Electric stimulation (II) [137] • H pylori eradication (I) [138], (II) [139-141] • Kappa-opioid agonists (II) [142] • Metoclopramide (II) [143], (III-3) [144] • Pantoprazole (II) [145] • Pharmacology (I) [146] • Polyethylene glycol solution (IV) [147] • Prokinetic (I) [148], (II) [149-151], (III-2) [152] • Protease inhibitors (II) [153] • Proton pump inhibitors (I) [154], (II) [155-157], (III-2) [158, 159], (IV) [160, 161] • Reassurance (III-2) [162] • Rebamipide (II) [163] • Tegasterod (II) [164, 165] • Thermal water (IV) [166] • Step up step down (II) [167] 	<ul style="list-style-type: none"> • 17.1% CES-D depression (IV) [84] • 28.5% moderate/severe HADS anxiety, 10.9% HADS moderate/severe depression (IV) [168] • 26% depression in mild, and 55% depression, 21% conversion disorder and 21% panic disorder in severe (III-2) [129] • 9.1% had depression or anxiety (SDS/SAS) (IV) [98] • 19.4% comorbidity (III-2) [169] • 60% comorbidity (III-3) [170] • 70% comorbidity (III-2) [171] • 43.06% comorbidity, significantly higher than controls (IV) [88] • 17% comorbid depression and 6% anxiety (III-2) [172] 	<ul style="list-style-type: none"> • Absenteeism (III-2) [3] • Affect (IV) [173] • Age (III-2) [174] • Anger (IV) [175] • Anxiety (III-2) [104, 106, 174, 176-182], (IV) [173] • Coping (III-2) [178] • Depression (III-2) [106, 130, 174, 176, 178-181, 183], (IV) [175] • Eating behaviours (II) [184] • History of emotional abuse (III-2) [105] • Impaired immune system (III-2) [108, 185] • Neuroticism (III-2) [105, 179-181] [177] • Obesity (III-2) [177] • Pain severity (III-2) [105, 186] • Psychiatric diagnosis (III-2) [106], (IV) [173] • Sleeping problems (III-2) [187] • Somatisation (III-2) [106, 176], (IV) [173] • Stress (II) [188], (III-2) [178, 189] 	<ul style="list-style-type: none"> • Cognitive-behavioural therapy (CBT) (II) [190] • Behavioural therapy (BT) (II) [191] • Cognitive therapy (CT) (II) [192] • Psychodynamic interpersonal therapy (PI) (II) [193] • Hypnotherapy (II) [194] • Biofeedback (II) [195] 	<ul style="list-style-type: none"> • CBT <ul style="list-style-type: none"> ◦ Superior to TAU (II) [190] • BT <ul style="list-style-type: none"> ◦ Superior to control (II) [191] • CT <ul style="list-style-type: none"> ◦ Superior to control (II) [192] • PI <ul style="list-style-type: none"> ◦ Superior to control (II) [193] • Hypnotherapy <ul style="list-style-type: none"> ◦ Superior to supportive therapy and TAU (II) [194] • Biofeedback <ul style="list-style-type: none"> ◦ Superior to control (II) [195]

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B1. Functional dyspepsia 2/2		<ul style="list-style-type: none"> • 29.6% (95% CI: 26.5-32.7) in Argentina [196] • 32.2% (95% CI: 29.5-34.9) in Sweden [197] • 36% in UK [198] • 38% UK [199] • 38.9% in Singapore [200] • 43% of referrals in Asia [201] • 87.5% of IBS patients also had FD [197] • 69.4% of a Dyspepsia sample were functional [202] • 76% still met the Rome III criteria for functional dyspepsia 12 months after initial diagnosis [203] 						
B1a. Postprandial distress syndrome (PDS)	<p><i>Diagnostic criteria*</i></p> <p><i>Must include one or both of the following:</i></p> <ol style="list-style-type: none"> 1. Bothersome postprandial fullness, occurring after ordinary-sized meals, at least several times per week 2. Early satiation that prevents finishing a regular meal, at least several times per week <p>* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis</p> <p><i>Supportive criteria</i></p> <ol style="list-style-type: none"> 1. Upper abdominal bloating or postprandial nausea or excessive belching can be present 2. Epigastric pain syndrome may coexist [5] <p>Review [204]</p>	<ul style="list-style-type: none"> • 5.6% in Korea [85] 	<ul style="list-style-type: none"> • 95.4% comorbidity with dyspepsia [205] 					

