

INTRODUCTION

Diabetes mellitus comprises an etiologically and clinically heterogeneous group of hyperglycemic disorders (*Unger and Foster, 1992*). Diabetes mellitus has increased worldwide during the last decade. It is one of the major causes of disability and death due to its complications (*Wallberg et al., 1998*).

Neuropathy of autonomic nervous system is common in patients with diabetes of long duration and can be very disconcerting clinical problem (*Karan and Forshan, 1994*).

It is generally accepted that the metabolic regulation of non-insulin dependant diabetic patients is influenced by their diet and physical activity. In postabsorptive state, exercise of moderate intensity has been shown to decrease plasma glucose concentration and is followed by increase in insulin sensitivity (*Martin et al., 1995*).

In non insulin dependant diabetes, the potential benefits of exercise are obvious and the serious hypoglycemia is relatively low (*Goodyear and Smith, 1994*).

Since physical work results in increased glucose uptake by muscle. It is not unexpected that a single bout of exercise causes increased rate of whole-body disposal of glucose (*Mikines et al., 1988*).

Measuring respiratory, metabolic and cardiovascular responses to exercise helps to explain why effort tolerance may be limited (*Laszlo, 1994*). Physical activity affects oxygen consumption and carbon dioxide production more than other forms of physiological stresses (*Mcardle et al., 1991*).

AIM OF THE WORK

The aim of the work is to assess some ventilatory functions and blood glucose level in response to a single bout of exercise in non insulin dependant diabetes mellitus patients with autonomic neuropathy and comparing them with non insulin dependant diabetes mellitus patients without autonomic neuropathy.