

## Supplementary Online Content

Steffen KJ, King WC, White GE, et al. Change in sexual functioning in women and men in the 5 years after bariatric surgery. *JAMA Surg*. Published online February 20, 2019. doi:10.1001/jamasurg.2018.1162

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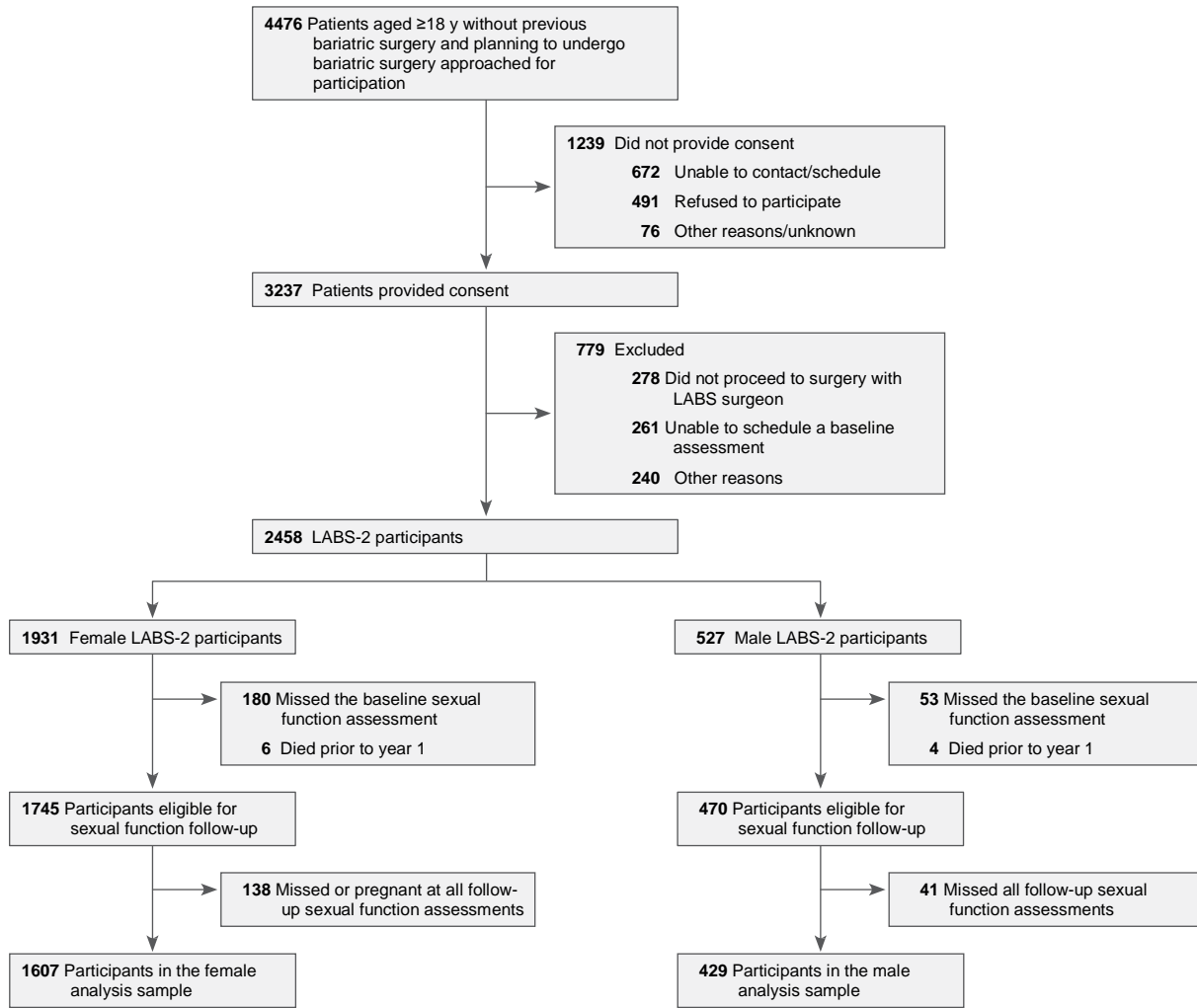
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1-5 Following Bariatric Surgery in Women.<sup>a</sup>

**eTable 10.** Associations between Baseline Characteristics and Surgical Procedure with Clinically Meaningful Presurgery-to-Postsurgery Improvements in Parameters of Sexual Function in Years

1-5 Following Bariatric Surgery in Men.<sup>a</sup>

**eFigure.** Longitudinal Assessment of Bariatric Surgery-2 (LABS-2) Study Flow from Approached Patients to Analysis Sample



**eTable 1.** Items on Sexual Function Questionnaire and Definitions of Clinically Meaningful Pre-surgery to Post-surgery Improvement

Domain	Question	Original Response Options and Recoded Responses		Improvement from Pre-surgery to Post-surgery		Additional Related Questions																					
<b>Desire</b>	During the past month, how often have you felt sexual desire or interest, that is desire or interest to engage in any activity that is arousing to you, alone or with a partner?	<table border="1"> <thead> <tr> <th>Original</th> <th>Recoded</th> </tr> </thead> <tbody> <tr> <td>'Not at all'</td> <td>'Not at all'</td> </tr> <tr> <td>'Once a month'</td> <td>'Once a month'</td> </tr> <tr> <td>'Once a week'</td> <td>'Once a week'</td> </tr> <tr> <td>'A few times a week'</td> <td>'A few times a week'</td> </tr> <tr> <td><b>'Once a day'</b></td> <td rowspan="2"><b>'At least once a day'</b></td> </tr> <tr> <td><b>'More than once a day'</b></td> </tr> </tbody> </table>	Original	Recoded	'Not at all'	'Not at all'	'Once a month'	'Once a month'	'Once a week'	'Once a week'	'A few times a week'	'A few times a week'	<b>'Once a day'</b>	<b>'At least once a day'</b>	<b>'More than once a day'</b>		<table border="1"> <thead> <tr> <th>Baseline</th> <th>Improvement at Follow-Up</th> </tr> </thead> <tbody> <tr> <td>'Not at all'</td> <td>'Once a month' or more</td> </tr> <tr> <td>'Once a month'</td> <td>'Once a week' or more</td> </tr> <tr> <td>'Once a week'</td> <td>'A few times a week' or more</td> </tr> </tbody> </table>	Baseline	Improvement at Follow-Up	'Not at all'	'Once a month' or more	'Once a month'	'Once a week' or more	'Once a week'	'A few times a week' or more	<p><i>Those reporting 'at least a few times a week' at baseline were excluded from this analysis.</i></p>	
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<b>Frequency</b>	During the past month, how often have you participated in any sexual activity, that is any activity that is arousing to you, alone or with a partner?	<table border="1"> <thead> <tr> <th>Original</th> <th>Recoded</th> </tr> </thead> <tbody> <tr> <td>'Not at all'</td> <td>'Not at all'</td> </tr> <tr> <td>'Once a month'</td> <td>'Once a month'</td> </tr> <tr> <td>'Once a week'</td> <td>'Once a week'</td> </tr> <tr> <td>'A few times a week'</td> <td>'A few times a week'</td> </tr> <tr> <td><b>'Once a day'</b></td> <td rowspan="2"><b>'At least once a day'</b></td> </tr> <tr> <td><b>'More than once a day'</b></td> </tr> </tbody> </table>	Original	Recoded	'Not at all'	'Not at all'	'Once a month'	'Once a month'	'Once a week'	'Once a week'	'A few times a week'	'A few times a week'	<b>'Once a day'</b>	<b>'At least once a day'</b>	<b>'More than once a day'</b>		<table border="1"> <thead> <tr> <th>Baseline</th> <th>Improvement at Follow-Up</th> </tr> </thead> <tbody> <tr> <td>'Not at all'</td> <td>'Once a month' or more</td> </tr> <tr> <td>'Once a month'</td> <td>'Once a week' or more</td> </tr> <tr> <td>'Once a week'</td> <td>'A few times a week' or more</td> </tr> </tbody> </table>	Baseline	Improvement at Follow-Up	'Not at all'	'Once a month' or more	'Once a month'	'Once a week' or more	'Once a week'	'A few times a week' or more	<p><i>Those reporting 'at least a few times a week' at baseline were excluded from this analysis.</i></p>	If applicable, participants selected reasons for no sexual activity (e.g., no partner, partner not interested).
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<b>Physical Health Limitations</b>	During the past month, how much has your physical health limited your sexual activity, that is any activity that is arousing to you, alone or with a partner?	<table border="1"> <thead> <tr> <th>Original</th> <th>Recoded</th> </tr> </thead> <tbody> <tr> <td>'Not at all'</td> <td rowspan="5">N/A</td> </tr> <tr> <td>'Slightly'</td> </tr> <tr> <td>'Moderately'</td> </tr> <tr> <td>'Quite a bit'</td> </tr> <tr> <td>'Extremely'</td> </tr> </tbody> </table>	Original	Recoded	'Not at all'	N/A	'Slightly'	'Moderately'	'Quite a bit'	'Extremely'		<table border="1"> <thead> <tr> <th>Baseline</th> <th>Improvement at Follow-Up</th> </tr> </thead> <tbody> <tr> <td>'Extremely'</td> <td>'Moderately' or better</td> </tr> <tr> <td>'Quite a bit'</td> <td>'Moderately' or better</td> </tr> <tr> <td>'Moderately'</td> <td>'Not at all'</td> </tr> <tr> <td>'Slightly'</td> <td>'Not at all'</td> </tr> </tbody> </table>	Baseline	Improvement at Follow-Up	'Extremely'	'Moderately' or better	'Quite a bit'	'Moderately' or better	'Moderately'	'Not at all'	'Slightly'	'Not at all'	<p><i>Those who reported 'not at all' at baseline were excluded from this analysis.</i></p>	If applicable, participants selected ways in which physical health limited sexual activity (e.g., pain/discomfort, difficulty having an orgasm, fear of hurting partner).			
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<b>Satisfaction</b>	Over the past month, how satisfied have you been with your overall sexual life?	<table border="1"> <thead> <tr> <th>Original</th> <th>Recoded</th> </tr> </thead> <tbody> <tr> <td>'Very satisfied'</td> <td rowspan="5">N/A</td> </tr> <tr> <td>'Moderately satisfied'</td> </tr> <tr> <td>'About equally satisfied and dissatisfied'</td> </tr> <tr> <td>'Moderately dissatisfied'</td> </tr> <tr> <td>'Very dissatisfied'</td> </tr> </tbody> </table>	Original	Recoded	'Very satisfied'	N/A	'Moderately satisfied'	'About equally satisfied and dissatisfied'	'Moderately dissatisfied'	'Very dissatisfied'		<table border="1"> <thead> <tr> <th>Baseline</th> <th>Improvement at Follow-Up</th> </tr> </thead> <tbody> <tr> <td>'Very dissatisfied'</td> <td>'About equally satisfied and dissatisfied' or better</td> </tr> <tr> <td>'Moderately dissatisfied'</td> <td>'About equally satisfied and dissatisfied' or better</td> </tr> <tr> <td>'About equally satisfied and dissatisfied'</td> <td>'Moderately satisfied' or better</td> </tr> </tbody> </table>	Baseline	Improvement at Follow-Up	'Very dissatisfied'	'About equally satisfied and dissatisfied' or better	'Moderately dissatisfied'	'About equally satisfied and dissatisfied' or better	'About equally satisfied and dissatisfied'	'Moderately satisfied' or better	<p><i>Those who were 'very satisfied' or 'moderately satisfied' at baseline were excluded from analysis.</i></p>						
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**eTable 2. Sensitivity Analysis of Missing at Random Assumption**

