



## INTEGRATIVE TREATMENTS TO OVERCOME INSULIN RESISTANCE IN PCOS PATIENTS

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It is well known that hyperinsulinemia is a frequent feature of PCOS. More than 45-55% of all PCOS patients show a modest up to an exaggerated hyperinsulinism in response to the standard oral glucose tolerance test (OGTT). Such condition can be due to overfeeding as well as by a constitutional predisposition to an abnormal control of glucose metabolism but such reduced insulin sensitivity can be observed also in 10-15% of the normal weight PCOS, thus confirming that hyperinsulinism can show up not only in relation to obesity or to excess of fat tissue but also as an intrinsic abnormal ability to control glucose metabolism.

Insulin sensitivity can be improved using glucose sensitizer drugs, such as metformin, but due to the frequent side effects it induces, recently new integrative therapeutical approach for PCOS has been proposed, that is inositol in 2 of the isomers at present available [myo-inositol (MYO) and d-chiro-inositol (DCI)] and alfa lipoic-acid (ALA).

Both inositols are tightly linked one to the other since MYO is transformed by an epimerase in DCI. In general both these compounds work as specific modulators of the intra cellular second messenger activated by the insulin linkage with its own membrane receptor. In addition also alfa lipoic acid (ALA) has been demonstrated to improve insulin sensitivity with specific positive effects in PCOS with familiar diabetes.

It becomes compulsory to know the clinical features and the anamnesis of PCOS patients, such as the predisposition to diabetes, to better adjust the integrative treatment to solve the insulin resistance and the reproductive impairments.

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