

## Supplementary Online Content

Blumenthal SR, Castro VM, Clements CC, et al. An electronic health records study of long-term weight gain following antidepressant use. *JAMA Psychiatry*. Published online June 4, 2014. doi:10.1001/jamapsychiatry.2014.414.

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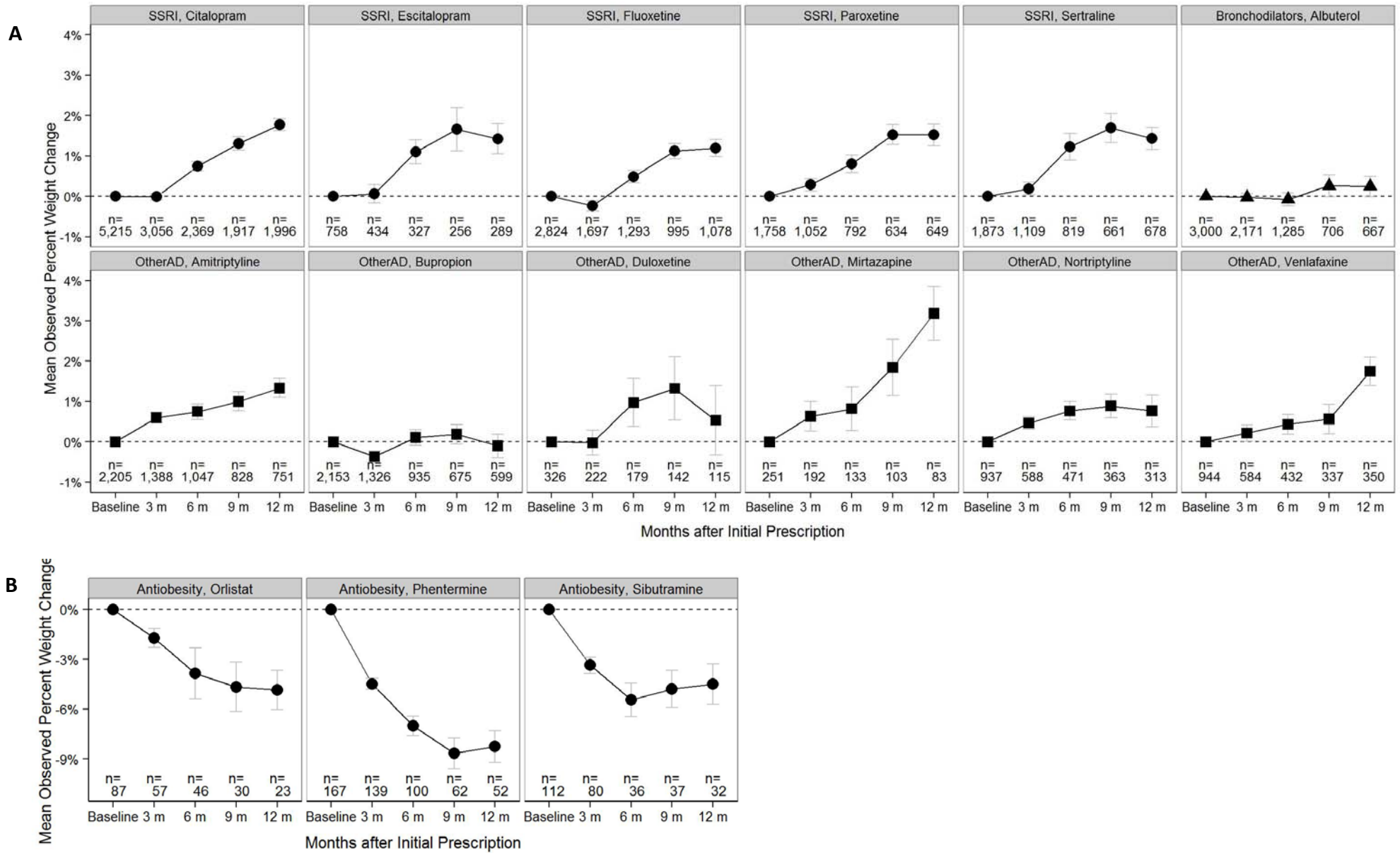
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This supplementary material has been provided by the authors to give readers additional information about their work



eFigure. Mean observed percent weight change after index prescription



(A) Antidepressants and Albuterol; (B) Weight loss medications. Note difference in scale between (A) and (B), reflecting weight loss versus gain.