A sensitivity analysis was performed to examine the robustness of results with respect to the missing at random assumption. Among those missing vs. not missing assessment of satisfaction with sexual life at follow-up, the degree of satisfaction at other follow-ups did not appear to differ, after controlling for factors that were independently related to completeness of follow-up data (site, age, smoking, marital status). Likewise, among those missing vs. not missing IWQOL-lite Sexual Life score at follow-up, the mean Sexual Life score at other follow-ups was not significantly different. These results indicate that missing follow-up data was not related to the sexual functioning, and thus should not bias the results.

**Modeled Degree of Satisfaction with Sexual Life by Time Point by Whether that Outcome was Observed or Missing at Each Follow-up Assessment**

		Whether outcome known, by year of follow-up									
		1 Year		2 Years		3 Years		4 Years		5 Years	
Satisfaction with sexual life, %		Observed (N=1598)	Missing (N=438)	Observed (N=1396)	Missing (N=640)	Observed (N=1343)	Missing (N=693)	Observed (N=1279)	Missing (N=757)	Observed (N=1285)	Missing (N=751)
<b>Baseline</b>	Very satisfied	30.3(30.3-30.3)	31.5(31.4-31.6)	29.7(29.6-29.7)	32.9(32.8-33.0)	29.0(29.0-29.1)	34.1(34.0-34.1)	30.3(30.3-30.3)	31.6(31.5-31.6)	29.5(29.5-29.5)	32.4(32.4-32.5)
	Moderately satisfied	20.2(20.1-20.2)	18.9(18.9-19.0)	20.5(20.5-20.5)	18.3(18.3-18.3)	20.0(20.0-20.1)	19.0(18.9-19.0)	20.5(20.4-20.5)	18.4(18.3-18.4)	21.1(21.1-21.1)	17.4(17.4-17.5)
	Equally satisfied and dissatisfied	21.2(21.2-21.2)	21.8(21.8-21.9)	21.4(21.4-21.4)	21.5(21.4-21.5)	22.2(22.2-22.3)	20.0(19.9-20.0)	21.1(21.1-21.1)	21.9(21.9-22.0)	21.0(21.0-21.1)	22.2(22.2-22.2)
	Moderately dissatisfied	16.6(16.6-16.6)	16.0(15.8-16.1)	16.4(16.4-16.5)	16.7(16.6-16.8)	16.4(16.4-16.5)	16.8(16.7-16.9)	16.5(16.5-16.5)	16.6(16.5-16.6)	16.7(16.6-16.7)	16.6(16.5-16.6)
	Very dissatisfied	14.7(14.6-14.7)	14.7(14.6-14.8)	14.5(14.5-14.5)	14.8(14.7-14.8)	15.1(15.1-15.1)	13.2(13.2-13.3)	14.2(14.1-14.2)	15.2(15.1-15.2)	14.1(14.1-14.1)	15.3(15.2-15.3)
	N missing	71	63	53	81	50	84	39	95	51	83
<b>Year 1</b>	Very satisfied	-	-	12.4(12.4-12.4)	13.0(12.8-13.1)	11.4(11.4-11.5)	14.9(14.8-15.0)	12.4(12.4-12.4)	13.1(13.0-13.2)	11.7(11.7-11.7)	13.7(13.6-13.9)
	Moderately satisfied	-	-	14.1(14.1-14.1)	12.6(12.5-12.7)	13.9(13.9-14.0)	13.7(13.6-13.7)	14.5(14.5-14.5)	12.4(12.4-12.5)	14.8(14.8-14.8)	12.0(11.9-12.1)
	Equally satisfied and dissatisfied	-	-	18.7(18.7-18.7)	18.4(18.3-18.4)	18.9(18.9-18.9)	18.2(18.2-18.3)	18.4(18.4-18.4)	18.8(18.7-18.8)	18.3(18.3-18.3)	19.1(19.0-19.1)
	Moderately dissatisfied	-	-	24.9(24.8-24.9)	24.9(24.8-24.9)	24.7(24.6-24.7)	25.9(25.9-26.0)	25.1(25.1-25.1)	24.3(24.3-24.4)	25.6(25.5-25.6)	24.2(24.1-24.2)
	Very dissatisfied	-	-	32.4(32.4-32.4)	33.0(32.9-33.0)	33.5(33.5-33.5)	30.4(30.4-30.5)	31.6(31.5-31.6)	34.1(34.0-34.1)	31.8(31.8-31.8)	33.9(33.8-33.9)
	N missing	-	-	206	232	204	234	194	244	222	216
<b>Year 2</b>	Very satisfied	13.0(12.9-13.0)	12.6(12.4-12.8)	-	-	12.2(12.2-12.2)	15.4(15.3-15.6)	13.2(13.1-13.2)	13.0(12.9-13.1)	12.4(12.4-12.5)	13.9(13.7-14.0)
	Moderately satisfied	13.4(13.3-13.4)	13.0(12.9-13.1)	-	-	13.1(13.1-13.2)	13.6(13.5-13.7)	13.7(13.7-13.7)	12.2(12.2-12.3)	14.0(14.0-14.0)	11.6(11.5-11.7)
	Equally satisfied and dissatisfied	21.8(21.8-21.8)	21.7(21.6-21.8)	-	-	22.3(22.2-22.3)	20.6(20.5-20.6)	21.9(21.8-21.9)	21.6(21.6-21.7)	21.6(21.6-21.6)	22.5(22.5-22.6)
	Moderately dissatisfied	22.9(22.9-22.9)	21.9(21.8-22.1)	-	-	22.6(22.6-22.7)	23.8(23.7-23.9)	22.9(22.9-23.0)	21.9(21.8-21.9)	23.3(23.2-23.3)	22.1(22.1-22.2)
	Very dissatisfied	31.2(31.2-31.3)	31.6(31.5-31.7)	-	-	32.0(32.0-32.0)	29.0(28.9-29.1)	30.6(30.6-30.7)	32.8(32.8-32.9)	30.9(30.9-30.9)	32.5(32.4-32.6)
	N missing	408	232	-	-	263	377	272	368	274	366
<b>Year 3</b>	Very satisfied	14.0(14.0-14.0)	15.1(14.9-15.4)	14.1(14.0-14.1)	14.6(14.4-14.8)	-	-	14.4(14.3-14.4)	14.0(13.8-14.2)	13.7(13.6-13.7)	15.0(14.9-15.2)
	Moderately satisfied	14.1(14.1-14.1)	13.1(12.9-13.3)	14.3(14.3-14.4)	12.9(12.8-12.9)	-	-	14.4(14.3-14.4)	12.4(12.3-12.5)	14.8(14.7-14.8)	11.8(11.6-11.9)
	Equally satisfied and dissatisfied	21.0(21.0-21.0)	22.3(22.2-22.5)	21.2(21.2-21.2)	21.2(21.1-21.3)	-	-	20.9(20.9-21.0)	21.5(21.4-21.6)	20.9(20.9-21.0)	22.1(22.0-22.1)
	Moderately dissatisfied	22.5(22.5-22.5)	21.3(21.1-21.4)	22.2(22.2-22.2)	22.2(22.0-22.3)	-	-	22.5(22.5-22.5)	21.5(21.4-21.6)	22.5(22.5-22.5)	22.0(21.9-22.1)
	Very dissatisfied	30.5(30.5-30.6)	30.4(30.3-30.5)	30.3(30.2-30.3)	31.0(30.9-31.1)	-	-	29.8(29.8-29.8)	32.4(32.3-32.5)	30.0(30.0-30.0)	31.7(31.6-31.8)
	N missing	459	234	316	377	-	-	229	464	263	430
<b>Year 4</b>	Very satisfied	15.4(15.3-15.4)	15.6(15.4-15.8)	15.4(15.4-15.5)	15.6(15.4-15.7)	14.9(14.8-14.9)	17.9(17.7-18.0)	-	-	14.9(14.9-14.9)	16.8(16.6-17.0)
	Moderately satisfied	13.6(13.6-13.6)	12.6(12.4-12.8)	13.6(13.6-13.7)	12.7(12.6-12.8)	13.5(13.4-13.5)	12.9(12.8-13.1)	-	-	14.1(14.1-14.1)	11.2(11.1-11.4)
	Equally satisfied and dissatisfied	21.4(21.4-21.4)	22.2(22.0-22.3)	21.5(21.5-21.5)	21.7(21.7-21.8)	21.8(21.8-21.8)	20.6(20.5-20.7)	-	-	21.3(21.3-21.3)	22.2(22.1-22.2)
	Moderately dissatisfied	21.8(21.8-21.8)	20.4(20.3-20.6)	21.6(21.5-21.6)	21.4(21.3-21.5)	21.4(21.4-21.4)	23.4(23.3-23.6)	-	-	21.7(21.7-21.8)	22.1(22.0-22.2)
	Very dissatisfied	30.1(30.1-30.1)	30.1(29.9-30.2)	30.0(30.0-30.0)	31.1(31.0-31.2)	30.7(30.6-30.7)	28.4(28.2-28.5)	-	-	29.7(29.6-29.7)	31.5(31.4-31.7)
	N missing	513	244	389	368	293	464	-	-	264	493
<b>Year 5</b>	Very satisfied	13.2(13.2-13.3)	14.2(14.0-14.5)	13.3(13.2-13.3)	14.0(13.9-14.2)	12.7(12.7-12.8)	15.9(15.7-16.0)	13.6(13.6-13.7)	13.5(13.3-13.7)	-	-
	Moderately satisfied	15.6(15.5-15.6)	14.9(14.7-15.0)	15.5(15.5-15.5)	14.7(14.7-14.8)	15.3(15.3-15.3)	15.4(15.3-15.5)	15.8(15.7-15.8)	13.9(13.8-14.0)	-	-
	Equally satisfied and dissatisfied	21.1(21.1-21.1)	21.9(21.8-22.0)	21.3(21.3-21.3)	21.7(21.6-21.8)	21.6(21.6-21.6)	21.6(21.6-21.6)	21.1(21.1-21.1)	21.5(21.4-21.6)	-	-
	Moderately dissatisfied	22.8(22.8-22.8)	23.2(23.0-23.3)	22.6(22.6-22.6)	23.0(22.9-23.1)	22.5(22.5-22.6)	23.9(23.8-24.0)	22.9(22.8-22.9)	22.7(22.6-22.8)	-	-
	Very dissatisfied	28.5(28.5-28.5)	28.6(28.5-28.7)	28.3(28.3-28.4)	29.8(29.7-29.9)	29.1(29.0-29.1)	26.9(26.8-27.0)	28.0(28.0-28.0)	29.9(29.8-30.0)	-	-
	N missing	535	216	385	366	321	430	258	493	-	-

