DOES REGULAR PHYSICAL EXERCISE BENEFIT THE PATIENT WITH HCV CHRONIC ACTIVE HEPATITIS

Thesis
Submitted For Partial Fulfiment of
Master Degree in Internal Medicine

By Mohammed El-Sayed El-Nemr M.B., B.Ch

Supervised by

Prof. Dr. Mohsen Mostafa Maher

Professor of Internal Medicine Faculty of Medicine Ain Shams University

Prof. Dr. Mohammed Gamal Zaki

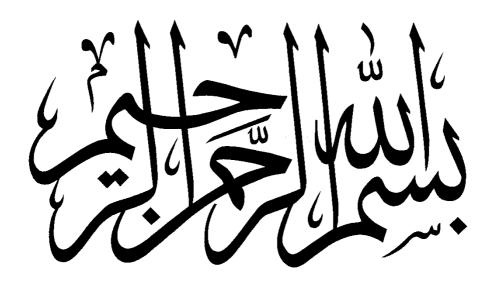
Professor of Physical Medicine Faculty of Medicine Ain Shams University

Prof. Dr. Mohammed A.M. Makhlouf

Professor of Internal Medicine Faculty of Medicine Ain Sha.ns University

> Faculty of medicine Ain Shams University 1999





Acknowledgment

First and foremost, thanks are all due to **Allah** for blessing this work until has reached its end, as a part of his generous help throughout my life.

I would like to direct special thanks to **Prof. Dr. Mohsen Mostafa**Maher, professor of internal medicine, Faculty of Medicine, Ain Shams
University, for the great support and encouragement he gave me throughout
the whole work. It is a great honor to work under his guidance and supervision.

I am greatly honored to express my utmost thanks to **Prof. Dr.**Mohammed Gamal Zaki, professor of physical medicine, Faculty of Medicine, Ain Shams University, from whom I received faithful supervision, Valuable suggestions, and continuous guidance throughout this work.

A.M Makhlouf: professor of internal medicine, Faculty of Medicine, Ain Shams University, for his close supervision, continuous help, and the tremendous effort he has done in the meticulous revision of the whole work.

Extended thanks go to my patients for their help in completing this work.

Finally: I would like to express my deep thanks to all the staff members of the physical medicine and the endoscopy department at the faculty of medicine; Am shams university and El-Mataria teaching hospital who assisted me finishing this thesis.

Mohammed El-sayed El-nemr
1999

Contents

 Introduction and aim of the work. 	
1-Review of literature .	
a-Hepatitis C virus	1
Virology.	
Epidemiology.	
b-Course of the disease	21
Acute hepatitis C.	
Chronic hepatitis C.	
Extrahepatic manifestations	
Histopathological features of HCV	
Diagnosis of HCV infection	
c-Immunity and HCV	49
d-Treatment of HCV	56
Therapeutic agents.	
Treatment of acute hepatitis C.	
Treatment of chronic hepatitis C.	
Adverse effects of alpha-Interferon therapy.	
e-Effects of physical exercise	82
2-Subjects and methods.	94
3-Results.	98
4-Discussion.	117
5-Summary and conclusions.	123
6-References.	124
7-Arabic summary,	

INTRODUCTION AND AIM OF THE WORK

INTRODUCTION AND AIM OF THE WORK

In our modern society, having a healthy life style is not at all a bad asset towards one's health.

Healthy life style includes a well-balanced diet, enough sleep and regular physical exercise.

Regular physical exercise was found to increase the populations of T-Lymphocytes (La Perriere et al., 1994).

A moderate training program can enhance the resting natural killer cell function of healthy people, potentially increasing resistance to both viral infections and preventing the formation of malignant cells (Venjatraman et al., 1997).

Infection with hepatitis C virus (HCV) often becomes chronic and proceeds to a state of chronic active hepatitis, a condition which is not easy to treat and almost always end up in liver cirrhosis as well as a high risk of hepatocellular carcinoma (HCC) (Bennet, 1996).

Along with the conventional therapy available such as interferon and/or ribavirin; clearance of the virus may in many cases depends on the state of body defense.

The aim of this work was to test this theory by studying the effect of regular physical exercise (over a period of time) on some of the parameters used to measure the "Activity" of HCV chronic active hepatitis.

REVIEW OF LITERATURE