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**EVALUATION OF PULMONARY FUNCTIONS IN
HEART FAILURE IN EGYPTIAN CHILDREN**

THESIS

Submitted for partial fulfillment of the
MD Degree in Pediatrics

By

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

«وعلمك ما لم تكن تعلم

وكان فضل الله عليك عظيما»

صدق الله العظيم

(سورة النساء آية ١١٣)

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LIST OF ABBREVIATIONS

A ₂	Aortic component of the second heart sound.
ACE	Angiotensin converting enzyme.
ADP	Adenosine diphosphate.
AF	Atrial fibrillation.
ALT	Alanine aminotransferase.
amp	Amplitude
ANP	Atrial natriuretic peptide.
AR	Aortic regurgitation.
AS	Aortic stenosis.
AST	Aspartate aminotransferase.
AT	Anaerobic threshold.
ATP	Adenosine triphosphate.
ATPase	Adenosine triphosphatase.
AVP	Arginine vasopressin.
bid	two times per day.
BNP	Brain natriuretic peptide.
BSA	Body surface area.
BTPs	Basal temperature and pressure.
CAMP	Cyclic adenosine monophosphate.
CHF	Congestive heart failure.
CNS	Central nervous system.
CO	Carbon monoxide.
CP	Creatine phosphate.
CRP	C-reactive protein.
DBP	Diastolic blood pressure
DLCO	Diffusing lung capacity for carbon monoxide.
ECG	Electrocardiogram.
EDD	End diastolic diameter.
EDP	End diastolic pressure.
EDV	End diastolic volume.
EF	Ejection fraction.
EIA	Exercise induced asthma.
EIB	Exercise induced bronchospasm.
ERV	End residual volume.
ESD	End systolic diameter.
Ex	Exercise

f	femto = 10^{-15} .
FEF ₂₅₋₇₅	Forced expiratory flow from 25% to 75% of FVC.
FEV ₁	Forced expiratory volume in the first second.
FRC	Forced residual capacity.
FVC	Forced vital capacity.
FVL	Flow volume loop.
G	Inhibitory guanyl nucleotide binding protein.
GFR	Glomerular filtration rate.
Gs	Stimulatory guanyl nucleotide binding protein.
HR	Heart rate.
IC	Inspiratory capacity.
IRV	Inspiratory reserve volume.
IV	Intravenous.
KPD	Kilopond.
LDH	Lactic dehydrogenase.
LV	Left ventricle.
LVH	Left ventricular hypertrophy.
MET	Metabolic equivalent.
MIF	Maximal inspiratory flow.
MR	Mitral regurgitation.
MRI	Magnetic resonance imaging.
MS	Mitral stenosis.
μV	Microvolt.
mV	Millivolt.
MVV	Maximal voluntary ventilation.
NE	Norepinephrine.
NS	Non significant.
NYHA	New York Heart Association.
P ₂	Pulmonary component of the second heart sound
PCO ₂	Partial pressure of carbon dioxide.
PEFR	Peak expiratory flow rate.
Pi	Inorganic phosphate.
PO	Per oral.
PO ₂	Partial pressure of oxygen.
PP	Pulmonary pressure.
PSG	Polysomnography.