

lunch on workdays (12h45 vs 12h30, $p=0.531$) compared with individuals with higher %TWL. Lower %TWL is typically observed in individuals having later eating midpoints (15h00 vs. 14h15 for workdays, $p=0.011$; 15h07 vs. 14h44 for free days, $p=0.205$). A later chronotype (3h37 vs 3h30, $p=0.347$) was also linked with poorer weight loss.

Conclusions: Eating later during the day and later chronotype may contribute to poorer post-bariatric weight loss. Funding: This work was supported by FCT - Fundação para a Ciência e Tecnologia [2021.01096.CEECIND, UIDB/04750/2020,LA/P/0064/2020&SGITR 2023/EPIUnit].

Key messages:

- Recognizing meal timing as a modifiable lifestyle factor may optimize current approaches by aligning food intake with circadian clock.
- A later chronotype, i.e. a behavioural expression of an individual's internal circadian clock system as a preference for eveningness or later sleep timing, may negatively influence weight loss.

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Chrono-nutrition and post-bariatric weight loss: insights from the Portuguese ChronoWise cohort

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Background: Post-bariatric weight loss varies substantially, and a large proportion of patients respond poorly. The literature highlights the importance of chrono-nutrition for weight regulation. This study aims to explore the chrono-related factors associated with poorer weight loss.

Methods: This study was conducted within the ChronoWise project, an ongoing prospective cohort study following patients undergoing bariatric surgery at the Santo António Local Health Unit, Porto. The sample included patients evaluated at both pre-surgery and 3 months post-surgery. Baseline information on meal timing was gathered through the Chrononutrition Profile-Questionnaire. The eating midpoint (midpoint between first and last meal) was calculated for work and free days. Chronotype was determined using the Munich Chronotype Questionnaire. Weight loss was expressed as the percent of total weight loss ($\%TWL = [(initial\ weight - current\ weight)/(initial\ weight)] \times 100$). Chrono-related variables were compared according to %TWL (dichotomized by the median) using the Mann-Whitney test.

Results: Sixty patients were included (72% female; mean age 45 ± 11.8). The mean baseline BMI was 44 ± 5.6 kg/m², which decreased to 35 ± 5.3 kg/m² at 3 months post-surgery, resulting in an average 20 ± 3.9 %TWL. On free days, participants with lower %TWL tend to do the first meal later in the day (9h45 vs. 9h10, $p=0.367$), and later