



JobCare

Occupational Health Services

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Type II Diabetes in the Fire Service

Type 2 diabetes is defined as diabetes which occurs due to insulin resistance rather than absolute insulin deficiency. In other words the beta cells of the pancreas continue to produce insulin, though the amount is inadequate as the cells of the body are not very sensitive to insulin. Worldwide it is estimated that over 100 million people have type 2 diabetes and over 90% of these have type 2 diabetes. It is therefore the 'common' form of diabetes. It is also a disease of older people and increasing numbers of patients are seen in ageing populations.

Type 2 diabetes is strongly linked with overweight, sedentary lifestyle and excess intake of high calorie or energy-rich foods. It is also associated more commonly with high blood pressure and abnormalities of blood fats such as cholesterol which together give a high risk of cardiovascular disease (heart attacks, strokes and circulatory problems in the legs). Over 75 % of people with type 2 diabetes die of these conditions and it is estimated that life expectancy is reduced by 5-10 years.

How did I get it?

There are many factors, some of them genetic, others environmental which are thought to contribute your chance of getting type 2 diabetes. There is strong evidence for a genetic link, as between 60-100 % of identical twins share this condition whereas less than 20 % of non-identical twins would be 'concordant' (both twins affected).

Being overweight, is now a major problem of lifestyle in western societies. More than half of adults are considered to be overweight. It must be emphasised however, that most obese people do not develop diabetes and not all individuals with type 2 diabetes are obese!

Lack of exercise is the other important 'environmental' factor in the development of obesity and it has been shown that people who exercise regularly are more sensitive to insulin.

What are the symptoms?

The symptoms of type 2 diabetes are exactly the same as those encountered in type 1 disease.

- Increased passage of urine
- thirst
- awakening at night to drink and void urine
- blurring of vision
- infections such as frequent urinary infections, skin infections (boils)
- lethargy

What are the complications?

Type 2 diabetes was described in the past as 'mild' diabetes as it could often be managed by diet alone and did not require insulin. It is now recognised as a serious condition with profound complications if untreated. Much of the morbidity (sickness) associated with type 2 diabetes stems from the associated cardiovascular problems.

Complications may be divided into two main groups - the vascular problems and the other complications of diabetes which are due to the metabolic effects of diabetes. They are listed below and described in detail elsewhere.

- coronary heart disease
- stroke
- peripheral vascular disease (poor circulation in the legs)
- infections
- diabetic kidney disease
- diabetic eye disease

How is Type 2 diabetes treated?

- A healthy diet is the cornerstone of managing type 2 diabetes. The aims are to reduce the overall intake of energy and fat maintaining normal body weight.
- It is known that reducing body weight in obese people reduces the risk of cardiovascular disease, lowers blood pressure and improves the composition of blood fats. Life expectancy is extended in people with type 2 diabetes.
- A diet high in carbohydrates and fibre while low in fat is now considered to be beneficial. These diets do not reduce energy intake unduly but reduce hyperinsulinaemia and the tendency to deposit fats in the vessel walls.

Through proper diet and nutrition, many fire fighters with Type II Diabetes are able to enjoy a healthy, long term employment in the Fire Service. Be prepared to meet the stress and challenges of the job by knowing your blood glucose levels and regulating them as advised by your physician. Long term management of diabetes can be monitored through A1c testing.

Going quickly are the days where firefighters don't need to be fit. With all of the studies about firefighter deaths and fitness resources that are available to us today, there is no excuse to not be exercising or getting into some type of shape. Being a firefighter is a high-risk job for more reasons than just the immediate daily dangers. Protect yourself, through education, exercise, nutrition and health exams.

Resources: OSHA, CDC, ADA, NFPA

For more information on how JobCare can serve your Fire and Emergency Response Department, contact us at 218-312-3017 or visit us online at www.jobcare.biz. Blood glucose monitoring and A1c screening are available and can be scheduled for on-site services.