

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

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By
Hany Sayed Abdel Maksoud
M.B. B.Ch., 2004,
Ain Shams University

Supervised by
Prof.Dr. Mona Hussein El Samahy
Professor of Pediatrics
Faculty of Medicine-Ain Shams University

Prof. Dr. Manal Fawzy Ghozlan
Professor of Clinical Pathology
Faculty of Medicine-Ain Shams University

Dr. Jonair Hussein Abdel Kafy
Lecturer of Pediatrics
Faculty of Medicine-Ain Shams University

Faculty of Medicine
Ain Shams University
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List of Abbreviations

ACTH	: Adrenocorticotrophic 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 transducer and 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 hypothalamus.
VLDL	: Very low density lipoprotein.
WHR	: Waist-hip ratio

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
وَأُنْزِلَ اللَّهُ
عَلَيْكَ الْكِتَابَ
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تَعْلَمُ
وَكَانَ فَضْلُ اللَّهِ
عَلَيْكَ عَظِيمًا
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Introduction and the Aim of the work





Review of Literature





Subjects and Methods





Results

