Ain Shams University
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Nutrition & Outcomes in Intensive Care Units' Patients

Protocol of an Essay

Submitted for partial fulfillment of Master Degree in intensive b care

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بسم الله الرحمن الرحيم

قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم الحكيم

صدق الله العظيم

سورة البقرة الآية: ٣٢

Acknowledgement

First and above all, my greatest thanks to ALLAH the most merciful the most gracious for helping us all to complete this work.

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Thank you!

Dedication

To my family;

I give thanks to my
Mother, father and
wife for all they have
shared

Every time they've
cared all the love they
gave even though it was
never spoken in words
but shown indeed
instead
And support they continually give.

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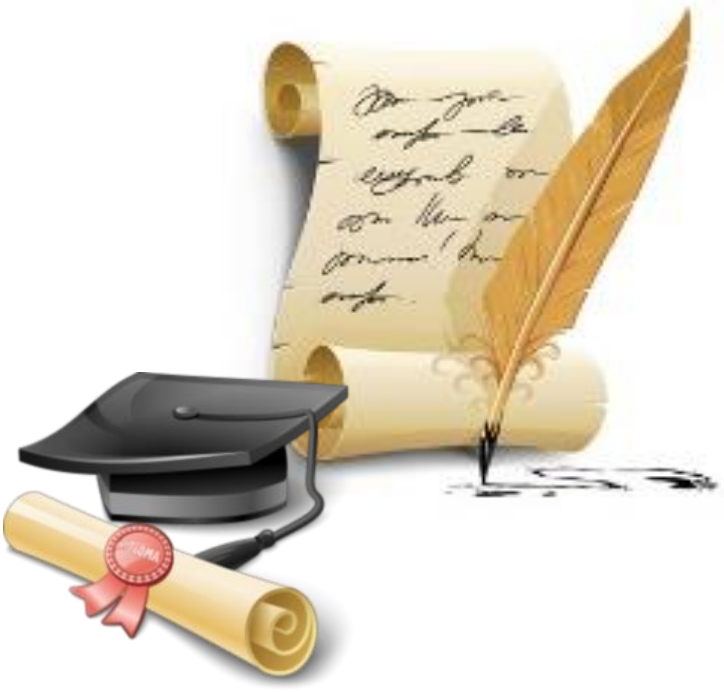
List of Abbreviations

AGA	American gastroenterological association
AIDS	Acquired immunodeficiency syndrome
APN	Advanced Practice nurse
ARDS	Acute respiratory distress syndrome
ATP	Adenosine triphosphate
BCAA	Branched chain amino acids
BG	Blood glucose
BUN	Blood urea nitrogen
CCF	Chronic cardiac failure
COPD	Chronic obstructive pulmonary disease
CPN	Central parenteral nutrition
CVE	Central venous catheter
CVVHD	Continuous venovenous hemodialysis
DHA	Docosahexaenoic acid
EE	Energy expenditure
EFA	Essential fatty acids
EN	Enteral nutrition
EPA	Eicosapataeniec acid
FDA	Food and drug administration
FFA	Free fatty acid
GIT	Gastrointestinal tract
GRV	Gastric residual volume
HbA1C	Glycosylated Hemoglobin
HIV	Human immunodeficiency virus
HN	High nitrogen
HOB	Head of bed
ICU	Intensive care unit
IL	Interleukin
IV	Intravenous
IVFE	Intravenous fat emulsions
JPE	Jejunal percutaneous endoscopy
JPE	Jejunal Percutaneous Endoscopy

LCT	Long Chain Triglycerides
LOS	Length Of Stay
MCT	Moderate Chain Triglycerides
MOF	Multiple Organ Failure
NG	Nasogastric
OGT	Orogastric Tube
PCM	Protein Calorie Malnutrition
PEG	Percutaneous Endoscopic Gastrostomy
PEG	Percutaneous Endoscopic Jejunostomy
PEM	Protein Energy Malnutrition
PN	Parenteral Nutrition
PPN	Peripheral Parenteral Nutrition
RD	Registered Dietitian
RDAs	Recommended Daily Allowances
RN	Registered Nurse
RQ	Respiratory Quotient
RV	Residual Volume
SBFTS	Small Bowel Feeding Tube
SC	Subcutaneous
TNA	Total Nutrient Admixture
TNF	Tumor Necrosis factor
TPA	Tissue Plasminogen Activator
TPN	Total Parenteral Nutrition

Introduction



INTRODUCTION

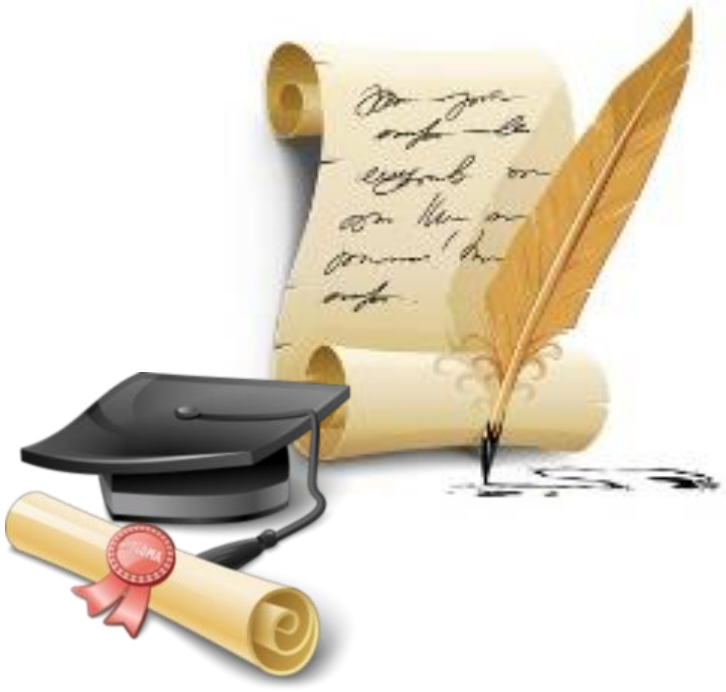
The three organic (carbon- based) fuels used by the human body are carbohydrates , proteins & lipids . The energy field from the combustion of these fuels is measured at heat production in kilocalories (KCal) per gram of substrate .*(Bistrian And Mc cowen 2008)*

Nutritional support refers to enteral or parenteral delivery of carbohydrates, proteins, electrolytes, vitamins, minerals, trace elements & fluids to critically all patients. *(Mc Clave et al ., 2009)*

The relationship between nutritional status & patients outcomes is of particular interest in chronically critically ill patients , that is patients who survive the life - threatening phase of critical illness but have prolonged hospitalizations because of their dependence on critical care support services .*(Daly et al ., 2001)*

Malnutrition, irrespective of the presence of injury & stress, is an independent risk factor for morbidity & mortality, there for early identification & appropriate action is critical & appropriate nutrition support results in decreased duration of ventilation, decreased complications & decreased costs. *(Holmes. 2007)*

Aim of the Work



AIM OF THE WORK

The aim of this essay is to discuss and explain the nutritional requirements, assessment & how nutritional state is a good predictor of the outcomes in the critically ill patients.

Chapter 1: Nutritional State