# Preoperative lifestyle improvement and personality traits are predictors of early weight loss after sleeve gastrectomy

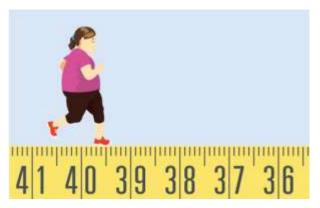
Department of Surgery

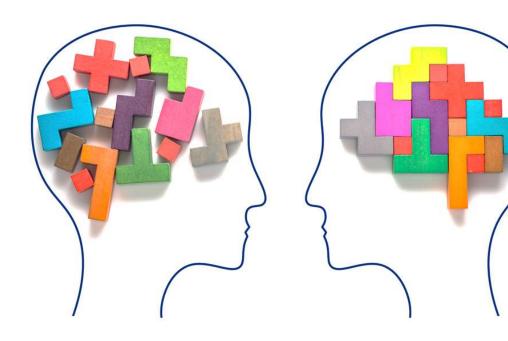
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### Early weight loss affects subsequent weight loss

- Saiki A. Ann Gastroenterol Surg. 2019
- Yang PJ. Surg Obes Relat Dis. 2021
- Yamaguchi T. Obes Surg. 2022
- Voglino C. Updates Surg. 2022



#### Prediction of early weight loss is important

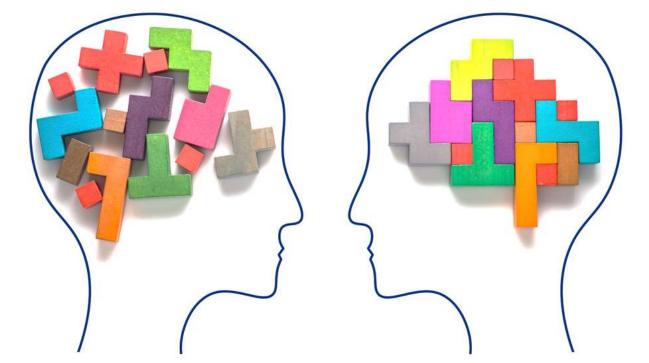
Age Sex BMI Psychologic factor

Physical activity Dietary factor Gut hormone Comorbidity

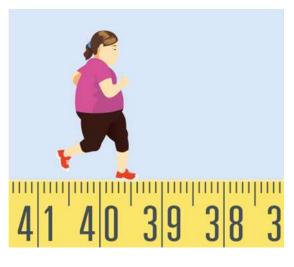
#### We investigated the associations of personality traits and preoperative lifestyle improvements with early weight loss after sleeve gastrectomy

Personality trait

Preoperative lifestyle improvements





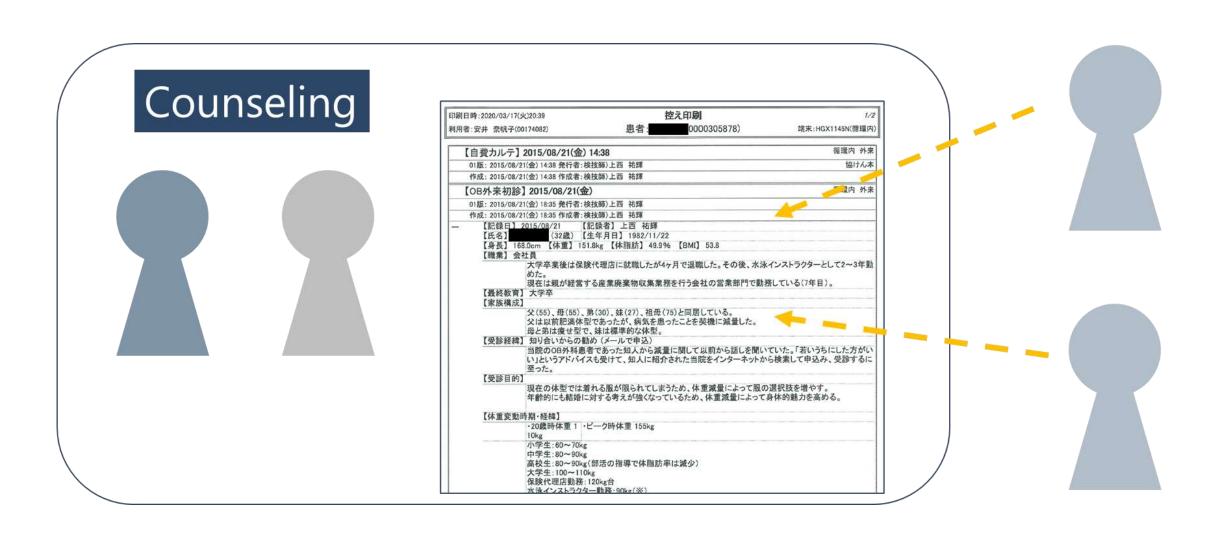


# This was a single-center, retrospective study of 57 patients

- From August 2012 to April 2019
- Sleeve gastrectomy
- Preoperative lifestyle intervention
  - Multidisciplinary team (MDT)
  - Cognitive behavioral therapy (CBT)
- Preoperative personality traits
  - Tokyo University Egogram New Version II (TEG II)
  - Neuroticism-Extraversion-Openness Five-Factor Inventory (NEO-FFI)
- Early weight loss
  - %TWL @ 1year after surgery



