

### Factors Associated to Weight Gain During Confinement Due to COVID-19 Pandemic in a Sample of Adults in Spain

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**Objectives:** To analyze the prevalence of weight gain during lockdown for the COVID-19 pandemic in Spain and associated factors in a sample of adults.

**Methods:** This cross-sectional study included 1029 adults recruited online through social media, website and newsletter of the Spanish Society of Community Nutrition (SENC) in a snowball procedure. The protocol used a 10-section questionnaire, including sociodemographic characteristics of participants (gender, age group, occupation), reported changes in dietary habits (22 Likert type items), and physical

activity (PA), self-reported body weight and height as well as reported change in body weight. Body Mass Index (BMI) was computed to estimate prevalence of overweight (BMI  $\geq$  25) and obesity (BMI  $\geq$  30). A score of dietary change was computed compared to the Spanish Dietary Guidelines (DG) (Score  $\geq$  6: greater adherence to DGs). Binomial logistic regression analysis was used to explore the association between sociodemographic factors, dietary change score, change in PA, and overweight or obesity with weight gain during confinement. Responses were collected during the de-escalation phase towards the so-called “new normal”, June 7–26, 2020 (weeks 13–15 since COVID-19 lockdown restrictions started in Spain).

**Results:** In this study, 1029 individuals (74% female) accepted to participate and provided valid responses. 37.7% (95%CI 34.8–40.8) reported weight gain during confinement, mean weight gain  $2.8 \pm 1.4$  kg, significantly higher among overweight ( $3.1 \pm 1.5$  kg) and obese ( $3.5 \pm 1.5$  kg) subjects. Adjusted for age and occupation, increased body weight was more likely in women OR 1.50 (95%CI 1.03–2.19), overweight OR 3.12 (IC95% 2.23–4.36) or obese subjects OR 3.13 (IC95% 1.89–5.18) less active than usual in confinement OR 2.16 (1.60–2.92), but less likely for those with dietary change score  $\geq$  6, OR 0.60 (IC95% 0.42–0.85).

**Conclusions:** A high proportion of adults in Spain reported weight gain during confinement, significantly higher in overweight subjects. Female gender, being overweight or obese and being less physically active were factors positively associated to weight gain in COVID-19 confinement. Changes in lifestyles during lockdown can negatively influence the evolution of chronic diseases and risk factors in many people.

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