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## Effect of Human Hypothyroidism & Hyperthyroidism on Some Electrolytic Minerals and Total antioxidants Capacity

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## Introduction:

Hypothyroidism is a clinical entity resulting from the deficiency of thyroid hormones or from their impaired activity (Hallengren, 1998)<sup>1</sup>. Thyroid hormones perform a wide array of metabolic functions including regulation of lipid ,carbohydrate ,protein and electrolyte minerals metabolisms. These hormones play a critical role in cell differentiation during development and help to maintain thermo genic, minerals and metabolic homeostasis in adult. Hyperthyroidism ,abnormal activity of thyroid gland that leads to mental and physical slowing because of increased basal metabolic rate (Marc *et. al.*,2002)<sup>2</sup>. Free radicals and disorders of the antioxidant defense system have a pathogenic impact on human tissues and hence are seen as important factors in the development of various diseases (McCode ,2000;Mahadik*et.al.*,2001)<sup>3</sup>. The main free radicals in human tissues are superoxide ,hydroxyl ,hydrogen peroxide , singlet oxygen ,and nitric oxide (Gutteridge ,1995)<sup>4</sup>. Free radicals are produced in the normal cell metabolism, in biochemical reaction involving oxygen , for the purpose of destroying bacteria and other living organisims taken into the cell by phagocytosis (Patil*et al.*, 2006)<sup>5</sup>.

Reem A.M.AL-Saad et al /International Journal of ChemTech Research, 2017,10(2): 679-682.

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