

# بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



شبكة المعلومات الجامعية

# جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها على هذه الأفلام قد أعدت دون أية تغيرات



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بعض الوثائـــق الاصلبــة تالفــة



# بالرسالة صفحات لم ترد بالاصل

مع المؤملة بأيراع كركسنى ملكروفيلمسين وأباعثول لذمين الباعث من والمراكز الحندات ولالدكاددسات

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Ain Shams University Women's Collage Biochemistry and Nutrition Department

# EFFECT OF WHEAT-BARLEY BREAD ON BLOOD LIPIDS AND BLOOD GLUCOSE IN EXPERIMENTAL RATS

#### **Thesis**

Submitted in Partial Fulfillment of M. Sc. Degree In Biochemistry and Nutrition

#### By

#### **Entesar Saed Shaaban Mahmoud**

Department of Biochemistry and Nutrition, Women's Collage Ain Shams University

> Women's Collage Ain Shams University 2002



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## INTRODUCTION

#### Introduction

Consumers today are concerned with health promoting foods. The increasing demand for health foods is to meet the requirements of target people. Considerable research has been directed towards the effect of diet on modulating plasma lipids and plasma glucose. One of the special interest has been the influence of source of carbohydrate on lipoproteins and plasma glucose. Recommendations for a healthy diet suggest that the carbohydrate content be increased to 60% or more of total energy intake with at least 45% of complex carbohydrate. This can be accomplished by increasing consumption of grains, vegetables and fruits.

Diets high in whole grains is high in complex carbohydrates, high in soluble and insoluble fiber, moderate in energy and low in fat and a good source of other nutrients such as vitamins and minerals. This dietary pattern has been associated with reduced risk of a variety of chronic diseases, like coronary heart disease. (Hyattsville, 1992 and Topping, 2001). One recent trend is to increase the fiber component in food product to overcome health problems like hypertension, diabetes and hyperlipidemia.

Barley is one of the earliest cultivated grains in the world. It is used as a staple food in Europe and USA, while in Egypt it is used mainly for malting and brewing or in animal feed. However because of the recognition of the high-soluble fiber concentration of barley grain and  $\beta$ -glucan in particular, there is now reemerged interest in barley as a food component.

Compared with other cereals, barley has relatively high levels of  $\beta$ -glucans about 2-11 g/100g (MacGregor and Fincher, 1993 and Almirall *et al.*, 1995). Soluble dietary fiber and  $\beta$ -glucan are