**STATUS OF MICRONUTRIENTS IN PATIENTS WITH TYPE 2 DIABETES MELLITUS.  
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**ABSTRACT**

Diabetes mellitus (DM) or simply diabetes is a group of metabolic diseases in which a person has high blood sugar. This high blood sugar produces the symptoms of frequent urination, increased thirst, increased hunger. Untreated diabetes can cause many complications. Diabetes is a metabolic disorder caused by defective insulin secretion, insulin action or both. The two major factors for the development of diabetes are pancreatic beta cell dysfunction and insulin resistance. The main types of diabetes mellitus are Type 1 DM and Type 2 DM. Type1 DM results from the body's failure to produce insulin. This form was previously referred to as "insulin-dependent diabetes mellitus" (IDDM) or "juvenile diabetes". Type 2 DM results from insulin resistance, a condition in which cells fail to use insulin properly, sometimes also with an absolute insulin deficiency. This form was previously referred to as non insulin-dependent diabetes mellitus (NIDDM) or "adult-onset diabetes".

**Key Words:**

Diabetes, T2DM

**1.0 Introduction**

Metals in extremely small quantities that are present in animal and plant cells and tissues are called trace metals. They are a necessary part of nutrition and physiology. Trace metals include iron, magnesium, lithium, zinc, copper, chromium, nickel, cobalt, vanadium, arsenic, molybdenum, manganese, selenium and others. Trace element deficiencies and excesses are known to affect numerous biological functions in humans, including physical growth, psychomotor development and immunity. Thus, it is very important to check trace elements concentration regularly in the body. Trace elements though required in smaller quantities are to be taken in diet as they are required by the body for specific functions but taking them in excess causes various problems. Trace metals are known to influence hormones and enzymes at levels of secretion, activity and binding to target tissues. The role of metal in the catalytic action of the enzymes is;

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