

PUBMED 2013 - Search criteria e.g.: (TITLE-ABS-KEY("functional heartburn")) 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.

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
FGID in general	<p>Reviews</p> <ul style="list-style-type: none"> • Review of complimentary and alternative medicine [2] • Review [3-25] • Review of the potential of the placebo in GI [26] • Comorbidity study [27] • Review of demographics [28] • Neuroimaging review [29] • Health related QoL [30] • Scale [31, 32] <p>Diagnostic Overlap</p> <ul style="list-style-type: none"> • IBS and FD [33-43] • FH more similar to FD than NERD [44, 45] • FD with IBS and GERD [41, 46] • IBS, FD, FC and FB in GERD more prevalent than those in the general population, especially IBS [47] • FD, IBS, FCP have common underlying mechanism [48] • FD, GERD and IBS all with lower HR-QOL [49] • 70% overlap between FH and GERD [50] • 80% overlap FCP and IBS, independent of esophageal hypersensitivity [51] • 31.7% of FD patients also have acid reflux (PEAR) [52] • 98% of fibromyalgia had comorbid FGID [53] • Predictors of bloating [54] 	<ul style="list-style-type: none"> • Review [55] • 58.4% (95% CI: 53.9-62.8) in Mexico [56] • 69.3% diagnosed after excluding self-report; USA national average was 69.3% [57] • 70% in Korea [42] • 75.5% in Korea [58] • In nine Asian regions: 19.2% China, 10.0% Hong Kong, 7.2% Indonesia, 7.2% Korea, 9.1% Malaysia, 6.9% Singapore, 10.8% Taiwan, 7.9% Thailand, and 21.7% Vietnam [32] 	<ul style="list-style-type: none"> • High in 17-18 age group (54.7%) [59] • left-handedness (cerebral lateralization) [60] • Obesity risk factor [61] • More sleep complaints [62] • Cigarette smoking associated with GERD, FD, and IBS overlaps in Japanese adults [63] 		<ul style="list-style-type: none"> • 26.7% (vs. 6.7%) CES-D depression (IV) [56]. • OR 2.25 (95% CI 2.11-2.39) (III-2) [64] • 77-98% comorbidity with eating disorders (IV) [65, 66] • Significantly lower mean QoL (physical and mental) (IV) [67] 	<ul style="list-style-type: none"> • Abdominal pain (III-2) [68] • Absenteeism (III-2) [57] • Age (III-2) [68] • Anxiety (III-2) [68] • Bowel-habit disturbance (III-2) [68] • Eating disorders (IV) [65] • Neuroticism (III-2) [68] • Somatisation (III-2) [68] • Visceral hypersensitivity (IV) [69] 	<ul style="list-style-type: none"> • Cognitive-behavioural therapy (CBT) (II) [70] • Biofeedback (III-2) [71] • Client-centred group therapy (III-2) [72] 	<ul style="list-style-type: none"> • CBT <ul style="list-style-type: none"> ◦ Superior to education and placebo (II) [70] • Biofeedback <ul style="list-style-type: none"> ◦ intervention associated with significantly reduced medical expenses (III-2) [71] • Client-centred group therapy <ul style="list-style-type: none"> ◦ superior to WLC (III-2) [72]

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A. Functional Esophageal Disorders	<p>Several Diagnostic requirements are uniform across the functional esophageal disorders:</p> <ol style="list-style-type: none"> 1. Exclusion of structural or metabolic disorders that might be producing the symptoms essential and is a principal criterion for all FGIDs [73]. 2. A requirement of at least 3 months of symptoms with onset occurring at least 6 months before diagnosis is applied to each diagnosis to establish chronicity. Since evidence-based research supporting an adjustment in this time constraint is lacking, this criterion is arbitrary. However, in the case of the functional esophageal disorders, this limit decreases the risk of overlooking a structural lesion. 3. Gastroesophageal reflux disease (GERD) must be excluded as an explanation for symptoms. 4. Finally, the primary symptom source must not be indicative of motor disorders with known histopathological bases (e.g., achalasia, scleroderma esophagus). [74] 	<ul style="list-style-type: none"> • 28.9% (95% CI: 26.3-31.5) in Canada [75] • 42.5% diagnosed after excluding self-report; USA national average was 41.6% [57] 				<ul style="list-style-type: none"> • Absenteeism (III-2) [57] 		