**eTable 3.** Mean IWQOL-lite Sexual Life Score by Time Point by Whether that Outcome was Observed or Missing at Each Follow-up Assessment

	Whether outcome known, by year of follow-up									
	1 Year		2 Years		3 Years		4 Years		5 Years	
IWQOL-Lite sexual life score, mean (95% CI)	Observed (N=1643)	Missing (N=393)	Observed (N=1455)	Missing (N=581)	Observed (N=1367)	Missing (N=669)	Observed (N=1326)	Missing (N=710)	Observed (N=1345)	Missing (N=691)
<b>Baseline</b>	52.2(50.1-54.2) Missing=44	52.9(48.8-57.0) Missing=47	52.1(49.9-54.3) Missing=43	51.8(48.4-55.2) Missing=48	51.7(49.4-53.9) Missing=45	53.4(50.4-56.4) Missing=46	51.9(49.6-54.3) Missing=42	52.5(49.6-55.4) Missing=49	52.5(50.2-54.8) Missing=41	52.1(49.1-55.1) Missing=50
<b>Year 1</b>	-	-	81.3(79.3-83.3) Missing=203	82.1(78.9-85.3) Missing=190	81.2(79.1-83.3) Missing=177	82.2(79.4-84.9) Missing=216	81.0(79.0-83.1) Missing=184	82.4(79.6-85.2) Missing=209	81.9(78.9-84.0) Missing=210	80.9(78.1-83.7) Missing=183
<b>Year 2</b>	82.7(80.7-84.6) Missing=391	82.2(78.3-86.1) Missing=190	-	-	82.9(80.8-84.9) Missing=249	82.7(79.8-85.7) Missing=332	82.5(80.3-84.6) Missing=266	83.0(80.2-85.9) Missing=315	83.5(81.4-85.6) Missing=265	81.0(78.1-83.9) Missing=316
<b>Year 3</b>	80.8(78.9-82.8) Missing=453	84.7(80.6-88.8) Missing=216	81.7(79.7-83.7) Missing=337	79.4(75.8-83.0) Missing=332	-	-	80.9(78.8-83.0) Missing=238	82.8(79.5-86.1) Missing=431	82.3(80.2-84.4) Missing=274	79.2(76.0-82.5) Missing=395
<b>Year 4</b>	79.9(77.9-81.9) Missing=501	77.7(73.1-82.2) Missing=209	80.2(78.1-82.3) Missing=395	77.6(73.8-81.3) Missing=315	80.2(78.0-82.4) Missing=279	77.8(74.2-81.3) Missing=431	-	-	80.7(78.6-82.9) Missing=263	77.4(73.8-81.0) Missing=447
<b>Year 5</b>	77.6(75.6-79.7) Missing=508	81.2(77.1-85.3) Missing=183	78.1(76.0-80.3) Missing=375	78.0(74.4-81.6) Missing=316	78.4(76.2-80.6) Missing=296	77.7(74.1-81.3) Missing=395	77.9(75.7-80.2) Missing=244	78.3(74.8-85.4) Missing=447	-	-

Abbreviations: IWQOL, Impact of Weight on Quality of Life.

**eTable 4. Demographic and Clinical Characteristics of Adults Prior to Bariatric Surgery, by Sex.**

Characteristic	Women (N=1607) <sup>a</sup>		Men (N=429) <sup>a</sup>	
	No.	% <sup>b</sup>	No.	% <sup>b</sup>
Age, years, median (IQR)	46.0	(37.0-54.0)	50.0	(39.0-58.0)
Race	(n=1591)		(n=424)	
White	1362	(85.6)	393	(92.7)
Black	177	(11.1)	24	(5.7)
Other <sup>c</sup>	52	(3.3)	7	(1.7)
Hispanic/Latino ethnicity, No./total (%)	79/1606	(4.9)	15/428	(3.5)
Education	(n=1600)		(n=427)	
High school or less	374	(23.4)	94	(22.0)
Some college/post high school education	642	(40.1)	166	(38.9)
College degree or higher	584	(36.5)	167	(39.1)
Marital status	(n=1600)		(n=428)	
Married/living as married	993	(62.0)	310	(72.4)
Divorced/separated	304	(19.0)	54	(12.6)
Widowed	43	(2.7)	2	(0.5)
Never married	260	(16.3)	62	(14.5)
Current or recent smoker, No./total (%)	211/1605	(13.1)	37/428	(8.6)
Alcohol use disorder symptoms, No./total(%)	104/1598	(6.5)	33/428	(7.7)
Body mass index, median (IQR)	45.5	(41.6-50.8)	46.9	(42.6-52.7)
Beck Depression Inventory Score, median (IQR)	6.0	(3.0-11.0)	5.0	(2.0-10.0)
Missing	92		26	
Diabetes status	(n=1523)		(n=401)	
Diabetes with insulin	151	(9.9)	84	(20.9)
Diabetes without insulin	301	(19.8)	99	(24.7)
No diabetes	1071	(70.3)	218	(52.4)
Hypertension, No./total(%)	1011/1568	(64.5)	340/422	(80.6)
Dyslipidemia, No./total(%)	756/1313	(57.6)	299/358	(83.5)
Sleep apnea, No./total(%)	770/1606	(47.9)	329/429	(76.7)
Cardiovascular disease, No./total(%)	85/1605	(5.3)	80/429	(18.7)
Urinary incontinence, No./total(%)	783/1597	(49.0)	93/424	(21.9)
Menopausal status			NA	
No	833	(51.8)		
Yes	494	(30.7)		
Unknown	280	(17.4)		
Prior live or still birth, No./total (%)	1066/1458	(73.1)	NA	
Antidepressants medications that may impair sexual function <sup>d</sup> , No./total(%)	570/1570	(36.3)	103/414	(24.9)
Antihypertensive medications that may impair sexual function <sup>e</sup> , No./total(%)	NA		148/416	(35.6)
Medications that may improve sexual function <sup>f</sup> , No./total(%)	111/1563	(7.1)	28/418	(6.7)
Other hormonal medications that may influence sexual function <sup>g</sup> , No./total(%)	108/1588	(6.8)	NA	
Surgical Procedure				
RYGB	1154	(71.8)	288	(67.1)
LAGB	391	(24.3)	115	(26.8)
Other	62 <sup>h</sup>	(3.9)	26 <sup>i</sup>	(6.1)

Abbreviations: IQR, interquartile range; LAGB, laparoscopic adjustable gastric band; NA, not applicable; RYGB, Roux-en-Y gastric bypass.

