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Dynamic contribution of whey protein in PCOS recovery

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Whey protein, a remnant from milk, has recently been gaining prominence due to its ability to solve hormone irregularities experienced by women with polycystic ovary syndrome (PCOS). The bodies of women with PCOS usually contain abnormally high androgen (male hormones) levels, thus leading to their inability to utilise insulin in the blood. This is mainly because their body cells become desensitised towards the efforts of insulin to convert blood sugar to energy. The subsequent flooding of the bloodstream with excessive glucose and insulin, in turn, stimulates the ovaries to produce higher concentrations of androgen. Furthermore, the symptoms of PCOS include excessive facial hair growth, fertility issues, irregular periods, visible facial and back acne and persistent obesity.

In major cases, it also leads to depression, with stress and erratic lifestyles acting as major aggravating factors; however, the cause of the occurrence of PCOS still remains unknown. Further, studies suggest that the consumption of whey supplements has led to the normalisation of severe hormonal responses including inter-dependent insulin and cortisol levels, ghrelin, dehydroepiandrosterone and androstenedione.

Profound improvements in each of the hormonal responses suggest that whey protein is beneficial in the treatment of PCOS. There are many difficulties experienced during PCOS, namely rising blood pressure (hypertension), risk of prediabetes, type-2 diabetes and cardiovascular diseases. A diet with low caloric intake along with whey protein supplements can aid in the secretion of cholecystokinin (appetite-controlling hormones), hence tricking our bodies into a prolonged feeling of satiety. This, thereby, reduces the risk of obesity experienced during PCOS. The additional benefits of whey proteins include the fact that whey protein, like other proteins, comprises the amino acid, leucine, which initiates muscle protein synthesis (MPS).

MPS helps in the maintenance of core body muscles and rebuilds muscular proteins for a toned body. Abiding by the characteristic values of proteins, whey plays an integral role in the synthesis and regulation of essential female hormones, oestrogen and insulin, by the release of glucagon that makes cells bind to glucose. Whey additionally controls blood sugar levels.

Although whey protein is not determined as a cure for PCOS, when consumed with a hypocaloric diet it assists in the reduction of serum cholesterol, apolipoprotein B, very low-density lipoprotein (VLDL), intermediate-density lipoprotein (IDL) and low-density lipoprotein (LDL) particles, all collectively termed as bad cholesterol. Therefore, apart from aiding the treatment of PCOS, whey proteins provide long-term benefits by decreasing fat mass with noticeable changes in plasma lipoproteins, fasting glucose and sex steroid hormones.

Keywords: Whey, Protein, Hormones, Insulin, Cholesterol, Polycystic ovary syndrome

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