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B1b. Epigastric pain syndrome (EPS)	<p><i>Diagnostic criteria*</i></p> <p><i>Must include all of the following:</i></p> <ol style="list-style-type: none"> 1. Pain or burning localized to the epigastrium of at least moderate severity, at least once per week 2. The pain is intermittent 3. Not generalized or localized to other abdominal or chest regions 4. Not relieved by defecation or passage of flatus 5. Not fulfilling criteria for gallbladder and sphincter of Oddi disorders <p>* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis</p> <p><i>Supportive criteria</i></p> <ol style="list-style-type: none"> 1. The pain may be of a burning quality, but without a retrosternal component 2. The pain is commonly induced or relieved by ingestion of a meal, but may occur while fasting 3. Postprandial distress syndrome may Coexist [5] 	<ul style="list-style-type: none"> • 4.2% in Korea [85] 						
B2. Belching disorders	<p>Review [206]</p>	<ul style="list-style-type: none"> • Accounts for 1% [201] to 6% [207] of FGID diagnoses 					<ul style="list-style-type: none"> • Spontaneous swallowing associated with changes in emotional state (III-2) [208] 	
B2a. Aerophagia	<p><i>Diagnostic criteria*</i></p> <p><i>Must include all of the following:</i></p> <ol style="list-style-type: none"> 1. Troublesome repetitive belching at least several times a week 2. Air swallowing that is objectively observed or measured <p>* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis [5]</p> <p>Review [209]</p>	<ul style="list-style-type: none"> • 2.1% in AU [87, 88] • 3.0% (95% CI: 1.8-4.2) in AU (RII criteria; 2.1% [95% CI:1.5-2.6] RI criteria) [83] • 5.6% (95% CI: 3.8-8.0) in Mexico [84] • 9.7% (95% CI: 8.0-11.4) in Canada [2] • 23.4% diagnosed after excluding self-report; national average was 23.7% [3] 		<ul style="list-style-type: none"> • Baclofen (IV) [210] • Diazepam and lorazepam (III-1) [211] • Laparoscopic AntiReflux Surgery LARS (III-2) [212] 	<ul style="list-style-type: none"> • 50.0% CES-D depression (IV) [84] • 19% reported anxiety (III-2) [172] • 44.06% comorbidity (IV) [88] 	<ul style="list-style-type: none"> • Absenteeism (III-2) [3] • Being undistracted from belching (IV) [213] • Impaired quality of life (IV) [214] • Attempting to overcorrect (case) [215] 		