<sup>a</sup>Denominators shift between variables because of missing data.

<sup>b</sup>Data are expressed at No. (%) unless otherwise indicated.

<sup>c</sup>Combined due to small numbers: Asian, American Indian/Alaska Native, Native Hawaiian/other Pacific Islander, multiple races.

<sup>d</sup>Antidepressant medications other than bupropion, trazodone, mirtazapine or nefazodone.

<sup>e</sup>Beta-adrenergic blockers and diuretics.

<sup>f</sup>Bupropion. Among men only, also phosphodiesterase type 5 inhibitors (PDE-5) and androgens. All men who were on a PDE-5 or an androgen were also on bupropion at the same visit.

<sup>g</sup>Estrogens, progestins, and androgens, either alone or in combination.

<sup>h</sup>Sleeve gastrectomy (n=30), banded Roux-en-Y gastric bypass (n=11) and biliopancreatic diversion with duodenal switch (n=21) were combined due to the low frequency of each.

<sup>i</sup>Sleeve gastrectomy (n=15), banded Roux-en-Y gastric bypass (n=3) and biliopancreatic diversion with duodenal switch (n=8) were combined due to the low frequency of each.

**eTable 5. Baseline Demographic and Clinical Characteristics of Participants Included in and Excluded from Analysis sample**

Characteristic	Women			Men						
	Analysis sample (N=1607) <sup>a</sup>		Excluded (N=324)	P	Analysis sample (N=429) <sup>a</sup>		Excluded (N=98)			
	No.	% <sup>b</sup>	No.		% <sup>b</sup>	No.	% <sup>b</sup>			
Age, years, median (IQR)	46.0	(37.0-54.0)	42.0	(35.0-51.0)	<.001	50.0	(39.0-58.0)	44.0	(38.0-51.0)	0.001
Race	(n=1591)		(n=321)		0.14	(n=424)		(n=97)		0.40
White	1362	(85.6)	261	(81.3)		393	(92.7)	86	(88.7)	
Black	177	(11.1)	47	(14.6)		24	(5.7)	8	(8.2)	
Other	52	(3.3)	13	(4.0)		7	(1.7)	3	(3.1)	
Hispanic/Latino ethnicity, No./total (%)	79/1606	(4.9)	22/324	(6.8)	0.17	15/428	(3.5)	3/98	(3.1)	0.83
Education	(n=1600)		(n=179)		0.48	(n=427)		(n=58)		0.43
High school or less	374	(23.4)	38	(21.2)		94	(22.0)	15	(25.9)	
Some college/post high school education	642	(40.1)	87	(48.6)		166	(38.9)	23	(39.7)	
College degree or higher	584	(36.5)	54	(30.2)		167	(39.1)	20	(34.5)	
Marital status	(n=1600)		(n=178)		0.86	(n=428)		(n=58)		0.75
Married/living as married	993	(62.0)	103	(57.9)		310	(72.4)	38	(65.5)	
Divorced/separated	304	(19.0)	35	(19.7)		54	(12.6)	9	(15.5)	
Widowed	43	(2.7)	5	(2.8)		2	(0.5)	1	(1.7)	
Never married	260	(16.3)	35	(19.7)		62	(14.5)	10	(17.2)	
Current or recent smoker, No./total (%)	211/1605	(13.1)	54/323	(16.7)	0.09	37/428	(8.6)	22/98	(22.4)	<.001
Alcohol use disorder symptoms, No./total (%)	104/1598	(6.5)	8/175	(4.6)	0.32	33/428	(7.7)	3/55	(5.5)	0.55
Body mass index, kg/m <sup>2</sup> , median (IQR)	45.5	(41.6-50.8)	46.5	(42.0-52.2)	0.03	46.9	(42.6-52.7)	46.9	(40.9-53.8)	0.81
Beck Depression Inventory Score, median (IQR)	6.0	(3.0-11.0)	7	(3.0-12.0)	0.50	5.0	(2.0-10.0)	7	(3.0-12.0)	0.054
Missing	92		50			26		13		
Diabetes status	(n=1523)		(n=155)		0.23	(n=401)		(n=51)		0.33
Diabetes with insulin	151	(9.9)	12	(7.7)		84	(20.9)	7	(13.7)	
Diabetes without insulin	301	(19.8)	39	(25.2)		99	(24.7)	11	(21.6)	
No Diabetes	1071	(70.3)	104	(67.1)		218	(52.4)	33	(64.7)	
Hypertension, No./total (%)	1011/1568	(64.5)	179/288	(62.2)	0.45	340/422	(80.6)	71/94	(75.5)	0.27
Dyslipidemia, No./total (%)	756/1313	(57.6)	137/228	(60.1)	0.48	299/358	(83.5)	62/77	(80.5)	0.53
Sleep apnea, No./total (%)	770/1606	(47.9)	134/323	(41.5)	0.03	329/429	(76.7)	55/97	(56.7)	<.001
Cardiovascular disease, No./total (%)	85/1605	(5.3)	1/88	(1.1)	0.44	80/429	(18.7)	1/23	(4.4)	0.03
Urinary incontinence, No./total (%)	783/1597	(49.0)	79/166	(47.6)	0.7	93/424	(21.9)	7/53	(13.2)	0.14
Menopausal status						NA		NA		
No	833	(51.8)	107	(33.0)	<.001					
Yes	494	(30.7)	25	(7.7)						
Unknown	280	(17.4)	192	(59.3)						
Prior live or still birth	1066/1458	(73.1)	228/306	(74.5)		NA		NA		
Antidepressants- impair function <sup>a</sup> , no./total (%)	570/1570	(36.3)	74/195	(37.9)	0.62	103/414	(24.9)	18/65	(27.7)	0.63
Antihypertensives- impair function <sup>b</sup> , no./total(%)	NA		NA		0.6	148/416	(35.6)	21/64	(32.8)	0.67
Medications- improve function <sup>c</sup> , no./total (%)	111/1563	(7.1)	14/197	(7.1)	4	28/418	(6.7)	7/65	(10.8)	0.24
Other hormonal medications- influence unknown <sup>d</sup> , no./total (%)	108/1588	(6.8)	9/196	(4.6)	0.9	NA		NA		
Surgical Procedure					9					0.33
RYGB	1154	(71.8)	235	(72.5)	0.24	288	(67.1)	61	(62.2)	
LAGB	391	(24.3)	74	(22.8)		115	(26.8)	30	(30.6)	
Other	62	(3.9)	15	(4.6)	0.7	26	(6.1)	7	(7.1)	
Frequency of sexual desire	(n=1563)		(n=141)		5	(n=425)		(n=45)		0.71
Not at all	401	(25.7)	36	(25.5)		47	(11.1)	8	(17.8)	
Once a month	376	(24.1)	25	(17.7)		43	(10.1)	3	(6.7)	
Once a week	312	(20.0)	34	(24.1)		81	(19.1)	5	(11.1)	
A few times a week	371	(23.7)	31	(22.0)	0.25	157	(36.9)	13	(28.9)	
At least once a day	103	(6.6)	15	(10.6)		97	(22.8)	16	(35.6)	
Frequency of sexual activity	(n=1571)		(n=141)			(n=424)		(n=45)		0.01
Not at all	540	(34.4)	46	(32.6)		107	(25.2)	8	(17.8)	
Once a month	359	(22.9)	28	(19.9)		62	(14.6)	4	(8.9)	
Once a week	364	(23.2)	35	(24.8)		102	(24.1)	9	(20.0)	
A few times a week	264	(16.8)	29	(20.6)	0.39	123	(29.0)	15	(33.3)	
At least once a day	44	(2.8)	3	(2.1)		30	(7.1)	9	(20.0)	
Physical health limited sex	(n=1516)		(n=137)			(n=411)		(n=42)		0.37
Extremely	612	(40.4)	41	(29.9)		142	(34.6)	20	(47.6)	
Quite a bit	330	(21.8)	38	(27.7)		89	(21.7)	6	(11.9)	
Moderately	222	(14.6)	17	(12.4)		68	(16.6)	7	(16.7)	
Slightly	187	(12.3)	18	(13.1)	0.03	60	(14.6)	6	(11.9)	
Not at all	165	(10.9)	23	(16.8)		52	(12.7)	5	(11.9)	
Satisfaction with sex life	(n=1488)		(n=133)			(n=414)		(n=42)		0.63
Very dissatisfied	425	(28.6)	13	(9.8)		151	(36.5)	16	(38.1)	
Moderately dissatisfied	297	(20.0)	25	(18.8)		73	(17.6)	6	(14.3)	
About equally satisfied and dissatisfied	311	(20.9)	24	(18.1)		83	(20.1)	6	(14.3)	
Moderately satisfied	236	(15.9)	26	(19.6)	0.18	70	(16.9)	9	(21.4)	
Very satisfied	219	(14.7)	45	(33.8)		37	(8.9)	5	(11.9)	
IWQOL-Lite sexual score, median (IQR)	50	(25-75)	50	(25-75)		63	(31-88)	69	(31-88)	0.43

Abbreviations: IQR, interquartile range; IWQOL, Impact of Weight on Quality of Life; NA, not applicable.