A1. Functional Heartburn	<p>Diagnostic criteria*</p> <p>Must include <i>all</i> of the following:</p> <ol style="list-style-type: none"> 1. Burning retrosternal discomfort or pain 2. Absence of evidence that Gastroesophageal acid reflux is the cause of the symptom 3. Absence of histopathology-based esophageal motility disorders <p>*Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis [74]</p> <ul style="list-style-type: none"> • Review [50, 76-84] • Review argues against PPI [85] 	<ul style="list-style-type: none"> • 4.8% China [40] • 10.4% (95% CI: 8.2-12.5) in AU (RII criteria; 13.8% [95% CI:12.6-15.1] RI criteria)[86] • 13.8% in AU [67, 87] • 17.5% in AU (95% CI: 14.2-19.9) [88] • 19.4% (95% CI: 17.2-21.6) in USA [89] • 19.6% (95% CI: 16.2-23.4) in Mexico [56] • 19.8% in USA [90] • 22.3% (95% CI: 19.9-24.7) in Canada (RII criteria; 26.4% RI criteria) [75] • 24.9% in USA in sleep cohort [91] • 28.7% UK [92] • 30% in USA [93] • 30.1% diagnosed after excluding self-report; USA national average was 29.1% [57] • 33.6% in UK [94] • 36.1% in US [95] • 40.2% in Denmark [96] • 44% in US [97] • Types of measurement may overestimate prevalence [98] 	<ul style="list-style-type: none"> • More common in caucasian [90] • More common in women [99] • Modified mechanical afferent nerve function after long-term acid stimulation [100] 	<ul style="list-style-type: none"> • Baclofen (III-2) [101], (IV) [102-104] • Citalopram (II) [105] • Omeprazole (II) [106-108], (IV) [109] • Tegaserod (II) [110, 111] 	<ul style="list-style-type: none"> • 26.5% CES-D depression (IV) [56] • 41.69% comorbidity, significantly higher than control (IV) [67] 	<ul style="list-style-type: none"> • Absenteeism (III-2) [57] • Acid and saline sensitivity (III-2) [112] • Depression (III-2) [113] • GABRA6 heterozygosity predisposition (III-2) [114] • Hysteria and low social support (III-2) [115] • Neuroticism (III-2) [114] • Somatisation (III-2) [116] • Stress (III-2) [117], (IV) [93] • Visceral hypersensitivity (III-2) [118-120] 	<ul style="list-style-type: none"> • Biofeedback (III-2) [121] • Relaxation (III-2) [122] 	<ul style="list-style-type: none"> • Biofeedback not effective (III-2) [121] • Relaxation superior to control (III-2) [122]

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A2. Functional chest pain of presumed esophageal origin	<p><i>Diagnostic criteria*</i></p> <p><i>Must include all of the following:</i></p> <ol style="list-style-type: none"> 1. Midline chest pain or discomfort that is not of burning quality 2. Absence of evidence that gastroesophageal reflux is the cause of the symptom 3. Absence of histopathology-based esophageal motility disorders <p>* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis [74]</p> <ul style="list-style-type: none"> • Review [4, 123-137] 	<ul style="list-style-type: none"> • 2.0% (95% CI: 1.2-2.8) in Canada [75] • 3.0% (95% CI: 1.7-4.9) in Mexico [56] • 5.0% in AU [67, 87] • 5.1% (95% CI: 3.6-6.7) in AU (RII criteria; 5.0% [95% CI:4.2-5.8] RI criteria) [86] • 12.8% diagnosed after excluding self-report; USA national average was 12.5% [57] • 13% in Sweden [138] • 13.9% (95% CI: 13-15) in China [139] • 23.1% in USA [90] • 23.5% (95% CI: 20.6-26.3) in Argentina [140] • 23.9% in UK [141] • 25% (Review) [137, 142]. 