

## **Predictive factors of responsiveness to a body weight reduction program in Prader-Willi patients at 6 years of follow-up.**

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Prader-Willi syndrome (PWS), a multisystemic disorder caused by lack of expression of genes on the paternally inherited chromosome 15q11.2-q13 region, is characterized by hyperphagia and childhood-onset morbid obesity. A retrospective cohort study of 60 PWS patients, 38 females and 22 males, undergoing a 6-year rehabilitation program was analysed. Mean age at the time of first admission was  $27 \pm 7$  years, body weight (BW) was  $97 \text{ kg} \pm 29 \text{ kg}$  and height was  $1.53 \pm 0.09 \text{ m}$ . Twenty-four patients (40%) showed BW loss after 6 years of follow-up, seventeen (28%) remained stable and nineteen (32%) gained BW. Responsiveness in terms of BW reduction was less frequent in patients with the UPD karyotype, karyotype del15 being more frequent among responsive patients. Furthermore, responsive PWS subjects had a higher BMI ( $47 \text{ vs. } 36 \text{ kg/m}^2$ ), waist ( $123 \text{ vs. } 106 \text{ cm}$ ) and hip ( $136 \text{ vs. } 118 \text{ cm}$ ) circumferences than non-responsive at the time of first hospitalization. Baseline body composition and metabolic parameters did not differentiate between responsive and non-responsive patients. Given the rarity of PWS and relative lack of studies, these results can be considered relevant because based on a relatively large number of PWS patients followed up for a long term period.

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