Values are expressed as no. (%) unless otherwise indicated. The number of participants across categories may not sum to the total number of participants due to missing data.

<sup>a</sup>Antidepressant medications that may impair sexual function; those other than bupropion, trazodone, mirtazapine or nefazodone.

<sup>b</sup>Antihypertensives that may impair sexual function; including beta-adrenergic blockers and diuretics.

<sup>c</sup>Bupropion. Among men only, also phosphodiesterase type 5 inhibitors and androgens.

<sup>d</sup>Hormonal Medications that may influence sexual function; estrogens, progestins, and androgens, either alone or in combination.



**eTable 6.** Observed Parameters of Sexual Function Before and After Bariatric Surgery, by Sex.

	Baseline		1 Year		2 Years		3 Years		4 Years		5 Years	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<b>Women</b>	1607		1356		1204		1154		1131		1152	
<i>In the past month...</i>												
<b>Frequency of sexual desire</b>												
Not at all	389	(25.2)	254	(19.8)	230	(20.2)	254	(23.4)	251	(23.8)	276	(25.8)
Once a month	375	(24.3)	232	(18.0)	228	(20.0)	211	(19.4)	210	(19.9)	209	(19.5)
Once a week	311	(20.1)	281	(21.9)	249	(21.9)	231	(21.2)	217	(20.6)	245	(22.9)
A few times a week	367	(23.8)	397	(30.9)	340	(29.9)	310	(28.5)	297	(28.2)	281	(26.3)
At least once a day	102	(6.6)	122	(9.5)	91	(8.0)	82	(7.5)	78	(7.4)	59	(5.5)
<b>Frequency of sexual activity</b>												
Not at all	531	(34.2)	361	(28.0)	316	(27.6)	301	(27.6)	320	(30.2)	338	(31.4)
Once a month	356	(22.9)	222	(17.2)	225	(19.6)	212	(19.5)	199	(18.8)	229	(21.3)
Once a week	362	(23.3)	326	(25.2)	280	(24.4)	282	(25.9)	263	(24.8)	255	(23.7)
A few times a week	260	(16.8)	326	(25.2)	281	(24.5)	260	(23.9)	250	(23.6)	230	(21.4)
At least once a day	43	(2.8)	58	(4.5)	45	(3.9)	34	(3.1)	27	(2.6)	23	(2.1)
<b>Reason for no sexual activity</b>												
Too tired/ not interested	278	(18.2)	130	(10.3)	141	(12.7)	153	(14.6)	161	(15.7)	183	(17.6)
Physical problems	110	(7.2)	57	(4.5)	55	(5.0)	47	(4.5)	48	(4.7)	44	(4.3)
No partner or partner not physically present	222	(14.5)	192	(15.1)	149	(13.4)	127	(11.9)	123	(11.9)	152	(14.5)
Partner not interested	90	(5.9)	53	(4.2)	45	(4.1)	48	(4.6)	64	(6.3)	56	(5.5)
<b>Physical health limits sexual activity</b>												
Extremely	162	(10.8)	37	(3.0)	38	(3.5)	40	(3.9)	52	(5.1)	37	(3.6)
Quite a bit	185	(12.4)	42	(3.4)	49	(4.5)	45	(4.4)	36	(3.6)	63	(6.2)
Moderately	220	(14.7)	58	(4.7)	63	(5.8)	59	(5.7)	55	(5.4)	67	(6.6)
Slightly	330	(22.0)	160	(13.0)	143	(13.2)	144	(13.9)	150	(14.8)	137	(13.5)
Not at all	601	(40.1)	932	(75.8)	789	(72.9)	745	(72.1)	719	(71.1)	713	(70.1)
<b>Ways that physical health limited sexual activity</b>												
Fatigue or low energy/not interested	771	(52.1)	220	(18.1)	232	(21.6)	238	(23.3)	242	(24.2)	254	(25.4)
Pain/discomfort/fear of damaging health	302	(20.7)	135	(11.2)	125	(11.8)	143	(14.1)	150	(15.1)	155	(15.5)
Embarrassment/fear of hurting partner	467	(31.9)	85	(7.1)	73	(6.9)	75	(7.4)	88	(9.0)	81	(8.2)
Difficulty having orgasm/difficulty becoming aroused/difficulty with lubrication	555	(37.9)	175	(14.4)	181	(17.0)	170	(16.8)	190	(19.2)	191	(19.1)
<b>Satisfaction with sex life</b>												
Very dissatisfied	418	(28.6)	165	(14.0)	149	(14.2)	161	(15.9)	179	(18.3)	153	(15.7)
Moderately dissatisfied	295	(20.2)	154	(13.0)	139	(13.3)	141	(13.9)	117	(12.0)	152	(15.6)
About equally satisfied and dissatisfied	307	(21.0)	213	(18.0)	235	(22.4)	207	(20.4)	206	(21.1)	202	(20.7)
Moderately satisfied	231	(15.8)	298	(25.2)	222	(21.2)	213	(21.0)	197	(20.1)	210	(21.6)
Very satisfied	213	(14.6)	352	(29.8)	304	(29.0)	292	(28.8)	278	(28.5)	257	(26.4)
<b>IWQOL-Lite Sexual Score (median, 25<sup>th</sup>, 75<sup>th</sup> percentile)</b>	50.0	(25.0, 75.0)	100.0	(68.8, 100.0)	100.0	(75.0, 100.0)	100.0	(68.8, 100.0)	100.0	(62.5, 100.0)	93.8	(62.5, 100.0)

Table is continued on the next page.

**eTable 6 Continued.** Observed Parameters of Sexual Function Before and After Bariatric Surgery, by Sex.

	Baseline		1 year		2 years		3 years		4 years		5 years	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<b>Men</b>	429		365		314		293		282		279	
<i>In the past month...</i>												
<b>Frequency of sexual desire</b>												
Not at all	45	(10.7)	24	(6.8)	17	(5.6)	18	(6.4)	18	(6.7)	24	(8.9)
Once a month	42	(10.0)	17	(4.8)	22	(7.2)	17	(6.0)	13	(4.9)	26	(9.6)
Once a week	80	(19.0)	57	(16.2)	53	(17.4)	52	(18.4)	52	(19.5)	47	(17.4)
A few times a week	157	(37.3)	156	(44.3)	131	(43.0)	119	(42.1)	109	(40.8)	100	(37.0)
At least once a day	97	(23.0)	98	(27.8)	82	(26.9)	77	(27.2)	75	(28.1)	73	(27.0)
<b>Frequency of sexual activity</b>												
Not at all	104	(24.8)	51	(14.5)	47	(15.6)	47	(16.7)	39	(14.9)	39	(14.7)
Once a month	62	(14.8)	39	(11.1)	41	(13.6)	35	(12.5)	32	(12.3)	43	(16.2)
Once a week	101	(24.1)	97	(27.6)	65	(21.6)	63	(22.4)	63	(24.1)	58	(21.9)
A few times a week	123	(29.3)	123	(35.0)	115	(38.2)	111	(39.5)	97	(37.2)	97	(36.6)
At least once a day	30	(7.1)	41	(11.7)	33	(11.0)	25	(8.9)	30	(11.5)	28	(10.6)
<b>Reason for no sexual activity</b>												
Too tired/ not interested	33	(8.0)	10	(2.9)	8	(2.7)	7	(2.6)	11	(4.3)	13	(4.9)
Physical problems	52	(12.6)	12	(3.5)	13	(4.4)	18	(6.6)	18	(7.0)	17	(6.4)
No partner or partner not physically present	28	(6.8)	18	(5.3)	13	(4.4)	11	(4.0)	10	(3.9)	14	(5.3)
Partner not interested	29	(7.0)	13	(3.8)	10	(3.4)	9	(3.4)	10	(3.9)	12	(4.6)
<b>Physical health limited sex</b>												
Extremely	60	(14.7)	12	(3.5)	11	(3.7)	18	(6.5)	18	(6.8)	16	(6.1)
Quite a bit	67	(16.5)	27	(7.9)	16	(5.4)	19	(6.8)	25	(9.4)	21	(8.1)
Moderately	52	(12.8)	13	(3.8)	17	(5.8)	14	(5.0)	12	(4.5)	18	(6.9)
Slightly	89	(21.9)	47	(13.7)	36	(12.2)	37	(13.3)	33	(12.5)	32	(12.3)
Not at all	139	(34.2)	243	(71.1)	214	(72.8)	190	(68.4)	177	(66.8)	174	(66.7)
<b>Ways that physical health limited sexual activity</b>												
Fatigue or low energy/not interested	185	(46.5)	55	(16.3)	37	(13.1)	49	(18.0)	51	(19.8)	54	(21.2)
Pain/discomfort/fear of damaging health	59	(15.3)	28	(8.4)	18	(6.4)	23	(8.5)	24	(9.3)	28	(11.0)
Embarrassment/fear of hurting partner	123	(31.3)	26	(7.8)	17	(6.1)	23	(8.6)	22	(8.6)	24	(9.4)
Difficulty having orgasm/difficulty becoming aroused/difficulty with lubrication	186	(46.4)	74	(21.8)	56	(19.4)	61	(22.3)	66	(25.4)	57	(22.1)
<b>Satisfaction with sex life</b>												
Very dissatisfied	36	(8.8)	98	(28.4)	77	(26.2)	63	(22.6)	54	(20.5)	65	(25.0)
Moderately dissatisfied	69	(16.8)	80	(23.2)	73	(24.8)	66	(23.7)	65	(24.7)	68	(26.2)
About equally satisfied and dissatisfied	83	(20.2)	54	(15.7)	50	(17.0)	58	(20.8)	50	(19.0)	44	(16.9)
Moderately satisfied	73	(17.8)	58	(16.8)	45	(15.3)	43	(15.4)	51	(19.4)	44	(16.9)
Very satisfied	150	(36.5)	55	(15.9)	49	(16.7)	49	(17.6)	43	(16.4)	39	(15.0)
<b>IWQOL-Lite Sexual Score (median, 25<sup>th</sup>, 75<sup>th</sup> percentile)</b>	62.5	(31.3, 87.5)	100.0	(75.0-100.0)	100.0	(81.3-100.0)	100.0	(75.0-100.0)	100.0	(75.0-100.0)	100.0	(75.0-100.0)