### Two blinded psychologists retrospectively evaluated the preoperative lifestyle improvement of each patient



#### Two types of psychological tests were performed

#### 1. TEG II

Tokyo University Egogram New Version II

- Critical parent
- Nurturing parent
- Adult
- Free child
- Adapted child











#### 2. NEO-FFI

Neuroticism-Extraversion-Openness 5-Factor Inventory

- Neuroticism
- Extraversion
- Openness
- Agreeableness
- Conscientiousness



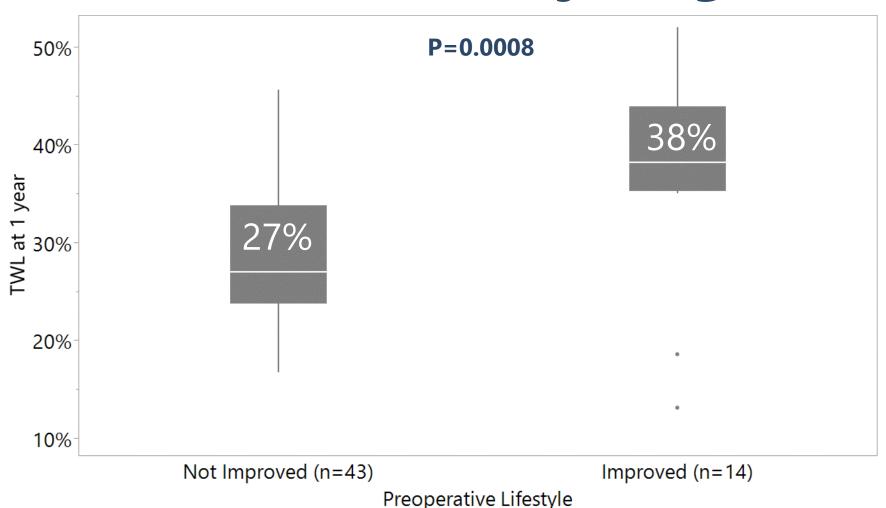




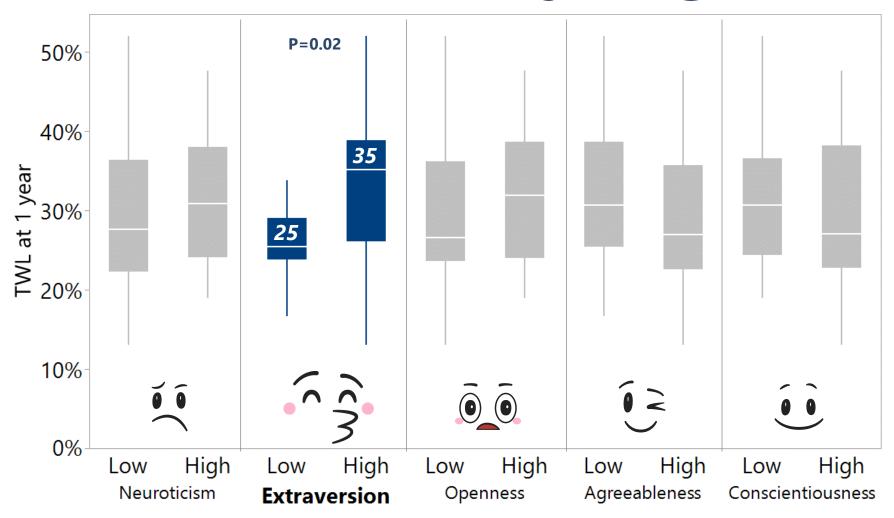




## lifestyle improvement was significantly associated with the early weight loss



### Extraversion (NEO-FFI) was significantly associated with the early weight loss



### The lifestyle improvement and the extraversion score were significantly associated with the early weight loss in a logistic regression analysis

Variable		Estimate	95% CI	P
Diabetes	Diagnosed	-1.00	- 2.39 to 0.31	0.14
	None	1		
Preoperative weight loss	High	0.55	- 0.79 to 1.95	0.42
	Low	1		
Lifestyle improvement	Improved	1.93	0.29 to 4.00	0.034
	None	1		
Extraversion (NEO-FFI)	High	1.92	0.64 to 3.39	0.005
	Low	1		

#### **Conclusion**

 Preoperative lifestyle improvement and extraversion score of NEO-FFI are predictors of early weight loss after sleeve gastrectomy.



