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# Central dopaminergic function in anorexia and bulimia nervosa: a psychoneuroendocrine approach.

[Brambilla F](#), [Bellodi L](#), [Arancio C](#), [Ronchi P](#), [Limonta D](#).

Dipartimento di Scienze Neuropsichiche, Istituto Scientifico Ospedale S. Raffaele, Via Prinetti 29, 20127, Milano, Italy.

## Abstract

Data on central dopamine (DA) function in patients with Anorexia Nervosa (AN) and Bulimia Nervosa (BN) are contradictory. To tentatively clarify the brain secretory state of the amine and its relationship with the nutritional impairments and/or the psychopathological aspects of the two disorders, we measured the responses of growth hormone (GH) to acute stimulation with apomorphine (APO), a selective D-1 and D-2 receptor agonist, in 16 AN patients, 8 restricted (AN-R) and 8 bingeing-purging (AN-BP), in 7 BN patients and in 8 healthy controls (CTR). Interference of impairment of the somatotrophic axis in the GH response to APO stimulation was excluded by measuring the GH and insulin-like growth factor-1 (IGF-1) basal levels and GH responses to growth hormone-releasing hormone (GHRH) stimulation. Psychological aspects of patients and controls were investigated by the rating scales Eating Disorder Inventory (E.D.I.), Bulimic Investigation Test Edinburgh (B.I.T.E.), and Yale-Brown Cornell Eating Disorder Scale (YBC-ED). Basal GH levels were significantly higher and those of IGF-1 lower in AN-R than in AN-BP, BN and CTR subjects. GH responses to GHRH stimulation were significantly higher in AN-R than in AN-BP and BN patients and in CTR. GH responses to APO stimulation were significantly lower in AN-R and AN-BP than in BN and CTR subjects, suggesting that at the hypothalamic level there is a subsensitivity of postsynaptic D-2 receptors and possibly a presynaptic DA hypersecretion. The altered GH responses to APO stimulation did not correlate with the Body Mass Index, while they correlated negatively with E.D.I. scores.

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