Abbreviations: IWQOL, Impact of Weight on Quality of Life.

**eTable 7. Modeled Parameters of Sexual Function Before and After Bariatric Surgery, by Sex**

	Model-Based Estimates, %(95% CI)						Adjusted P		
	Baseline	1 Year	2 Years	3 Years	4 Years	5 Years	Baseline vs Year 1	Baseline vs Year 5	Linear Trend Year 1-5
<b>Women</b>									
<b>In the past month,</b>									
Felt sexual desire (N=1534)							<.001	0.06	0.01
Not at all	28.0(27.7-28.2)	20.4(20.1-20.8)	21.3(21.0-21.7)	25.3 (24.9-25.7)	26.0 (25.6-26.4)	28.7 (28.3-29.0)			
Once a month	26.6(26.3-26.9)	17.9(17.6-18.2)	20.2(19.8-20.6)	19.6 (19.2-20.0)	20.4 (20.0-20.7)	19.9 (19.5-20.3)			
Once a week	22.0(21.7-22.3)	24.6(24.2-24.9)	24.1(23.7-24.5)	23.1 (22.7-23.5)	22.3 (21.9-22.7)	25.2 (24.8-25.6)			
A few times a week	18.0(17.6-18.4)	28.4(27.9-28.9)	27.4(26.9-27.9)	25.4 (24.8-25.9)	24.9 (24.3-25.4)	21.7 (21.1-22.2)			
At least once a day	5.5(5.0-5.9)	8.7(8.1-9.3)	6.9(6.3-7.6)	6.6 (6.0-7.3)	6.5 (5.8-7.2)	4.5 (3.9-5.2)			
Participated in sexual activity (N=1544)							<.001	0.053	0.03
Not at all	39.2(38.9-39.5)	30.4(30.0-30.7)	29.9(29.6-30.3)	30.5 (30.1-30.8)	33.7 (33.4-34.1)	36.1 (35.7-36.4)			
Once a month	25.8(25.5-26.2)	18.2(17.8-18.5)	21.5(21.1-21.9)	21.4 (21.0-21.8)	20.5 (20.2-20.9)	23.2 (22.8-23.6)			
Once a week	24.8(24.4-25.1)	29.8(29.3-30.2)	28.3(27.8-28.7)	29.8 (29.3-30.3)	28.3 (27.8-28.8)	26.2 (25.8-26.7)			
A few times a week	7.8(7.3-8.3)	17.4(16.8-18.0)	16.8(16.1-17.5)	15.5 (14.8-16.2)	15.1 (14.3-15.8)	12.6 (11.9-13.3)			
At least once a day	2.4(1.8-2.9)	4.3(3.6-5.0)	3.5(2.8-4.2)	2.9 (2.1-3.7)	2.4 (1.5-3.2)	1.9 (1.3-2.5)			
Reasons for no sexual activity (N=1544)									
Too tired/ not interested	15.7 (13.8-17.5)	8.7 (7.3-10.1)	10.3 (8.7-11.9)	11.9 (10.2-13.6)	13.0 (11.1-14.8)	14.8 (12.8-16.8)	<.001	0.70	<.001
Physical problems	6.2 (5.0-7.5)	3.9 (2.9-4.8)	4.0 (3.0-5.1)	3.7 (2.7-4.8)	3.9 (2.8-4.9)	3.6 (2.6-4.7)	0.002	0.001	0.92
No partner or partner not physically present	22.1(19.6-24.6)	21.9(19.3-24.5)	19.6(17.0-22.3)	17.7 (15.2-20.2)	18.0 (15.4-20.7)	21.4 (18.6-24.2)	0.99	0.93	0.81
Partner not interested	3.7(3.0-4.5)	2.7(1.9-3.4)	2.4(2.0-3.4)	2.7 (2.0-3.4)	3.7 (2.8-4.6)	3.4 (2.5-4.3)	0.04	0.78	0.04
Physical health limited sex (N=1490)							<.001	<.001	0.06
Extremely	10.3(10.0-10.7)	2.6(2.3-2.9)	3.1(2.7-3.5)	3.4 (3.0-3.8)	4.6 (4.2-5.0)	3.2 (2.8-3.7)			
Quite a bit	10.6(10.3-10.9)	2.4(2.1-2.6)	3.2(2.9-3.5)	3.1 (2.8-3.3)	2.5 (2.2-2.8)	4.5 (4.2-4.8)			
Moderately	14.4(14.0-14.7)	3.8(3.5-4.1)	4.8(4.5-5.1)	4.7 (4.4-5.0)	4.5 (4.1-4.8)	5.5 (5.1-5.8)			
Slightly	22.0(21.7-22.3)	11.4(11.1-11.7)	11.6(11.3-11.9)	12.4 (12.1-12.7)	13.4 (13.1-13.8)	12.2 (11.9-12.5)			
Not at all	42.8(42.5-43.0)	79.9(79.7-80.0)	77.3(77.1-77.4)	76.4 (76.3-76.6)	75.0 (74.9-75.2)	74.6 (74.5-74.8)			
Ways physical health limited sexual activity (N=1490)									
Fatigue or low energy or not interested	42.8(40.3-45.4)	15.0(13.2-16.8)	17.8(15.8-19.9)	19.2 (17.0-21.4)	19.9 (17.7-22.2)	21.0 (18.8-23.3)	<.001	<.001	<.001
Pain or fear of damaging health	15.3(13.6-17.0)	8.3(7.0-9.6)	8.5(7.1-9.9)	10.3 (8.7-11.8)	11.1 (9.4-12.8)	11.4 (9.8-13.0)	<.001	<.001	<.001
Embarrassment or fear of hurting partner	28.5(26.1-30.8)	6.4(5.0-7.7)	6.3(5.0-7.7)	6.7 (5.3-8.2)	8.1 (6.5-9.7)	7.5 (5.9-9.1)	<.001	<.001	0.16
Difficulty becoming aroused, with lubrication or having orgasm	28.7(26.5-31.0)	11.0(9.5-12.5)	12.8(11.1-14.4)	12.6 (10.8-14.3)	14.4 (12.6-16.3)	14.3 (12.5-16.2)	<.001	<.001	0.001

Table is continued on the next page.