**eTable 1. Dictionary of indication diagnoses**

Diagnosis	Code	Code Type	Code Description
Anxiety	29384	ICD-9 Billing Code	Organic anxiety syndrome
Anxiety	300	ICD-9 Billing Code	Neurotic disorders
Anxiety	3000	ICD-9 Billing Code	Anxiety states
Anxiety	30000	ICD-9 Billing Code	Anxiety state, unspecified
Anxiety	30001	ICD-9 Billing Code	Panic disorder
Anxiety	30002	ICD-9 Billing Code	Generalized anxiety disorder
Anxiety	30009	ICD-9 Billing Code	Other anxiety states
Anxiety	30010	ICD-9 Billing Code	Hysteria, unspecified
Anxiety	30020	ICD-9 Billing Code	Phobia, unspecified
Anxiety	30021	ICD-9 Billing Code	Agoraphobia with panic attacks
Anxiety	30022	ICD-9 Billing Code	Agoraphobia without mention of panic attacks
Anxiety	30023	ICD-9 Billing Code	Social phobia
Anxiety	30029	ICD-9 Billing Code	Other isolated or simple phobias
Anxiety	3003	ICD-9 Billing Code	Obsessive-compulsive disorders
Anxiety	3005	ICD-9 Billing Code	Neurasthenia
Anxiety	30089	ICD-9 Billing Code	Other neurotic disorders
Anxiety	3009	ICD-9 Billing Code	Unspecified neurotic disorder
Anxiety	30981	ICD-9 Billing Code	Prolonged posttraumatic stress disorder
Anxiety	3130	ICD-9 Billing Code	Overanxious disorder specific to childhood and adolescence
Anxiety	3131	ICD-9 Billing Code	Misery and unhappiness disorder specific to childhood and adolescence
Anxiety	31321	ICD-9 Billing Code	Shyness disorder of childhood
Anxiety	31322	ICD-9 Billing Code	Introverted disorder of childhood
Anxiety	3133	ICD-9 Billing Code	Relationship problems specific to childhood and adolescence
Anxiety	31382	ICD-9 Billing Code	Identity disorder of childhood or adolescence
Anxiety	31383	ICD-9 Billing Code	Academic underachievement disorder of childhood or adolescence
Anxiety	LPA310	EMR Problem List	Panic attacks-LMR 310
Anxiety	LPA519	EMR Problem List	Anxiety-LMR 519
Anxiety	LPA656	EMR Problem List	Obsessive compulsive disorder-LMR 656
Anxiety	LPA835	EMR Problem List	Post traumatic stress disorder-LMR 835
Anxiety	LPA851	EMR Problem List	Panic disorder-LMR 851
Anxiety	LPB12959	EMR Problem List	Anxiety-LMR 12959
Anxiety	LPB519	EMR Problem List	Anxiety-LMR 519
Depression	29383	ICD-9 Billing Code	Organic affective syndrome
Depression	296	ICD-9 Billing Code	Affective psychoses
Depression	2962	ICD-9 Billing Code	Major depressive disorder, single episode
Depression	29620	ICD-9 Billing Code	Major depressive disorder, single episode, unspecified degree
Depression	29621	ICD-9 Billing Code	Major depressive disorder, single episode, mild degree
Depression	29622	ICD-9 Billing Code	Major depressive disorder, single episode, moderate degree
Depression	29623	ICD-9 Billing Code	Major depressive disorder, single episode, severe degree, without mention of psychotic behavior
Depression	29624	ICD-9 Billing Code	Major depressive disorder, single episode, severe degree, specified as with psychotic behavior

