Therapies and treatment which can control diabetes at pre diabetic stage.

Thomas Pierce*

Department of Anatomy, University of Freiburg, Freiburg, Germany

Options for Treating Insulin Resistance

Insulin resistance is thought to be a major contributor to metabolic problems like high blood pressure, abdominal weight gain, and type 2 diabetes in up to 70% of women with PCOS [1]. Diet, exercise, and pharmaceuticals and/or nutritional supplements are the three best strategies to improve insulin resistance.

Diet changes

While losing weight can help you have better insulin, changing your eating habits can also help you lose weight. The goal is to eat things that don't cause your insulin levels to rise even higher. It may be useful to change your diet to incorporate more low-glycemic-index fruits, vegetables, and lean proteins. Concentrate on anti-inflammatory foods that have been proven to help with insulin resistance. Carbohydrate foods should be limited to one or two servings every meal, or one-quarter of your plate, to best manage insulin levels. Grain, fruits, vegetables, beans, legumes, milk, and yoghurt are all carbohydrate foods. Distribute the foods throughout the day [2].

Physical activity

PCOS cannot be managed only by diet. Women with PCOS grow muscle more easily than women without the illness because their testosterone levels are higher. More muscle mass boosts metabolic rate, allowing you to burn calories more efficiently, and it aids glucose utilization, requiring less insulin to be released. To grow and maintain muscle mass, try to do at least two days of weight exercise every week.

Increasing your daily exercise by using the stairs instead of the elevator, parking your car further away from the door, or going for short walks during lunch or breaks will improve your health and help you produce less insulin. Some people find using fitness trackers to be beneficial in increasing their daily steps and even competing with coworkers or acquaintances.

Insulin-lowering medications

If dietary modifications are insufficient and insulin resistance has been proven by testing, you should talk to your doctor about adding an insulin-altering prescription [3]. By combining medicine and lifestyle adjustments, many women have had significant success with weight loss. It's crucial to note, however, that the FDA has not approved these medications for use in the treatment of PCOS [4].

Most healthcare practitioners will prescribe metformin initially if the woman is a candidate for the drug. It works by raising the sensitivity of cells to insulin and suppressing the liver's synthesis of glucose. Taking this drug can help many women regain regular ovulation and periods. Glitazones (such as Avandia and Actos) are another type of medication that is frequently used in conjunction with metformin. These drugs reduce insulin sensitivity directly and frequently have fewer gastrointestinal adverse effects than metformin. Glitazones may also cause women to gain weight rather than lose it. Victoza and other injectable drugs have also been investigated in PCOS women and have shown to be effective when used in conjunction with metformin and a balanced lifestyle.

Insulin-lowering supplements

Inositol is one of the most researched dietary supplements in the PCOS population. Many of the metabolic and reproductive components of PCOS have been demonstrated to improve when Myo (MYO) and D-Chiro-Inositol (DCI) inositol types are combined in a 40:1 ratio. Improvements in cholesterol, insulin, androgens, and weight are among these advantages.

N-Acetyl Cysteine (NAC) is an antioxidant that has been demonstrated in multiple randomized controlled trials to reduce insulin and cholesterol in women with PCOS as well as metformin. Insulin resistance might make it difficult for people with PCOS to lose weight. You can assist your body boost its insulin response and maybe reduce androgen production by making a few key lifestyle modifications. This may aid in the reduction of symptoms, the restoration of regular ovulation, and the prevention of long-term chronic diseases [5].

References

1. Ferrannini E, DeFronzo RA. Impact of glucose-lowering drugs on cardiovascular disease in type 2 diabetes. Eur Heart J. 2015;36(34):2288-96.
2. Reilly SM, Chiang SH, Decker, et al. An inhibitor of the protein kinases TBK1 and IKK-ε improves obesity-related metabolic dysfunctions in mice. Nature medicine. 2013;19(3):313-21.
3. Koch L. Teaching an old drug new tricks—amlexanox targets inflammation to improve metabolic dysfunction. Nat Rev Endocrinol. 2013;9(4):185-85.

***Correspondence to:** Thomas Pierce, Department of Anatomy, University of Freiburg, Freiburg, Germany, E-mail: piercet@ucf.uni-freiburg.de

***Received**: 13-May-2022, Manuscript No. AADY-22-63775; **Editor assigned**: 14-May-2022, PreQC No. AADY-22-63775(PQ); **Reviewed**: 21-May-2022, QC No. AADY-22-63775; **Revised:** 23-May-2022, Manuscript No. AADY-22-63775(R); **Published:** 26-May-2022, DOI:10.35841/aady-6.3.111*

***Citation:** Pierce T. Therapies and treatment which can control diabetes at pre diabetic stage. J Diabetol. 2022;6(3):111*

4. Groop LC, Bonadonna RC, DelPrato S, et al. Glucose and free fatty acid metabolism in non-insulin-dependent diabetes mellitus. Evidence for multiple sites of insulin resistance. J Clin Investig. 1989;84(1):205-13.

5. Weyer C, Bogardus C, Mott DM, et al. The natural history of insulin secretory dysfunction and insulin resistance in the pathogenesis of type 2 diabetes mellitus. J Clin Investig. 1999;104(6):787-94.

Citation: *Pierce T. Therapies and treatment which can control diabetes at pre diabetic stage. J Diabetol. 2022;6(3):111*