

## The Relationship between Thyroid and Pancreas in Health and Disease

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It is well known that there is a strong relationship between thyroid hormones and the functions of other endocrine glands. Recently, an increasing prevalence of metabolic diseases including obesity, diabetes and hyperlipemia, have reestablished the focus on thyroid hormone, since they have the ability to improve energy metabolism in the body and their effects on pancreatic function have been very recently reviewed. Many types of research done on the relationships between thyroid and pancreas focused on the regulation of the pancreatic secretory function of insulin or on the insulin function through the improvement of energy metabolism induced by thyroid hormones. Although little information has been known about the effects of thyroid hormones and their underlying mechanisms on pancreatic function, epidemiological investigations and animal studies found a great link between autoimmune diseases, thyroid dysfunction and pancreatic pathology. On the other hand, one of the main functions of the pancreas is the insulin secretion, which is altered in diabetes, so it could be expected that diabetes might be related to thyroid dysfunction. Furthermore, recent studies have shown the important roles of thyroid hormones in pancreas development and on islet pathology, both in diabetes and in pancreatic cancer. This presentation will expose the link between the physiology of both thyroid and pancreas and the effects of thyroid hormones on pancreas development. It will display the thyroid hormone receptors and transporters in the pancreas. The presentation will also discuss the possible molecular mechanisms between thyroid and pancreas pathologies and will clarify the relationship between autoimmune thyroid dysfunction and autoimmune pancreas lesions. Also, it will summarize the roles of the thyroid hormones in the pathogenesis of diabetes and their effects on pancreas pathology in cancer pancreas. The effect of treatment of thyroid diseases on the improvement of pancreatic dysfunction in diabetes will be discussed also.

### Biography:

Prof. Hesham Fouad, MD is a Consultant Physician Endocrinology & Diabetes with 37 years working experience in Internal Medicine, Endocrinology and Diabetes, of them, 31 years post-MS and 20 years post MD. He is also a member of both "Egypt society for friends of diabetic patients" and "Egypt society of obesity surgeons" (founder Member). He was graduated in 1979 from Alexandria University Medical School in Egypt with a bachelor's degree in Medicine and Surgery, after he finished a one-year period as an intern. His residency was for 4 years at Ras El Tin General Hospital, Alexandria. He received my Master's degree in Internal Medicine and Endocrinology from Alexandria University, November 1985. Thesis Title: "Effect of calcium channel blockers on metabolic and hemodynamic changes of hyperthyroidism (Degree of Thesis Grade: 100%)". He have finished my high medical training by working at Alexandria University Hospitals for 5 years and for a year in Endocrinology consultant clinic at Gamal Abdul Nasser Insurance Hospital being trained by Prof. Dr/ Gamal El-Din Hanno, MD, FRCP, professor and head of Endocrinology Department, Alexandria University, and one of international Endocrinologists at that time. He received the Medical Doctor Degree in Internal Medicine, Diabetes and Endocrinology, Alexandria University, August 1996. Thesis Title: "Studies on the role of hormonal and chemical changes in the pathogenesis of diabetic retinopathy". My Major: "Endocrinology and Diabetes".