24% in Sweden from review [143] • 33% in AU [144] • Estimated 10-20% of cardiac patients [145] 	<ul style="list-style-type: none"> • Women significantly higher prevalence than men [140] • Dysphagia is common in elderly patients [188] • Most commonly begins in 20-40 years old [189] 	<ul style="list-style-type: none"> • Antidepressants (I) [146, 147] • Adenosine (II) [148] • Citalopram (II) [105] • Clonidine (II) [149] • Diltiazem (II) [150] • Imipramine (I) [151] • Johrei (CAM) (II) [152] • Nifedipine (II) [153] • Nitroglycerin (IV) [154] • Oesophageal balloon distention test (IV) [155] • Rabeprazole (IV) [156] • Sertraline (I) [151], (II) [157] • Theophylline [158] • Trazodone (II) [159] • Tricyclic antidepressants (IV) [160] • Venlafaxine (I) [151], (II) [161] 	<ul style="list-style-type: none"> • 46.7% CES-D depression (IV) [56] • 84% psychiatric comorbidity (III-2) [162] • 41.69% comorbidity, significantly higher than controls (III-2) [67] • 52% comorbidity (IV) [163] • 58% psychiatric comorbidity (39% anxiety, 10% depression) (III-2) [164] • 70% psychiatric comorbidity (50% panic disorder, 25% major depression) (III-2) [165] • 38% psychiatric comorbidity (15% panic, 32% anxiety, 5% major depression, 13% somatoform) (IV) [166] • 9.3% BDI depression (II) [167] 	<ul style="list-style-type: none"> • Absenteeism (III-2) [57] • Anxiety (IV) [144] • Childhood emotional or verbal abuse (III-2) [168] • Neuroticism (IV) [144] • Oesophageal hypersensitivity (III-2) [169, 170] • Panic disorder (III-2) [171], (IV) [172, 173] • Psychiatric diagnosis (III-2) [162, 164, 165, 174] • Stress (III-2) [175] • Visceral sensitivity (III-2) [174] 	<ul style="list-style-type: none"> • Cognitive-behavioural therapy (CBT) [167, 176-179] • Behaviour therapy (BT) (IV) [180] • Hypnotherapy (II) [181, 182] • Biofeedback (IV) [121] • Group relaxation therapy (II) [183] 	<ul style="list-style-type: none"> • CBT <ul style="list-style-type: none"> ○ Superior to control (II) [176, 177] ○ Superior to TAU (II) [167] ○ Superior to placebo and peroxatone (II) [178] ○ Improvement (II) [179] • BT <ul style="list-style-type: none"> ○ Improvement (IV) [180] • Hypnotherapy <ul style="list-style-type: none"> ○ Superior to control (II) [181, 182] • Biofeedback <ul style="list-style-type: none"> ○ Superior to TAU (IV) [121] • Group relaxation therapy <ul style="list-style-type: none"> ○ Superior to WLC [183]
A3. Functional dysphagia	<p><i>Diagnostic criteria*</i></p> <p><i>Must include all of the following:</i></p> <ol style="list-style-type: none"> 1. Sense of solid and/or liquid foods sticking, lodging, or passing abnormally through the esophagus 2. Absence of evidence that gastroesophageal reflux is the cause of the symptom 3. Absence of histopathology-based esophageal motility disorders <p>* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis [74]</p> <ul style="list-style-type: none"> • Review [4, 184-187] 	<ul style="list-style-type: none"> • 1.2% (95% CI: 0.4-1.9) in AU (RII criteria; 2.8% [95% CI:2.2-3.4] RI criteria) [86] • 1.8% (95% CI: 0.8-3.4) in Mexico [56] • 2.2% (95% CI: 1.4-3.1) in Canada (RII criteria; 6.5% RI criteria) [75] • 2.8% in AU [67, 87] • 7.4% diagnosed after excluding self-report; USA national average was 6.8% [57] • 12.9% (95% CI: 10.6-15.2) in Argentina [140] • 13.5% in USA [90] 	<ul style="list-style-type: none"> • Women significantly higher prevalence than men [140] • Dysphagia is common in elderly patients [188] • Most commonly begins in 20-40 years old [189] 	<ul style="list-style-type: none"> • Manometry useful in diagnosis (III-2) [190] • Proton