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Depression	29625	ICD-9 Billing Code	Major depressive disorder, single episode, in partial or unspecified remission
Depression	29626	ICD-9 Billing Code	Major depressive disorder, single episode in full remission
Depression	2963	ICD-9 Billing Code	Major depressive disorder, recurrent episode
Depression	29630	ICD-9 Billing Code	Major depressive disorder, recurrent episode, unspecified degree
Depression	29631	ICD-9 Billing Code	Major depressive disorder, recurrent episode, mild degree
Depression	29632	ICD-9 Billing Code	Major depressive disorder, recurrent episode, moderate degree
Depression	29633	ICD-9 Billing Code	Major depressive disorder, recurrent episode, severe degree, without mention of psychotic behavior
Depression	29634	ICD-9 Billing Code	Major depressive disorder, recurrent episode, severe degree, specified as with psychotic behavior
Depression	29635	ICD-9 Billing Code	Major depressive disorder, recurrent episode, in partial or unspecified remission
Depression	29636	ICD-9 Billing Code	Major depressive disorder, recurrent episode, in full remission
Depression	2969	ICD-9 Billing Code	Other and unspecified affective psychoses
Depression	29690	ICD-9 Billing Code	Unspecified affective psychosis
Depression	29699	ICD-9 Billing Code	Other specified affective psychoses
Depression	3004	ICD-9 Billing Code	Neurotic depression
Depression	309	ICD-9 Billing Code	Adjustment reaction
Depression	3090	ICD-9 Billing Code	Adjustment reaction with brief depressive reaction
Depression	3091	ICD-9 Billing Code	Adjustment reaction with prolonged depressive reaction
Depression	3092	ICD-9 Billing Code	Adjustment reaction with predominant disturbance of other emotions
Depression	30922	ICD-9 Billing Code	Emancipation disorder of adolescence and early adult life
Depression	30923	ICD-9 Billing Code	Specific academic or work inhibition
Depression	30924	ICD-9 Billing Code	Adjustment reaction with anxious mood
Depression	30928	ICD-9 Billing Code	Adjustment reaction with mixed emotional features
Depression	30929	ICD-9 Billing Code	Other adjustment reactions with predominant disturbance of other emotions
Depression	3093	ICD-9 Billing Code	Adjustment reaction with predominant disturbance of conduct
Depression	3094	ICD-9 Billing Code	Adjustment reaction with mixed disturbance of emotions and conduct
Depression	3098	ICD-9 Billing Code	Other specified adjustment reactions
Depression	30982	ICD-9 Billing Code	Adjustment reaction with physical symptoms
Depression	30983	ICD-9 Billing Code	Adjustment reaction with withdrawal
Depression	30989	ICD-9 Billing Code	Other specified adjustment reactions
Depression	3099	ICD-9 Billing Code	Unspecified adjustment reaction
Depression	311	ICD-9 Billing Code	Depressive disorder, not elsewhere classified
Depression	7807	ICD-9 Billing Code	Malaise and fatigue
Depression	78079	ICD-9 Billing Code	Other malaise and fatigue
Depression	LPA1002	EMR Problem List	Abnormal grief reaction-LMR 1002
Depression	LPA101	EMR Problem List	Depression-LMR 101
Depression	LPA1304	EMR Problem List	Adjustment disorder-LMR 1304
Depression	LPA144	EMR Problem List	Fatigue-LMR 144
Depression	LPA1593	EMR Problem List	Depression-LMR 1593
Depression	LPA407	EMR Problem List	Suicidal tendencies-LMR 407
Depression	LPA684	EMR Problem List	Seasonal affective disorder-LMR 684
Depression	LPA751	EMR Problem List	Dysthymia-LMR 751
Depression	LPB101	EMR Problem List	Depression-LMR 101
Depression	LPB1593	EMR Problem List	Depression-LMR 1593

