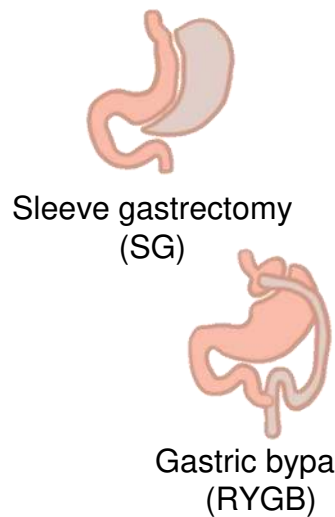


Comparing the impact of two types of bariatric surgery on food preferences: The BARIATASTE pilot study

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Introduction



- Bariatric surgery is the most effective treatment for obesity (1, 2)
- Nutritional complications remain common (3, 4)
- Changes in food preferences may contribute to weight loss and / or weight regain (5)
- There are inconsistencies between studies and few have compared different types of surgical techniques

Objective: To compare the liking and wanting to consume a food, depending on its composition and appearance in patients seeking for surgery (OB), with an SG and with a RYGB

Material and methods

- Cross-sectional observational study
- Patients hospitalized for obesity check up or postoperative follow-up (6, 12, 24 months) at the Integrated Center of Obesity of Lyon

Main outcomes and measures

- **Appetite** (Visual Analog Scales)
- **Food preferences** (Leeds Food Preference Questionnaire (LFPQ) (6)) Each patient performed 6 computerized cognitive tasks in a random order Explicit liking and wanting and implicit wanting were assessed for 11 dichotomic food categories varying in composition or appearance

Figure 1. Main outcomes of the the LFPQ

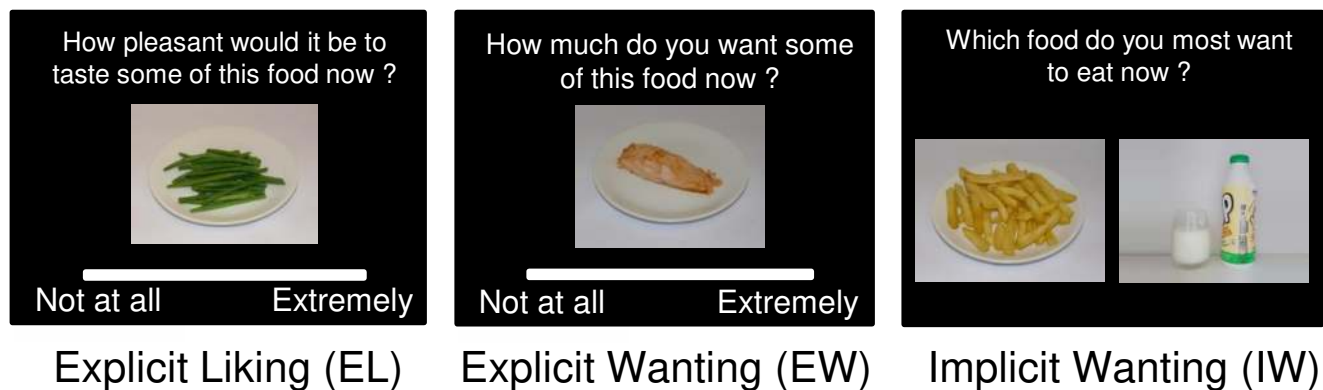


Table 1. Dichotomic food categories tested with the LFPQ

Task	Category 1		Category 2
Task 1	High carbohydrates (HC) Low carbohydrates (LC)	X	Solid (SO) Fluid (FL)
Task 2	Dairy (DA) Nondairy (ND)	X	Color (CO) No color (NC)
Task 3	High fat (HF) Low fat (LF)	X	Sweet (SW) Savory (SA)
Task 4	Fiber (FI) No fiber (NF)	X	Sauce (SC) No sauce (NS)
Task 5	Meat (ME) No meat (NM)	X	High fat (HF) Low fat (LF)
Task 6	High protein (HP) Low protein (LP)	X	Variation (VA) No variation (NV)

- **Binge eating** (Binge Eating Scale (7))
- **Food addiction** (Yale Food Addiction Scale (8))
- **Impulsivity** (UPPS-P Impulsive behavior scale (9))

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References:

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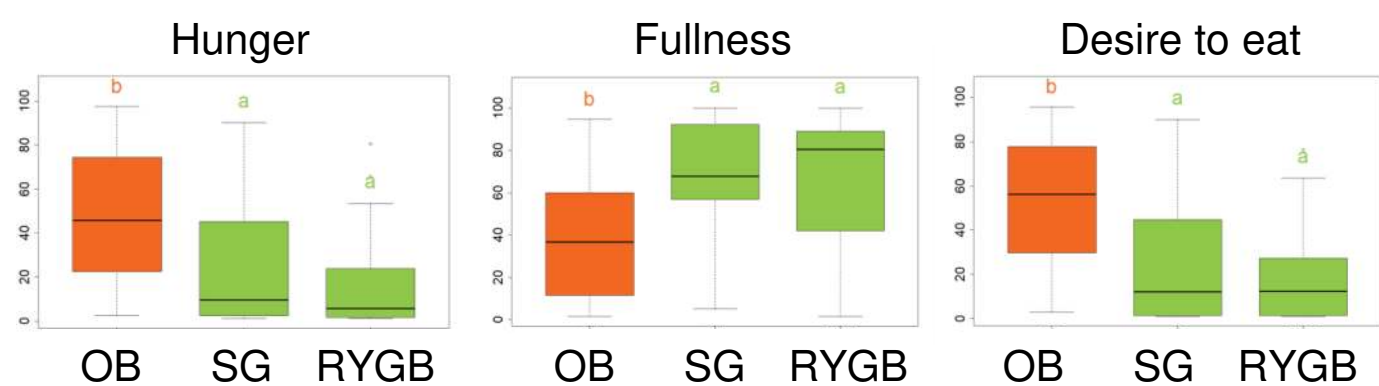
Results