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B2b. Unspecified excessive belching	<p><i>Diagnostic criteria*</i></p> <p><i>Must include all of the following:</i></p> <ol style="list-style-type: none"> 1. Troublesome repetitive belching at least several times a week 2. No evidence that excessive air swallowing underlies the symptom <p>* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis [5]</p>							
B3. Nausea and vomiting disorders								
B3a. Chronic idiopathic nausea (CIN)	<p><i>Diagnostic criteria*</i></p> <p><i>Must include all of the following:</i></p> <ol style="list-style-type: none"> 1. Bothersome nausea occurring at least several times per week 2. Not usually associated with vomiting 3. Absence of abnormalities at upper endoscopy or metabolic disease that explains the nausea <p>* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis [5]</p>			<ul style="list-style-type: none"> • Mirtazapine (II) [216], (case) [217] • Antiemetics and Domperidone (case) [218] 				
B3b. Functional vomiting	<p><i>Diagnostic criteria*</i></p> <p><i>Must include all of the following:</i></p> <ol style="list-style-type: none"> 1. On average one or more episodes of vomiting per week 2. Absence of criteria for an eating disorder, rumination, or major psychiatric disease according to DSM-IV 3. Absence of self-induced vomiting and chronic cannabinoid use and absence of abnormalities in the central nervous system or metabolic diseases to explain the recurrent vomiting <p>* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis [5]</p> <p>Review [219-221]</p>	<ul style="list-style-type: none"> • 0.4% (95% CI: 0.0-0.8) in Canada [2] • 0.9% (95% CI: 0.2-1.6) in AU [83] • 2.0% (95% CI: 1.0-3.6) in Mexico [84] • 2-3% vomit once or more a month [17] 		<ul style="list-style-type: none"> • Botulinum toxin injection in a gastroparesis sample (IV) [222] • Dietary advice (II) [223] • Gastric electrical stimulation (II) [224], (IV) [225, 226] • Mirtazapine (II) [216] 	<ul style="list-style-type: none"> • 30.0% CES-D depression (IV) [84] 	<ul style="list-style-type: none"> • Major depression and conversion disorder (III-2) [227] 	<ul style="list-style-type: none"> • Hypnotherapy (case) [228] 	<ul style="list-style-type: none"> • Hypnotherapy improvement (case) [228]

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B3c. Cyclic vomiting syndrome (CVS)	<p><i>Diagnostic criteria</i></p> <p>Must include all of the following:</p> <ol style="list-style-type: none"> 1. Stereotypical episodes of vomiting regarding onset (acute) and duration (less than one week) 2. Three or more discrete episodes in the prior year 3. Absence of nausea and vomiting between episodes <p><i>Supportive criteria</i></p> <p>History or family history of migraine Headaches [5]</p>			<ul style="list-style-type: none"> • Tricyclic antidepressants (IV) [229] 	<ul style="list-style-type: none"> • 23% have anxiety or affective disorder (IV) [229] 	<ul style="list-style-type: none"> • Chronic cannabis use (IV) [230] 		
B4. Rumination syndrome in adults	<p><i>Diagnostic criteria*</i></p> <p>Must include both of the following:</p> <ol style="list-style-type: none"> 1. Persistent or recurrent regurgitation of recently ingested food into the mouth with subsequent spitting or remastication and swallowing 2. Regurgitation is not preceded by retching <p><i>Supportive criteria</i></p> <ol style="list-style-type: none"> 1. Regurgitation events are usually not preceded by nausea 2. Cessation of the process when the regurgitated material becomes acidic 3. Regurgitant contains recognizable food with a pleasant taste [5] <p>Review [206, 231-234]</p>	<ul style="list-style-type: none"> • 0.5% (95% CI: 0.01-1.0) in AU (RII criteria; 0.9% [95% CI:0.5-1.2] RI criteria) [83] • 0.8% (95% CI: 0.3-1.3) in Canada (RII criteria; 4.2% RI criteria) [2] • 0.8% (95% CI: 0.2-2.0) in Mexico [84] • 0.9% in AU [87, 88] 		<ul style="list-style-type: none"> • Baclofen (IV) [210] 	<ul style="list-style-type: none"> • 75.0% CES-D depression (IV) [84] • 43.92% comorbidity (IV) [88] • 20% of individuals with bulimia nervosa ruminate (III-2) [235] • History of bulimia was found in 17% of females (IV) [236] 	<ul style="list-style-type: none"> • Gastric sensitivity (III-2) [237] 	<ul style="list-style-type: none"> • Cognitive behavioural therapy (CBT) (IV) [238] • Behavioural therapy (IV) [239] • Biofeedback (IV) [240] 	<ul style="list-style-type: none"> • Cognitive behavioural therapy (CBT) improvement (IV) [238] • Behavioural therapy improvement (IV) [239] • Biofeedback improvement (IV) [240]

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