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Depression	V111	ICD-9 Billing Code	Personal history of affective disorders
Depression	V6284	ICD-9 Billing Code	Suicidal ideation
Pain	30781	ICD-9 Billing Code	Tension headache
Pain	338	ICD-9 Billing Code	Pain, not elsewhere classified
Pain	3381	ICD-9 Billing Code	Acute pain
Pain	33811	ICD-9 Billing Code	Acute pain due to trauma
Pain	33812	ICD-9 Billing Code	Acute post-thoracotomy pain
Pain	33818	ICD-9 Billing Code	Other acute postoperative pain
Pain	33819	ICD-9 Billing Code	Other acute pain
Pain	3382	ICD-9 Billing Code	Chronic pain
Pain	33821	ICD-9 Billing Code	Chronic pain due to trauma
Pain	33822	ICD-9 Billing Code	Chronic post-thoracotomy pain
Pain	33828	ICD-9 Billing Code	Other chronic postoperative pain
Pain	33829	ICD-9 Billing Code	Other chronic pain
Pain	7194	ICD-9 Billing Code	Pain in joint
Pain	71940	ICD-9 Billing Code	Pain in joint, site unspecified
Pain	71941	ICD-9 Billing Code	Pain in joint involving shoulder region
Pain	71942	ICD-9 Billing Code	Pain in joint involving upper arm
Pain	71943	ICD-9 Billing Code	Pain in joint involving forearm
Pain	71944	ICD-9 Billing Code	Pain in joint involving hand
Pain	71945	ICD-9 Billing Code	Pain in joint involving pelvic region and thigh
Pain	71946	ICD-9 Billing Code	Pain in joint involving lower leg
Pain	71947	ICD-9 Billing Code	Pain in joint involving ankle and foot
Pain	71948	ICD-9 Billing Code	Pain in joint involving other specified sites
Pain	71949	ICD-9 Billing Code	Pain in joint involving multiple sites
Pain	7231	ICD-9 Billing Code	Cervicalgia
Pain	7241	ICD-9 Billing Code	Pain in thoracic spine
Pain	7242	ICD-9 Billing Code	Lumbago
Pain	7245	ICD-9 Billing Code	Backache, unspecified
Pain	7295	ICD-9 Billing Code	Pain in limb
Pain	78651	ICD-9 Billing Code	Precordial pain
Pain	7890	ICD-9 Billing Code	Abdominal pain
Pain	78900	ICD-9 Billing Code	Abdominal pain, unspecified site
Pain	78901	ICD-9 Billing Code	Abdominal pain, right upper quadrant
Pain	78902	ICD-9 Billing Code	Abdominal pain, left upper quadrant
Pain	78903	ICD-9 Billing Code	Abdominal pain, right lower quadrant
Pain	78904	ICD-9 Billing Code	Abdominal pain, left lower quadrant
Pain	78905	ICD-9 Billing Code	Abdominal pain, periumbilic
Pain	78906	ICD-9 Billing Code	Abdominal pain, epigastric
Pain	78907	ICD-9 Billing Code	Abdominal pain, generalized
Pain	78909	ICD-9 Billing Code	Abdominal pain, other specified site; multiple sites
Pain	LPA1307	EMR Problem List	Abdominal pain-LMR 1307
Pain	LPA1365	EMR Problem List	Chronic pain-LMR 1365
Pain	LPA150	EMR Problem List	Flank pain-LMR 150

Pain	LPA1520	EMR Problem List	Thoracic back pain-LMR 1520
Pain	LPA160	EMR Problem List	GI discomfort-LMR 160
Pain	LPA1922	EMR Problem List	Ear pain-LMR 1922
Pain	LPA2211	EMR Problem List	Back pain-LMR 2211
Pain	LPA2212	EMR Problem List	Low Back Pain-LMR 2212
Pain	LPA2213	EMR Problem List	Neck pain-LMR 2213
Pain	LPA2218	EMR Problem List	Shoulder pain-LMR 2218
Pain	LPA2221	EMR Problem List	Knee pain-LMR 2221
Pain	LPA2222	EMR Problem List	Leg pain-LMR 2222
Pain	LPA2223	EMR Problem List	Foot pain-LMR 2223
Pain	LPA226	EMR Problem List	Low back pain-LMR 226
Pain	LPA233	EMR Problem List	Lower extremity pain-LMR 233
Pain	LPA2354	EMR Problem List	Hip pain-LMR 2354
Pain	LPA26	EMR Problem List	Arthralgias-LMR 26
Pain	LPA279	EMR Problem List	Neck pain-LMR 279
Pain	LPA3	EMR Problem List	Abdominal pain-LMR 3
Pain	LPA3012	EMR Problem List	Pain-LMR 3012
Pain	LPA3018	EMR Problem List	Arm pain-LMR 3018
Pain	LPA315	EMR Problem List	Pelvic pain-LMR 315
Pain	LPA37	EMR Problem List	Back pain-LMR 37
Pain	LPA439	EMR Problem List	Upper extremity pain-LMR 439
Pain	LPA514	EMR Problem List	Shoulder pain-LMR 514
Pain	LPA515	EMR Problem List	Knee pain-LMR 515
Pain	LPA516	EMR Problem List	Ankle pain-LMR 516
Pain	LPA722	EMR Problem List	Foot pain-LMR 722
Pain	LPA724	EMR Problem List	Hip pain-LMR 724
Pain	LPA726	EMR Problem List	Leg pain-LMR 726
Pain	LPA743	EMR Problem List	Arm pain-LMR 743
Pain	LPA746	EMR Problem List	Elbow pain-LMR 746
Pain	LPA759	EMR Problem List	Epigastric discomfort-LMR 759
Pain	LPA827	EMR Problem List	Wrist pain-LMR 827
Pain	LPA949	EMR Problem List	Pain in joint-LMR 949
Pain	LPA950	EMR Problem List	Limb pain-LMR 950
Pain	LPB12599	EMR Problem List	Ankle pain-LMR 12599
Pain	LPB12605	EMR Problem List	Hand pain-LMR 12605
Pain	LPB1365	EMR Problem List	Psychiatric problem, nos-LMR 1365
Pain	LPB160	EMR Problem List	GI discomfort-LMR 160
Pain	LPB1922	EMR Problem List	Ear pain-LMR 1922
Pain	LPB2211	EMR Problem List	Back pain-LMR 2211
Pain	LPB2212	EMR Problem List	Low back pain-LMR 2212
Pain	LPB2213	EMR Problem List	Neck pain-LMR 2213
Pain	LPB2218	EMR Problem List	Shoulder pain-LMR 2218
Pain	LPB2219	EMR Problem List	Limb pain-LMR 2219
Pain	LPB2220	EMR Problem List	Wrist pain-LMR 2220

