The Relationship between Serum Leptin and Insulin Resistance in Children and Adolescents with Obesity, Type 1 and Type 2 Diabetes Mellitus

Thesis
Submitted for partial fulfillment
of Master Degree in Pediatrics

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2013

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List of Abbreviations

ACTH : Adrenocorticotropic hormone

AGRP : Agouti gene related protein

AMPK : 5-Adenosine monophosphate activated protein kinase
ARC : Hypothalamic arcuate nucleus
ASIP : Agouti signaling protein
BBB : Blood brain barrier.
BMI : Body mass index.
BDNF : Brain derived neurotrophic factor
cAMP : Cyclic adenosine monophosphate
CART : Cocaine and amphetamine regulated transcript
CCK : Cholecystokinin
CNS : Central nervous system
CRP : C-reactive protein
DCCT : Diabetes Control and Complications Trial
DKA : Diabetic ketoacidosis
DHEAS : Dehydroepiandrosterone sulfate
DM : Diabetes mellitus
EMCL : Extra myocellular lipids
FFA : Free fatty acids.
GH : Growth hormone
GLP-1 : Glucagon like peptide-1
GLUT-4 : Glucose transporters-4.
HDL : High density lipoproteins.
HbA1c : Glycosylated hemoglobin
HSL : hormone sensitive lipase
IFG : Impaired fasting glucose.
IGF-1 : Insulin growth factor-1
IGT : Impaired glucose tolerance.

IL-1 : Interleukin-1.
IL-6 : Interleukin-6.
IMCLs : Intra myocellular lipids.
IR : Insulin resistance.
IRS-1 : Insulin receptor substrate-1.
JAK-STAT3 :Janus kinase signal transducerand activator of transcription 3
LDL : Low density lipoproteins .
LHA : Lateral hypothalamus
LH : Luteinizing hormone
FSH : Follicular stimulating hormone
MAPK : Mitogen activated protein kinase.
MCH : Melanin concentrating hormone.
MC3R **:** Melanocortin 3 receptor
MC4R : Melanocortin 4 receptor
mTOR : Mammalian target of rapamycin
MS : Metabolic syndrome
NAFLD : Non alcoholic fatty liver disease
NGT : Normal glucose tolerance
NPY : Neuropeptide Y
ObRs : Leptin receptors.
OSA : Obsructive sleep apnea
PC-1 : Prohormone convertase-1
PCOS : Polycystic ovarian disease
PI3 : Phospatidylinositol 3
PI3K : Phospatidylinositol 3-kinase
PKA **:** Protein kinase A
PKC **:** Protein kinase C
POMC : Pro-opiomelanocortin
PVN : Para ventricular neucleus
PYY : Peptide YY
ROS : Reactive oxygen species

SOD : Superoxide dismutase
sOB-R : Soluble leptin receptors
T1DM : Type 1 diabetes mellitus
T2DM : Type 2 diabetes mellitus
TG : Triglycerides
TNF : Tumor necrosis factor.
VMH : Ventromedial hypothlamus.
VLDL : Very low density lipoprotein.
WHR **:** Waist-hip ratio

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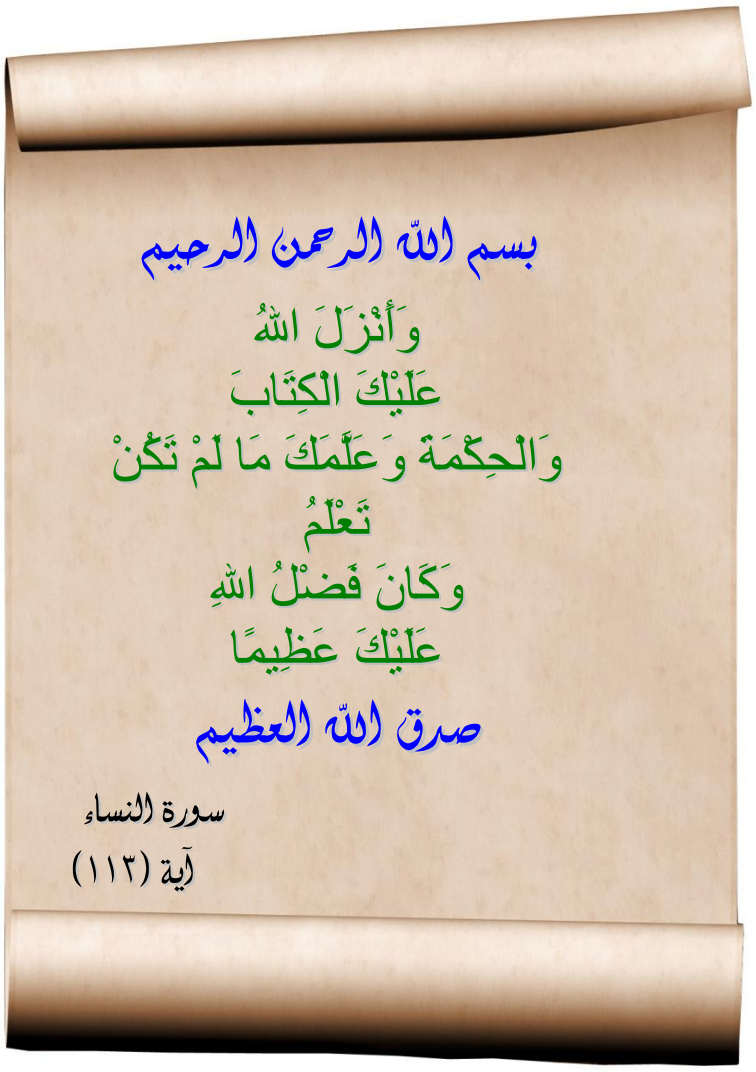
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Acknowledgement

First and foremost, I feel always indebted to **Allah**, the most kind and the most merciful.

I would like to express my sincere gratitude to ***Prof. Dr. Mona Hussein El-Samahy,*** *Professor of Pediatrics, Faculty of Medicine –Ain Shams University, under her supervision, I had the honor to complete this work, I am deeply grateful to her for her professional advice, guidance and support.*

I wish also to express my gratitude to ***Prof. Dr. Manal Fawzy Ghozlan,*** *Professor of Clinical Pathology, Faculty of Medicine –Ain Shams University, for her great efforts, kind advice, support and encouragement throughout the whole work.*

I am also greatly indebted to ***Dr. Jonair Huessin Abd El Kafy,*** *Lecturer of Pediatrics, Faculty of Medicine –Ain Shams University, for her tremendous effort she has done, enthusiasm and help.*

Also many thanks to the patients, as their cooperation was very important to accomplish this work.

Last but not least, I like to thank my beloved parents and brothers for their persistent assistance, kind care, help and encouragement. They are the candle of my life.

Introduction and the Aim of the work

Review of Literature

Subjects and Methods

Results