

Line to Take

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SUBJECT: Physical activity

- Physical activity is a key issue in the prevention and monitoring of diabetes. Ideally, people should exercise one hour three times per week or 30 minutes daily.
- People are doing less and less physical activity and in some countries physical activity is even disappearing from daily life. In particular, in developed countries physical inactivity is the norm! IDF Europe is advocating for this vicious cycle to be broken.
- IDF Europe promotes physical activity of any kind and thinks that children should be educated to enjoy doing sport. Statistics say that obese children are more likely to miss school and that lower fitness can be associated with lower test scores, and as consequence lower income. In addition, PWD need money to treat their condition and at the same time they are more likely to have more sickness days. In the worst case, all these factors lead to premature death. Children of inactive parents are far less likely to be active compared to people of the same age. To improve this situation there should be emphasis on schools to promote the importance of being physically active.
- IDF Europe promotes the importance of physical activity and believes that PWD could benefit from it. Exercise enables:
 - better HbA1C result
 - weight loss
 - delay diabetes complications
 - improve insulin sensitivity
 - enlarge glycogen store to protect people from the dangers of low blood sugars
 - reduce blood pressure
 - prevent cardiovascular disease
 - improve blood circulation and tone muscles
 - improve lipid profile

Background

The WHO Global Strategy on Diet, Physical Activity and Health promotes and protects health through healthy eating and physical activity. This initiative involves key stakeholders including Member States, WHO, International partners, Civil society and non-governmental organizations, private sector. The four main objectives of the plan are:

- Reduce risk factors for chronic diseases that stem from unhealthy diets and physical inactivity through health actions

- Increase awareness and understanding of the influences of diet and physical activity on health and the positive impact of preventive interventions
- Develop, strengthen and implement global, regional, national policies and action plans to improve diets and increase physical activity that are sustainable
- Monitor science and promote research on diet and physical activity

IDF is one of the founder members of the Non-Communicable Diseases (NCDs) Alliance, which prepared a briefing paper calling for commitment to action on several areas, which focus not only on international but also on National policies and their need to encourage walking, cycling, and active travel, play and leisure. The paper also refers to the WHO Global strategy on diet, Physical Activity and Health and underline the fact that this plan has to be widely adopted to ensure effective policies are in place to address nutrition and physical activity related risk factors for NCDs. A call was also made for putting in place legislation to promote the provision of open spaces and widespread dedicated walking and cycling facilities throughout built and external environments.

Case study: Diabetes UK

Diabetes UK also focuses on physical activity and dedicates a whole section of its website to the promotion of an active life. In addition, they collaborate with “Fit for sport”, an association which provides tools to keep children active and make them enjoying physical activity.

Overview of some of IDF Europe’s activities

Since 2011 IDF Europe has been organising a Youth Camp which takes place every year. The aim of this educational week is to involve people from 18 to 30 years old and to promote the importance of physical activity to monitor type 1 diabetes (for further information see “Youth” LTT)

In September 2013 IDF Europe will run the “Grand Tour” 13-day cycling ride in collaboration with GSMA, the umbrella organisation of mobile operators. During the ride people will control their glucose level using mobile applications (mHealth).

This event focuses on the use of mobile applications but also on proving that people with diabetes can and need to do physical activity as anyone else.

For further information: <http://www.mhealthtour.com/>

During the 2012 World Diabetes Day IDF Europe stressed the importance of physical activity to avoid obesity in children.

On 14 November 2012, IDF Europe also held a breakfast meeting on healthy eating and physical activity. The event was attended by 50 participants, including MEPs, EU staff and other key stakeholders in the health sector in Europe. The line-up of speakers for the event included dieticians, food-policy experts and professional athletes living with diabetes.

In November 2013 the same event will be organised.

Some practical tips

How to get started?

Before starting a regular exercise programme, see your doctor for a full medical examination. There are also a few things you need to take into consideration:

Take it slowly: You do not want to start off with too much intensity.

First: The glucose levels during and after the exercise may be difficult to handle

Second: If you are not used to exercise, you may feel pain the next day. Do not start off too strong or else sports may not be an enjoyable experience!

Always increase the intensity of the exercise slowly

Amount of exercise?

Ideally, you should be doing 1 hour of exercise three times per week or 30 minutes of exercise per day.

What you have to do before exercising?

- *FOR INSULIN PEN USERS: Be sure 2 or 3 hours have passed since your last rapid-active insulin injection. If you are training having rapid-active insulin in your body may put you at risk of hypoglycemia.*
- *FOR INSULIN PUMP USERS: Reduction of basal insulin before/during /after the exercise will be needed. Talk with your doctor to identify how best to proceed and discuss an adopted and appropriate therapy together.*
- *Check your blood sugar before exercise*
- *A carbohydrate-based (low GI) pre-exercise meal, 1-3 hours before the exercise, is recommended*
- *If your blood glucose is higher than 300mg/dl (1.67 mmol/L) – your blood sugar may be too high to exercise safely, putting you at risk of Ketoacidosis. Test your level of ketones. Discuss this situation with your doctor or diabetes nurse.*

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During exercise?

For aerobic (i.e. an activity that allows you to speak during exercise) or anaerobic exercise (i.e. an activity that does not allow you to speak during exercise) try to check your blood glucose level every 30 minutes during the exercise. As the time goes on, you will learn how your body reacts to exercise and you will be able to exercise for 1 hour without checking your blood glucose level. If you train for more than 1 hour, it is best to measure the blood sugar level every 30 minutes to 1 hour to avoid either hypoglycemia or hyperglycemia.

After the exercise?

Monitor blood glucose during the period of exercise and possible 2-6 hours after the exercise. Do not get surprised if your **blood sugar level goes up a little when you stop training**, especially after a high intensity exercise. That is because your body is still “going fast” and you have an excess of stress hormones circulating in your blood and counteracting the work of insulin. In this situation it may be necessary to take a few units of rapid-acting insulin immediately after the training to inhibit the increase of glucose. But later on, after 2 hours, it is really important to be careful when injecting insulin for the meal following the exercise. **Approximately 10 to 30% reduction** of the rapid-acting insulin may be needed because of the exercise that was previously carried out.

When getting ready for exercise, do not forget to take your glucose meters, your insulin and a snack in case you need to eat!

Please note that IDF Europe is not in the capacity to provide a single set of guidelines that will suit all individuals living with diabetes and that the present document does not replace expert and medical advice. Each person living with diabetes should consult their diabetologist and dietitian concerning physical activity. What is more important, they have to use trial and error to find the best approach that will suit them.

Also note that the present document is mainly addressed to people living with type 1 diabetes.

Annex – Key document

NCD Alliance briefing paper on nutrition and physical activity:

http://ncdalliance.org/sites/default/files/resource_files/Full%20Briefing%20Paper.pdf

www.idf.org: diabetes and physical activity

WHO Global Strategy on Diet, Physical Activity and Health:

<http://www.who.int/dietphysicalactivity/en/>