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Pain	LPB2221	EMR Problem List	Knee pain-LMR 2221
Pain	LPB2222	EMR Problem List	Leg pain-LMR 2222
Pain	LPB2223	EMR Problem List	Foot pain-LMR 2223
Pain	LPB2354	EMR Problem List	Hip pain-LMR 2354
Pain	LPB26	EMR Problem List	Joint pains-LMR 26
Pain	LPB279	EMR Problem List	Neck pain-LMR 279
Pain	LPB3012	EMR Problem List	Pain-LMR 3012
Pain	LPB3018	EMR Problem List	Arm pain-LMR 3018
Pain	LPB37	EMR Problem List	Back pain-LMR 37
Pain	LPB514	EMR Problem List	Shoulder pain-LMR 514
Pain	LPB515	EMR Problem List	Knee pain-LMR 515
Pain	LPB516	EMR Problem List	Ankle pain-LMR 516
Pain	LPB722	EMR Problem List	Foot pain-LMR 722
Pain	LPB724	EMR Problem List	Hip pain-LMR 724
Pain	LPB726	EMR Problem List	Leg pain-LMR 726
Pain	LPB827	EMR Problem List	Wrist pain-LMR 827
Smoking	3051	ICD-9 Billing Code	Tobacco use disorder
Smoking	30510	ICD-9 Billing Code	Tobacco use disorder
Smoking	30511	ICD-9 Billing Code	Tobacco use disorder, continuous use
Smoking	30512	ICD-9 Billing Code	Tobacco use disorder, episodic use
Smoking	30513	ICD-9 Billing Code	Tobacco use disorder, in remission
Smoking	LPA395	EMR Problem List	Smoking-LMR 395
Smoking	LPA677	EMR Problem List	Past smoking-LMR 677
Smoking	LPB395	EMR Problem List	Smoking-LMR 395
Smoking	V1582	ICD-9 Billing Code	History of tobacco use

**eTable 2. Sensitivity analysis: Association of sociodemographic, health status, and concomitant treatment covariates with weight change in mixed effects model, limited to antidepressant-treated patients only**

Feature	Beta (SE)	pval
<b>Sociodemographic</b>		
Age	-0.002 (0.001)	0.000
Gender, female	-0.026 (0.015)	0.089
Race, caucasian	-0.027 (0.016)	0.087
Insurance, public	-0.013 (0.016)	0.391
<b>Health history</b>		
Baseline BMI	-0.008 (0.001)	0.000
Pre baseline weight trend	-4.430 (0.847)	0.000
Year of index prescription	-0.001 (0.003)	0.708
Comorbidity Index (ACCI)	0.007 (0.008)	0.409
Depression diagnosis	0.045 (0.015)	0.002
Anxiety diagnosis	0.075 (0.017)	0.000
Pain diagnosis	-0.011 (0.015)	0.450
Recent smoker	0.030 (0.024)	0.206
Concomittant psychotherapy	0.024 (0.024)	0.311
Comcomittant antipsychotic	0.099 (0.034)	0.004
<b>Treatment</b>		
SSRI Antidepressants		
Citalopram	REF	
Escitalopram	-0.061 (0.040)	0.124
Fluoxetine	0.008 (0.023)	0.723
Paroxetine	-0.026 (0.027)	0.334
Sertraline	-0.054 (0.027)	0.046
non-SSRI Antidepressants		
Amitriptyline	-0.087 (0.025)	0.000
Bupropion	-0.076 (0.028)	0.006
Duloxetine	-0.134 (0.051)	0.008
Mirtazapine	0.004 (0.058)	0.950
Nortriptyline	-0.138 (0.034)	0.000
Venlafaxine	-0.058 (0.034)	0.091

Values are estimates (and standard error) of interaction of feature and time in mixed effect models. Model is fitted using patients with index prescription of antidepressants only (excluding control drugs); compare to Table 2.