pump inhibitors (PPI) (II) [191] • VitalStim therapy (IV) [192] 	<ul style="list-style-type: none"> • 44.4% CES-D depression (IV) [56] • 42.61% comorbidity, significantly higher than controls (IV) [67] 	<ul style="list-style-type: none"> • Absenteeism (III-2) [57] • Anxiety and stress [189] • Impaired oesophageal force while swallowing (III-2) [193] • Social anxiety (case) [194] • Social isolation and poor self-esteem (IV) [195] 	<ul style="list-style-type: none"> • CBT (case) [196] • Biofeedback (III-1) [197] 	<ul style="list-style-type: none"> • CBT <ul style="list-style-type: none"> ○ Improvement (case) [196] • Biofeedback <ul style="list-style-type: none"> ○ Superior to biofeedback (III-1) [197]

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A4. Globus	<p><i>Diagnostic criteria*</i></p> <p><i>Must include all of the following:</i></p> <ol style="list-style-type: none"> Persistent or intermittent, nonpainful sensation of a lump or foreign body in the throat Occurrence of the sensation between meals Absence of dysphagia or odynophagia Absence of evidence that gastroesophageal reflux is the cause of the symptom Absence of histopathology-based esophageal motility disorders <p>* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis [74]</p> <ul style="list-style-type: none"> Review [4, 198-205] 	<ul style="list-style-type: none"> 0.9% (95% CI: 0.2-1.6) in AU (RII criteria; 3.7% [95% CI:3.0-4.4] RI criteria) [86] 1.8% (95% CI: 0.8-3.4) in Mexico [56] 2.5% (95% CI: 1.6-3.4) in Canada (RII criteria; 7.3% RI criteria) [75] 3.7% in AU [67, 87] 7.0% in USA [90] 12.5% diagnosed after excluding self-report; USA national average was 10.4% [57] 13.9% (95% CI: 11.6-16.2) in Argentina [140] 16% in Sweden [138] 28.7-43.4% in UK [206] 45.6% in UK [94] 	<ul style="list-style-type: none"> Women significantly higher prevalence than men [140, 207] Equal prevalence between men and women [94, 208, 209] Women more likely to seek health care [206] Autoimmune disease increased prevalence [210] Males more likely to become asymptomatic [207] 	<ul style="list-style-type: none"> Amitriptyline ineffective (II) [211] Antidepressants (IV) [212] Banxia Houpu decoction (CAM) (II) [213] Barium swallow ineffective but reassuring (IV) [214] Cimetidine ineffective (II) [215] Cisapride [216] Transnasal esophagoscopy (IV) [217] Videofluoroscopy and static radiography (IV) [218] 	<ul style="list-style-type: none"> 11.1% CES-D depression (IV) [56] 64% psychiatric comorbidity, but do not differ in anxiety and depression from outpatients (IV) [219] 37.5% psychiatric comorbidity (II) [211] 50% comorbidity (significantly greater than controls) (III-2) [220] 25% psychiatric comorbidity (IV) [221] 41.61% comorbidity, significantly higher than controls (IV) [67] 95.5% experienced the symptom when emotionally distressed, it then subsided with crying (IV) [94] 	<ul style="list-style-type: none"> Absenteeism (III-2) [57] Anxiety (III-2) [222, 223], (IV) [224, 225] Depression (III-2) [223, 226], (IV) [224, 225, 227] Introversion (III-2) [223] Neuroticism (III-2) [223], (IV) [228] Panic disorder (IV) [211] PTSD (IV) [225] OCD (IV) [229] Oesophageal visceral hypersensitivity (III-2) [230, 231] Skin allergy (III-2) [232] Somatisation (III-2) [222, 223], (IV) [225] Stress (III-2) [226, 233], (IV) [234] Substance abuse (IV) [225] Young age (IV) [235] 	<ul style="list-style-type: none"> Group Therapy (IV) [236] Behavioural therapy (case) [237] 	<ul style="list-style-type: none"> Group therapy reassurance improvement (IV) [236] Behavioural therapy improvement (case) [237]

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