**eTable7 Continued.** Modeled Parameters of Sexual Function Before and After Bariatric Surgery, by Sex

	Model-Based Estimates, %(95% CI)						Adjusted P		
	Baseline	1 Year	2 Years	3 Years	4 Years	5 Years	Baseline vs Year 1	Baseline vs Year 5	Linear Trend Year 1-5
Satisfaction with sex life (N=1456)							<.001	<.001	0.08
Very dissatisfied	31.1(30.8-31.3)	15.1(14.8-15.4)	15.5(15.2-15.8)	17.4 (17.1-17.7)	19.9 (19.6-20.2)	17.1 (16.8-17.4)			
Moderately dissatisfied	19.6(19.3-19.9)	11.9(11.6-12.2)	11.9(11.6-12.3)	13.0 (12.6-13.3)	10.7 (10.4-11.0)	14.3 (13.9-14.7)			
About equally satisfied and dissatisfied	20.3(20.0-20.6)	17.4(17.1-17.8)	21.9(21.6-22.3)	19.5 (19.2-19.9)	20.6 (20.2-21.0)	20.4 (20.1-20.8)			
Moderately satisfied	13.4(13.1-13.6)	23.2(22.8-23.5)	18.9(18.5-19.3)	18.6 (18.2-19.0)	17.7 (17.3-18.1)	19.3 (18.9-19.7)			
Very satisfied	15.7(15.4-15.9)	32.4(32.1-32.7)	31.7(31.4-32.0)	31.5 (31.2-31.8)	31.0 (30.7-31.4)	28.8 (28.5-29.1)			
<b>IWQOL-Lite (N=1499)</b>									
IWQOL-Lite Sexual Score, mean (95% CI)	50.3 (48.6-52.0)	80.2 (78.6-81.7)	81.5 (80.0-83.1)	80.5 (78.9-82.1)	78.1 (76.4-79.8)	76.9 (75.1-78.7)	<.001	<.001	<.001
<b>Men</b>									
<b>In past month,</b>									
Felt sexual desire (N=419)							0.02	0.63	0.33
Not at all	10.1(8.8-11.4)	6.0(4.7-7.3)	4.9(2.9-6.9)	5.7 (3.8-7.5)	6.1 (4.2-8.0)	8.5 (6.7-10.4)			
Once a month	8.7(7.6-9.8)	3.8(2.7-5.0)	5.4(4.1-6.6)	4.6 (3.1-6.0)	4.1 (2.5-5.7)	8.7 (7.1-10.4)			
Once a week	19.5(18.3-20.7)	14.9(13.6-16.2)	16.4(15.0-17.8)	18.3 (16.7-19.8)	19.3 (17.6-20.9)	18.2 (16.7-19.7)			
A few times a week	38.8(37.7-39.9)	46.4(45.3-47.6)	46.8(45.5-48.1)	44.5 (43.1-45.8)	42.0 (40.6-43.5)	37.5 (36.0-38.9)			
At least once a day	22.9(21.8-23.9)	28.8(27.5-30.0)	26.5(25.2-27.8)	27.1 (25.7-28.4)	28.5 (27.1-29.9)	27.0 (25.7-28.4)			
Participated in sexual activity (N=418)							0.02	0.08	0.97
Not at all	27.3(26.2-28.4)	14.6 (13.3-15.9)	16.0(14.5-17.6)	17.0 (15.4-18.7)	15.3 (13.6-17.0)	15.4 (13.8-17.0)			
Once a month	14.5(13.3-15.7)	9.6 (8.4-10.8)	12.3(10.9-13.7)	10.5 (9.1-11.9)	10.9 (9.4-12.5)	15.0 (13.4-16.6)			
Once a week	27.0(25.8-28.3)	30.3 (28.9-31.7)	22.4(20.9-23.8)	25.1 (23.5-26.7)	27.3 (25.6-29.0)	24.3 (22.6-25.9)			
A few times a week	24.3(22.8-25.9)	33.8 (32.2-35.5)	38.4(36.6-40.1)	38.8 (37.0-40.6)	35.1 (33.1-37.0)	35.1 (33.1-37.0)			
At least once a day	6.8(5.3-8.2)	11.7 (10.0-13.4)	10.9(9.2-12.7)	8.6 (6.4-10.7)	11.4 (9.6-13.2)	10.3 (7.9-12.6)			
Reasons for no sexual activity (N=418)									
Too tired or not interested	8.1(4.9-11.2)	3.0 (1.0-4.9)	2.6(0.6-4.7)	2.7 (0.6-4.8)	4.6 (1.6-7.5)	5.2 (2.4-7.9)	0.003	0.27	0.15
Physical problems	11.5(6.3-16.7)	3.1 (1.0-5.2)	3.8(1.5-6.1)	5.8 (2.7-8.9)	5.8 (2.7-9.0)	5.7 (2.7-8.6)	<.001	0.005	0.06
No partner or partner not physically present	14.5(8.4-20.7)	10.3 (5.1-15.5)	9.0(3.8-14.2)	8.7 (3.6-13.7)	8.9 (3.1-14.8)	11.6 (5.3-17.9)	0.30	0.71	0.97
Partner not interested	3.2(1.6-4.9)	1.7 (0.7-2.7)	1.6(0.5-2.6)	1.4 (0.4-2.5)	1.7 (0.6-2.7)	2.0 (0.7-3.2)	0.04	0.19	0.93
Physical health limited sex (N=406)							<.001	<.001	0.22
Extremely	12.5(11.3-13.7)	3.2(1.9-4.6)	4.9(3.4-6.5)	4.3 (2.7-6.0)	3.9 (2.1-5.6)	6.0 (4.3-7.6)			
Quite a bit	12.8(11.4-14.2)	2.2(1.0-3.4)	2.4(1.5-3.4)	4.5 (2.6-6.5)	4.9 (3.3-6.5)	4.5 (2.9-6.1)			
Moderately	16.8(15.6-18.0)	7.0(6.0-8.0)	4.7(3.7-5.8)	6.0 (4.8-7.2)	8.4 (7.2-9.7)	7.4 (6.2-8.6)			
Slightly	21.8(20.7-22.9)	12.2(11.2-13.2)	10.7(9.6-11.8)	11.9 (10.7-13.1)	11.3 (10.1-12.5)	10.8 (9.6-12.0)			
Not at all	36.1(35.3-37.0)	75.5(74.9-76.0)	77.2(76.6-77.7)	73.2 (72.6-73.9)	71.5 (70.8-72.2)	71.3 (70.6-72.0)			

Table is continued on the next page.

**eTable 7 Continued.** Modeled Parameters of Sexual Function Before and After Bariatric Surgery, by Sex

	Model-Based Estimates, %(95% CI)						Adjusted <i>P</i>		
	Baseline	1 Year	2 Years	3 Years	4 Years	5 Years	Baseline vs Year 1	Baseline vs Year 5	Linear Trend Year 1-5
Ways physical health limited sexual activity (N=407)									
Fatigue or not interested	46.5(38.9-54.2)	16.4 (12.2-20.7)	13.2(9.1-17.4)	17.9 (12.8-23.1)	20.3 (14.8-25.8)	21.3 (15.8-26.9)	<.001	<.001	0.02
Pain or fear of damaging health	12.5(8.5-16.4)	6.8 (4.1-9.5)	5.1(2.8-7.5)	6.8 (3.9-9.6)	8.1 (4.8-11.3)	9.0 (5.5-12.6)	0.001	0.20	0.07
Embarrassment or fear of hurting partner	32.4(25.2-39.6)	8.2 (5.1-11.4)	6.3(3.3-9.4)	8.9 (5.1-12.8)	8.9 (5.0-12.9)	9.7 (5.8-13.7)	<.001	<.001	0.50
Difficulty becoming aroused, having orgasm or functional difficulty	49.5(41.2-57.7)	22.9 (17.7-28.1)	20.4(15.2-25.6)	23.2 (17.4-29.0)	26.9 (20.3-33.4)	23.5 (17.6-29.5)	<.001	<.001	0.54
Satisfaction with sex life (N=409)							<.001	<.001	0.85
Very dissatisfied	40.1(39.2-41.0)	16.5(15.4-17.7)	17.5(16.3-18.7)	18.4 (17.1-19.7)	17.6 (16.2-18.9)	16.2 (14.9-17.6)			
Moderately dissatisfied	17.1(16.0-18.1)	15.6(14.3-16.8)	13.8(12.5-15.2)	13.4 (12.0-14.7)	17.7 (16.2-19.1)	14.9 (13.5-16.4)			
About equally satisfied and dissatisfied	20.1(18.9-21.3)	15.3(14.2-16.5)	17.2(15.9-18.5)	21.3 (20.0-22.7)	19.0 (17.6-20.5)	17.1 (15.6-18.6)			
Moderately satisfied	13.7(12.6-14.9)	20.9(19.7-22.2)	22.9(21.4-24.3)	22.5 (21.0-24.1)	23.0 (21.4-24.6)	23.6 (22.0-25.1)			
Very satisfied	9.0(8.1-10.0)	31.6(30.5-32.7)	28.7(27.5-29.9)	24.4 (23.1-25.6)	22.8 (21.4-24.1)	28.2 (26.8-29.5)			
<b>IWQOL-Lite</b> (N=417)									
IWQOL-Lite Sexual Score, mean (95% CI)	53.4 (49.8-57.0)	80.1 (77.0-83.1)	81.1 (78.0-84.3)	78.4 (75.1-81.7)	79.5 (76.3-82.8)	76.1 (72.6-79.6)	<.001	<.001	<.001

Abbreviations: IWQOL, Impact of Weight on Quality of Life.

<sup>a</sup>Adjusted for age, site, smoking status, and marital status.

<sup>b</sup>*P* values were adjusted using simulation.

**eTable 8.** Observed Proportion of Patients with Clinically Important Improvements in Parameters of Sexual Function Following Bariatric Surgery, by Sex.