**eTable 3. Sensitivity analysis: Association of medication prescription with weight change, from mixed effects model; individuals with antipsychotic exposure excluded.**

Class	Treatment	All Patients Mixed Effects Model		Completers Mixed Effects Model		Dropouts Mixed Effects Model	
		Beta (SE)	p-val	Beta (SE)	p-val	Beta (SE)	p-val
<i>Antidepressant</i>							
SSRI	Citalopram	REF		REF		REF	
	Escitalopram	-0.055 (0.039)	0.154	-0.075 (0.044)	0.087	0.054 (0.088)	0.537
	Fluoxetine	-0.004 (0.022)	0.857	-0.007 (0.025)	0.772	0.019 (0.050)	0.712
	Paroxetine	-0.041 (0.026)	0.123	-0.055 (0.030)	0.063	-0.002 (0.061)	0.970
	Sertraline	-0.038 (0.026)	0.145	-0.033 (0.030)	0.268	-0.063 (0.058)	0.276
non-SSRI	Amitriptyline	-0.085 (0.025)	0.001	-0.066 (0.028)	0.018	-0.180 (0.054)	0.001
	Bupropion	-0.061 (0.027)	0.026	-0.067 (0.032)	0.034	-0.067 (0.057)	0.234
	Duloxetine	-0.119 (0.050)	0.018	-0.119 (0.056)	0.034	-0.195 (0.112)	0.083
	Mirtazapine	-0.086 (0.060)	0.156	-0.062 (0.069)	0.369	-0.205 (0.126)	0.104
	Nortriptyline	-0.149 (0.034)	0.000	-0.145 (0.038)	0.000	-0.150 (0.074)	0.043
	Venlafaxine	-0.064 (0.034)	0.058	-0.027 (0.038)	0.482	-0.239 (0.073)	0.001
<i>Controls</i>							
Weight loss	Orlistat	-0.225 (0.104)	0.031	-0.122 (0.125)	0.328	-0.253 (0.194)	0.193
	Phentermine	-0.588 (0.066)	0.000	-0.516 (0.073)	0.000	-0.838 (0.150)	0.000
	Sibutramine	-0.198 (0.093)	0.034	-0.139 (0.111)	0.212	-0.295 (0.182)	0.105
Bronchodilator	Albuterol	-0.125 (0.025)	0.000	-0.123 (0.029)	0.000	-0.153 (0.052)	0.003

Effect of drug on weight change over time excluding patients on concomitant antipsychotic treatment. Values are covariate-adjusted estimates (and standard error) of interaction of drug and time compared with citalopram over time in a mixed effect model. Completers include only patients who had a weight measured at the 12-month time point; Dropouts include patients with no weight measurement at the 12-month time point

**eTable 4. Logistic regression model to predict discontinuation before 12-month observation**

	Estimate	SE	z value	p
(Intercept)	44.752	11.912	3.757	0.000
drugEscitalopram	-0.005	0.081	-0.060	0.952
drugFluoxetine	-0.034	0.049	-0.695	0.487
drugParoxetine	0.029	0.058	0.496	0.620
drugSertraline	0.074	0.056	1.324	0.185
drugAmitriptyline	0.160	0.054	2.967	0.003
drugBupropion	0.460	0.056	8.169	0.000
drugDuloxetine	0.242	0.120	2.017	0.044
drugMirtazapine	0.264	0.138	1.913	0.056
drugNortriptyline	0.190	0.076	2.501	0.012
drugVenlafaxine	0.104	0.074	1.401	0.161
drugOrlistat	0.531	0.247	2.152	0.031
drugPhentermine	0.288	0.172	1.677	0.093
drugSibutramine	0.407	0.213	1.914	0.056
drugAlbuterol	0.793	0.053	15.002	0.000
genderM	0.073	0.031	2.382	0.017
Age (years)	-0.016	0.001	-12.959	0.000
Pretreatment BMI	-0.001	0.002	-0.499	0.618
Year	-0.022	0.006	-3.658	0.000
Race - Asian	-0.057	0.095	-0.602	0.547
Race - Black	0.144	0.066	2.167	0.030
Ethnicity - Hispanic	0.082	0.046	1.792	0.073
Race - Other	0.230	0.059	3.888	0.000

Terms of a logistic regression model predicting patients who drop out before 12-month timepoint. Reference drug is citalopram, reference race is Caucasian.

