

Word diabetes includes a group of metabolic diseases with a common problem of hyperglycemia or elevated glucose level in blood. High level of glucose leads to large number of health problems and complications and for that reason diabetes needs to be managed. Management of diabetes includes exercise/activity, diet and medical management with hormones and oral medications. Exercise is beneficial for diabetic patients because it decreases the level of glucose in blood by increasing its uptake into the cells to be used for energy. Before exercise glucose level has to be checked. Too low glucose or glucose over 250mg/dL has first to be regulated and then exercise can take place. Low glucose could lead to dangerous hypoglycemia and coma. High glucose can lead to increased glucagon production and that will additionally increase glucose level even more. Diet has to be carefully planned by a registered dietitian. That way glycemic index will stay low and high glucose spikes will be avoided. Alcohol and artificial sweeteners have to be avoided or carefully used. Pharmacologic therapy is done by hormone insulin. There are different forms of insulin with variable time course of action. Insulin in the US is mostly produced by recombinant DNA technology. Beside insulin, there is large variety of oral anti diabetic medications which can help control hyperglycemia. Their mechanisms of action include: inhibition of glucose production by the liver, delayed absorption of glucose from the intestines and increase in body sensitivity to insulin. Also, some medications prolong insulin release and stimulate pancreas.

References

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