	No./total No. (%)				
	1 Year	2 Years	3 Years	4 Years	5 Years
<b>Women</b>					
Frequency of sexual desire	425/900 (47.2)	377/801 (47.1)	344/785 (43.8)	314/739 (42.5)	321/767 (41.9)
Frequency of sexual activity	419/1043 (40.2)	382/930 (41.1)	351/886 (39.6)	320/867 (36.9)	322/881 (36.6)
Physical health limits sexual activity	547/724 (75.6)	455/645 (70.5)	443/616 (71.9)	435/606 (71.8)	417/610 (68.4)
Satisfaction with sexual life	475/820 (57.9)	394/729 (54.1)	370/692 (53.5)	374/689 (54.3)	366/679 (53.9)
<b>Men</b>					
Frequency of sexual desire	89/141 (63.1)	80/126 (63.5)	70/113 (61.9)	66/101 (65.4)	67/107 (62.6)
Frequency of sexual activity	118/226 (52.2)	104/197 (52.8)	90/181 (49.7)	88/169 (52.1)	97/173 (56.1)
Physical health limits sexual activity	166/226 (73.5)	150/197 (76.1)	135/181 (74.6)	122/172 (70.9)	119/177 (67.2)
Satisfaction with sexual life	137/256 (53.5)	125/223 (56.1)	117/212 (55.2)	100/203 (49.3)	114/204 (55.9)

**eTable 9.** Associations between Baseline Characteristics and Surgical Procedure with Clinically Meaningful Presurgery-to-Postsurgery Improvements in Parameters of Sexual Function in Years 1-5 Following Bariatric Surgery in Women.<sup>a</sup>

	Improvement in frequency of sexual desire (n=884)		Improvement in frequency of sexual activity (n=1152)		Improvement in degree physical health limits sexual activity (n=830)		Improvement in satisfaction with sexual life (n=907)	
	ARR(95%CI)	P	ARR(95%CI)	P	ARR(95%CI)	P	ARR(95%CI)	P
Age, per 10 years younger	1.30(1.19-1.41)	<.0001	1.27 (1.18-2.37)	<.0001	0.98 (0.94-1.02)	0.29	1.02(0.96-1.09)	0.48
Nonwhite race (vs white)	1.08(0.89-1.32)	0.43	1.06 (0.90-1.25)	0.51	0.98 (0.89-1.09)	0.75	0.98(0.84-1.14)	0.76
Hispanic ethnicity (vs non-Hispanic)	0.98(0.67-1.42)	0.91	1.10 (0.87-1.41)	0.43	1.10 (0.95-1.28)	0.21	1.27(0.99-1.62)	0.06
Fewer depressive symptoms, per 5 BDI points	1.05(0.999-1.10)	0.052	1.04 (0.997-1.09)	0.07	1.05 (1.02-1.08)	<0.001	1.07(1.03-1.11)	0.001
Higher BMI, per 5 BMI points	1.03(0.98-1.08)	0.22	0.99 (0.95-1.29)	0.56	0.99 (0.97-1.02)	0.56	1.02(0.98-1.05)	0.34
Current or recent smoker (vs not)	1.01(0.84-1.21)	0.94	1.11 (0.96-1.29)	0.18	0.95 (0.85-1.07)	0.40	1.08(0.95-1.23)	0.26
Married/living as married (vs not)	1.09(0.96-1.25)	0.19	1.33 (1.17-1.50)	<.0001	0.86 (0.80-0.92)	<.0001	1.03(0.91-1.15)	0.55
Menopausal (vs not)	1.03(0.83-1.29)	0.76	0.89 (0.73-1.08)	0.25	0.97 (0.88-1.08)	0.62	1.04(0.89-1.22)	0.61
Urinary incontinence (vs none)							0.87(0.79-0.96)	<0.01
Sleep apnea (vs none)	0.84(0.72-0.97)	0.02						0.01
Dyslipidemia (vs none)	0.87(0.76-0.98)	0.03						
Cardiovascular disease history (vs none)			0.69 (0.51-0.94)	0.02	0.77 (0.63-0.93)	0.01		
Medication that may improve sexual function (vs none)	0.86(0.66-1.12)	0.27	0.93 (0.74-1.16)	0.52	1.04 (0.9-1.17)	0.56	0.99(0.85-1.16)	0.90
Antidepressant medication that may impair sexual function (vs none)	0.92(0.81-1.06)	0.24	0.84 (0.75-0.95)	0.01	0.94 (0.88-1.01)	0.11	0.92(0.83-1.02)	0.11
Surgical procedure (vs LAGB)		0.74		0.66		0.28		0.84
RYGB	1.01(0.87-1.18)		1.06 (0.92-1.21)		1.06 (0.97-1.16)		1.03(0.92-1.15)	
Other	0.90(0.66-1.23)		0.99 (0.76-1.28)		1.13 (0.94-1.36)		0.98(0.74-1.29)	

Abbreviations: ARR, adjusted relative risk; BDI, Beck Depression Inventory; BMI, body mass index; LAGB, laparoscopic adjustable gastric banding; RYGB, Roux-en-Y gastric bypass.

<sup>a</sup>The following variables were forced into each model: site, baseline age, smoking status, marital status, race, ethnicity, BMI, menopausal status, BDI score, medications that may impair sexual functioning, medications that may improve sexual functioning, and the baseline value of the corresponding outcome. The following variables were considered and retained if statistically significant: baseline education, baseline sleep apnea, regular alcohol use, alcohol use disorder symptoms, prior live or still birth, cardiovascular disease history, hypertension, diabetes with insulin, dyslipidemia, urinary incontinence, and hormonal medications that may influence sexual functioning.

**eTable 10.** Associations between Baseline Characteristics and Surgical Procedure with Clinically Meaningful Presurgery-to-Postsurgery Improvements in Parameters of Sexual Function in Years 1-5 Following Bariatric Surgery in Men.<sup>a</sup>

	Improvement in frequency of sexual desire (n=149)		Improvement in frequency of sexual activity (n=242)		Improvement in degree physical health limits sexual activity (n=240)		Improvement in satisfaction with sexual life (n=267)	
	ARR(95%CI)	P	ARR(95%CI)	P	ARR(95%CI)	P	ARR(95%CI)	P
Age, per 10 years younger	1.19(1.08-1.32)	0.001	1.12 (1.005-1.24)	0.04	1.02 (0.95-1.10)	0.54	1.02(0.93-1.13)	0.62
Nonwhite race (vs white)	1.21(0.88-1.64)	0.24	1.01 (0.64-1.61)	0.95	0.99 (0.78-1.25)	0.93	1.41(1.09-1.82)	0.01
Hispanic ethnicity (vs non-Hispanic)	0.75 (0.21-2.62)	0.65	1.51 (0.72-3.16)	0.28	0.98 (0.71-1.35)	0.92	1.37(0.97-1.94)	0.07
Education (vs high school or less)								
Some college							1.42(1.09-1.85)	
College degree or higher							1.29(0.98-1.69)	
Fewer depressive symptoms, per 5 BDI points	0.95(0.89-1.02)	0.18	1.03 (0.95-1.13)	0.46	1.06 (1.002-1.12)	0.04	1.04(0.96-1.13)	0.31
Higher BMI, per 5 BMI points	0.99(0.91-1.06)	0.70	1.00 (0.92-1.08)	0.92	1.01 (0.97-1.05)	0.74	1.08(1.03-1.14)	<0.01
Current or recent smoker (vs not)	1.19(0.86-1.63)	0.29	1.21 (0.84-1.73)	0.31	1.04 (0.83-1.32)	0.72	0.97(0.72-1.32)	0.86
Married/living as married (vs not)	1.26(0.98-1.63)	0.08	0.91 (0.72-1.16)	0.45	0.94 (0.82-1.08)	0.41	1.24(1.002-1.52)	0.048
Regular alcohol use (vs none)					1.27 (1.09-1.47)	<0.01		
Sleep apnea (vs none)							0.78(0.64-0.93)	0.01
Cardiovascular disease history (vs none)	0.95(0.71-1.27)	0.72	0.95 (0.70-1.29)	0.75	0.92 (0.75-1.12)	0.40	0.76(0.58-0.99)	0.04
Medication that may improve sexual function (vs none)	1.09(0.74-1.62)	0.65	0.75 (0.49-1.14)	0.18	1.06 (0.82-1.38)	0.65	1.28(0.83-1.98)	0.27
Antidepressant medication that may impair sexual function (vs none)	0.94(0.73-1.22)	0.64	0.89 (0.69-1.15)	0.39	1.00 (0.87-1.15)	0.31	0.89(0.70-1.13)	0.34
Antihypertensive medication that may impair sexual function (vs none)	1.00(0.79-1.27)	0.98	1.13 (0.90-1.41)	0.28	0.92 (0.79-1.08)	0.99	1.20(0.98-1.47)	0.07
Surgical procedure (vs LAGB)		0.52		0.43		0.22		0.21
RYGB	1.20(0.87-1.64)		1.13 (0.87-1.47)		1.17 (0.98-1.39)		1.00(0.80-1.25)	
Other	1.25(0.72-2.15)		1.40 (0.83-2.39)		1.27 (0.80-1.64)		0.74(0.51-1.07)	

Abbreviations: ARR, adjusted relative risk; BDI, Beck Depression Inventory; BMI, body mass index; LAGB, laparoscopic adjustable gastric banding; RYGB, Roux-en-Y gastric bypass.

<sup>a</sup>The following variables were forced into each model: site, baseline age, smoking status, marital status, race, ethnicity, BMI, BDI score, cardiovascular disease history, medications that may impair sexual functioning, medications that may improve sexual functioning, and the baseline value of the corresponding outcome. The following variables were considered and retained if statistical significant: baseline education, baseline sleep apnea, regular alcohol use, alcohol use disorder symptoms, hypertension, diabetes with insulin, dyslipidemia, and urinary incontinence