**eTable 5. Sensitivity analysis: Association of medication prescription with weight change, from mixed effects model – weighted average of 12-month completers and dropouts.**

Class	Treatment	Missing Residual Mixed Effects Model	
		Beta (SE)	p-val
<i>Antidepressant</i>			
SSRI	Citalopram	REF	
	Escitalopram	-0.006 (0.053)	0.914
	Fluoxetine	0.003 (0.031)	0.929
	Paroxetine	-0.030 (0.038)	0.423
	Sertraline	-0.077 (0.036)	0.030
non-SSRI	Amitriptyline	-0.132 (0.034)	0.000
	Bupropion	-0.052 (0.038)	0.169
	Duloxetine	-0.125 (0.068)	0.068
	Mirtazapine	-0.087 (0.078)	0.265
	Nortriptyline	-0.141 (0.048)	0.003
	Venlafaxine	-0.128 (0.046)	0.005
<i>Controls</i>			
Weight loss	Orlistat	-0.190 (0.140)	0.175
	Phentermine	-0.717 (0.100)	0.000
	Sibutramine	-0.232 (0.129)	0.072
Bronchodilator	Albuterol	-0.138 (0.037)	0.000

Values are covariate-adjusted estimates (and standard errors) of interaction of drug and time, representing weighted average of values for completers and dropouts. (Compare to Table 3)

**eTable 6. 3-month mean predicted and observed weight change by drug**

Class	Treatment	Predicted 3m Weight Change (kg) mean $\pm$ sd	Observed 3m Weight Change (kg) mean $\pm$ sd	Proportion of patients with >7% weight gain at 3m
<i>Antidepressant</i>				
SSRI	Citalopram	-0.1 $\pm$ 3.6	-0.1 $\pm$ 3.7	0.04
	Escitalopram	0.1 $\pm$ 3.4	-0.1 $\pm$ 4.1	0.03
	Fluoxetine	-0.3 $\pm$ 3.8	-0.3 $\pm$ 4.2	0.03
	Paroxetine	0.2 $\pm$ 3.6	0.1 $\pm$ 4.1	0.05
	Sertraline	0.1 $\pm$ 4.1	0.0 $\pm$ 4.0	0.04
non-SSRI	Amitriptyline	0.4 $\pm$ 3.6	0.4 $\pm$ 3.5	0.05
	Bupropion	-0.4 $\pm$ 4.0	-0.4 $\pm$ 4.5	0.02
	Duloxetine	0.1 $\pm$ 4.9	-0.1 $\pm$ 3.8	0.06
	Mirtazapine	0.3 $\pm$ 3.5	0.4 $\pm$ 3.8	0.07
	Nortriptyline	0.3 $\pm$ 3.3	0.3 $\pm$ 3.1	0.03
	Venlafaxine	0.0 $\pm$ 4.0	0.1 $\pm$ 3.8	0.03
<i>Controls</i>				
Weight loss	Orlistat	-2.7 $\pm$ 5.4	-2.1 $\pm$ 5.0	0.02
	Phentermine	-5.5 $\pm$ 5.5	-5.1 $\pm$ 4.7	0.01
	Sibutramine	-3.7 $\pm$ 4.5	-3.5 $\pm$ 4.4	0.01
Bronchodilator	Albuterol	-0.1 $\pm$ 3.6	-0.1 $\pm$ 3.7	0.03

Predicted weight change is best linear unbiased predictor (BLUP) from primary mixed effect model adjusted for all covariates. See text for details.

**eTable 7. 6-month mean predicted and observed weight change by drug**

Class	Treatment	Predicted 6m Weight Change (kg) mean ± sd	Observed 6m Weight Change (kg) mean ± sd	Proportion of patients with >7% weight gain at 6m	
<i>Antidepressant</i>					
SSRI	Citalopram	0.4 ± 3.9	0.4 ± 4.4	0.09	
	Escitalopram	0.5 ± 3.5	0.7 ± 4.3	0.10	
	Fluoxetine	0.1 ± 3.9	0.2 ± 4.3	0.08	
	Paroxetine	0.4 ± 4.5	0.4 ± 4.9	0.09	
	Sertraline	0.6 ± 4.8	0.8 ± 6.8	0.10	
	non-SSRI	Amitriptyline	0.4 ± 3.8	0.5 ± 4.9	0.10
		Bupropion	-0.1 ± 4.3	0.0 ± 4.8	0.07
		Duloxetine	0.3 ± 5.6	0.6 ± 6.4	0.15
		Mirtazapine	0.5 ± 3.9	0.5 ± 4.6	0.14
		Nortriptyline	0.4 ± 3.4	0.5 ± 3.9	0.06
	Venlafaxine	0.3 ± 3.6	0.2 ± 4.3	0.09	
<i>Controls</i>					
Weight loss	Orlistat	-3.6 ± 6.7	-4.4 ± 11.2	0.00	
	Phentermine	-7.3 ± 5.9	-7.9 ± 7.3	0.01	
	Sibutramine	-5.0 ± 4.7	-5.7 ± 6.0	0.00	
Bronchodilator	Albuterol	-0.2 ± 4.1	-0.2 ± 4.8	0.06	

Predicted weight change is best linear unbiased predictor (BLUP) from primary mixed effect model adjusted for all covariates. See text for details.