- 86 patients were included: 30 OB, 30 SG and 26 RYGB

Table 2. Characteristics of the patients (mean ± SD)

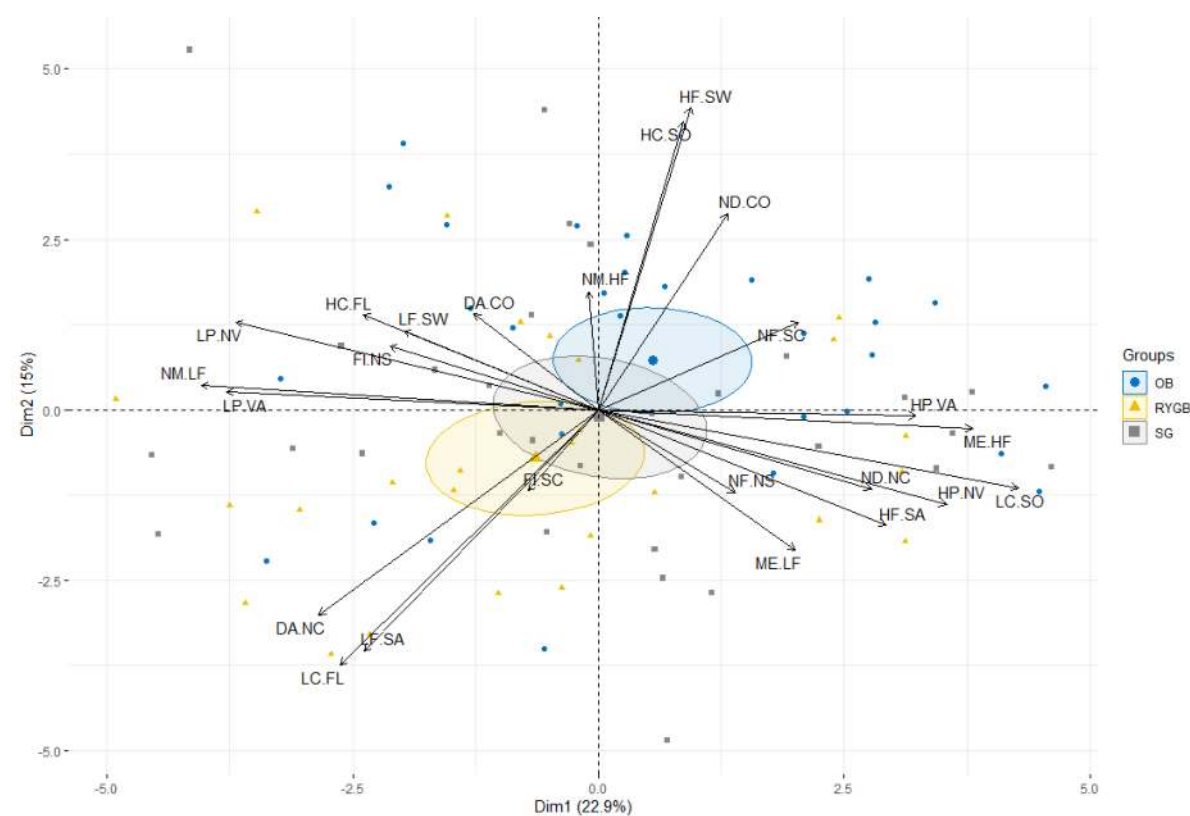
	OB n = 30	SG n = 30	RYGB n = 26	p
Women (%)	56.7	76.7	73.1	0.21
Age (yr)	37.9 ± 14.0 ^a	38.3 ± 9.6 ^a	50.5 ± 9.0 ^b	<.0001
BMI (kg/m ²)	41.2 ± 5.3 ^a	31.5 ± 4.6 ^b	31.3 ± 4.4 ^b	<.0001
Time since surgery (mo)	-	14.0 ± 7.6	13.8 ± 7.9	0.94

Figure 2. Appetite levels



- Higher scores for explicit liking and explicit wanting (all $p < .05$) were found among OB compared to SG and RYGB, except for LF-SA and FI-NS
- Implicit wanting scores were not significantly different among groups, except for HF-SW ($p = 0.0044$), and DA-CO ($p = 0.0022$)

Figure 3. Principal component analysis of IW



- Time since surgery did not affect food preferences
- Binge eating score was higher among OB ($p < .0001$) compared to SG and RYGB. Among all patients, binge eating score was positively correlated with explicit liking ($r^2 = 0.48$, $p < .0001$), explicit wanting ($r^2 = 0.49$, $p < .0001$) and implicit wanting ($r^2 = 0.40$, $p = 0.0005$) scores for HFSW
- Food addiction and impulsivity scores were not significantly different among the groups

Conclusion

- Food preferences are not different between patients following SG and RYGB surgery.
- Based on explicit measures, obese patients seeking for surgery and operated patients have different food preferences
- Overall, implicit measures showed no significant differences between OB and operated patients, although there is a trend towards distinct preferences for all food categories except protein rich foods (task 5 and 6)
- Future studies in real foods and exploring the sensory perception seem prudent