**eTable 8. 9-month mean predicted and observed weight change by drug**

Class	Treatment	Predicted 9m Weight Change (kg) mean ± sd	Observed 9m Weight Change (kg) mean ± sd	Proportion of patients with >7% weight gain at 9m
<i>Antidepressant</i>				
SSRI	Citalopram	0.8 ± 4.3	0.8 ± 5.7	0.13
	Escitalopram	0.8 ± 4.5	1.1 ± 6.3	0.12
	Fluoxetine	0.6 ± 4.0	0.7 ± 4.9	0.12
	Paroxetine	1.0 ± 3.8	1.0 ± 4.8	0.13
	Sertraline	1.0 ± 5.5	1.0 ± 6.8	0.15
non-SSRI	Amitriptyline	0.6 ± 3.9	0.6 ± 5.6	0.13
	Bupropion	-0.1 ± 4.5	0.0 ± 5.4	0.08
	Duloxetine	0.6 ± 5.9	0.5 ± 8.8	0.21
	Mirtazapine	1.4 ± 4.3	1.4 ± 5.3	0.22
	Nortriptyline	0.5 ± 3.6	0.5 ± 4.5	0.09
	Venlafaxine	0.5 ± 4.3	0.3 ± 5.8	0.13
<i>Controls</i>				
Weight loss	Orlistat	-4.2 ± 5.4	-5.4 ± 10.0	0.00
	Phentermine	-9.0 ± 6.9	-9.9 ± 8.8	0.00
	Sibutramine	-4.8 ± 5.6	-4.8 ± 6.9	0.00
Bronchodilator	Albuterol	-0.1 ± 4.7	-0.1 ± 6.2	0.10

Predicted weight change is best linear unbiased predictor (BLUP) from primary mixed effect model adjusted for all covariates. See text for details.



**eTable 9. 12-month mean predicted and observed weight change by drug**

Class	Treatment	Predicted 12m Weight Change (kg) mean $\pm$ sd	Observed 12m Weight Change (kg) mean $\pm$ sd	Proportion of patients with >7% weight gain at 12m
<i>Antidepressant</i>				
SSRI	Citalopram	1.3 $\pm$ 4.0	1.2 $\pm$ 5.3	0.16
	Escitalopram	1.1 $\pm$ 4.2	0.9 $\pm$ 4.7	0.15
	Fluoxetine	0.8 $\pm$ 4.1	0.7 $\pm$ 5.5	0.14
	Paroxetine	1.0 $\pm$ 4.1	1.0 $\pm$ 5.5	0.15
	Sertraline	1.0 $\pm$ 4.3	0.9 $\pm$ 5.7	0.15
non-SSRI	Amitriptyline	0.8 $\pm$ 3.9	0.9 $\pm$ 5.1	0.14
	Bupropion	-0.2 $\pm$ 4.8	-0.2 $\pm$ 6.2	0.09
	Duloxetine	0.1 $\pm$ 5.8	0.1 $\pm$ 8.2	0.17
	Mirtazapine	2.1 $\pm$ 3.2	2.2 $\pm$ 4.5	0.25
	Nortriptyline	0.3 $\pm$ 4.1	0.3 $\pm$ 5.9	0.14
	Venlafaxine	1.0 $\pm$ 3.8	1.2 $\pm$ 5.1	0.18
<i>Controls</i>				
Weight loss	Orlistat	-6.5 $\pm$ 7.9	-5.0 $\pm$ 6.0	0.00
	Phentermine	-10.9 $\pm$ 6.4	-9.8 $\pm$ 8.3	0.02
	Sibutramine	-4.7 $\pm$ 4.7	-4.4 $\pm$ 6.9	0.00
Bronchodilator	Albuterol	0.0 $\pm$ 4.2	0.0 $\pm$ 5.5	0.09

Predicted weight change is best linear unbiased predictor (BLUP) from primary mixed effect model adjusted for all covariates. See text for deta









