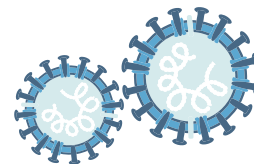


GUIDELINES FOR THE PROTECTION of individuals with Diabetes Mellitus from Coronavirus (Covid-19)



The Hellenic Diabetes Association (HDA) in alignment with the International Diabetes Federation (IDF), with a view to prevention and management of coronavirus by individuals with Diabetes Mellitus and any issues that may occur, has published the guidelines available below

DIABETES MELLITUS

Individuals with diabetes are more susceptible to infections and face a **2-3 times greater risk of becoming ill with coronavirus**, regardless of whether they suffer from any other underlying health problems or not. According to a recent message by the President of IDF, Professor Andrew Boulton, infection with coronavirus appears to be relatively mild in younger people with type 1 diabetes, especially children.

In general terms, factors that increase the risk of infection in individuals with diabetes are the following:

- **Poor glucose control** (high blood sugar levels weaken the immune system)
- **Longer duration of diabetes**
- **Severe obesity**
- **Old age**
- **Smoking**
- **Presence of chronic diabetes complications** (mainly related to the cardiovascular system and kidneys)



CORONAVIRUS AND DIABETES MELLITUS

At the end of 2019, a new strain of coronavirus was identified as a cause of pneumonia cases in Wuhan, China. Coronavirus has spread rapidly, with the virus outbreak first sweeping through China and then spreading to almost all continents, thus being declared a "pandemic" (World Health Organization, 11.03.2020)



USUAL ROUTES OF TRANSMISSION



- 1 From person to person through droplets produced from the mouth during talking, coughing or sneezing, or during physical contact (e.g. hugging, kissing, handshaking)



- 2 By touching contaminated surfaces (e.g. tables, door handles) and then touching your mouth, nose or eyes

Coronavirus typically survives for approximately 2-3 hours on surfaces, but may persist much longer at low temperatures and low atmospheric humidity.

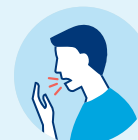
Incubation time is typically around 5 days, but may reach even up to 14 days. Coronavirus can be neutralized on surfaces using an alcohol-based solution (over 40%)

Symptoms are typically mild and

98% of those who contract the disease survive

From those infected, **over 80% experience mild symptoms** similar to those of the common cold and can recover at home:

- Runny nose
- Cough
- Sore throat
- Headache
- Unexplained tiredness
- Fever



In ~14% of the cases, the virus gets deeper in the lungs and causes pneumonia with more severe symptoms (difficulty breathing). However, in 5% of the cases this condition may become critical, by experiencing respiratory failure, sepsis and multi-organ failure

HIGH-RISK GROUPS

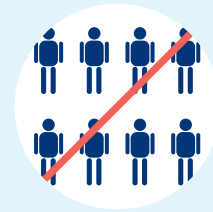
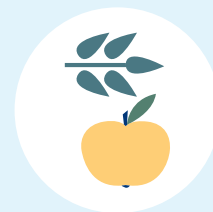
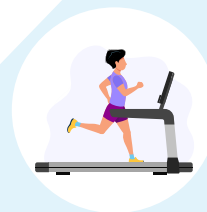


The disease is typically more severe in individuals with underlying health problems, particularly people with obesity, older people and those suffering from cardiovascular disease, chronic lung diseases, hypertension and diabetes (same as with influenza).



PREVENTIVE MEASURES to protect yourself from coronavirus

- 1 Maintain good regulation of blood glucose levels
- 2 Physical activity/exercise
- 3 **Adequate hydration**, consumption of foods or drinks rich in antioxidants (such as fruits, vegetables, green tea) and avoidance of processed foods optimize your immune system's defense
- 4 Wash your hands regularly with soap and water or use an alcohol-based solution
- 5 Avoid social contacts or maintain distance (minimum 1 metre) from people who have symptoms or are obviously ill. When coughing or sneezing, cover your nose or mouth with a disposable tissue and then discard it into a bin
- 6 The World Health Organization recommends that for people **without respiratory symptoms**, wearing a medical mask in the community is not required, even if COVID-19 is prevalent in the area; wearing a mask does not decrease the importance of other general measures to prevent infection, and it may result in unnecessary cost and supply problems
- 7 Ensure that there is direct access to emergency telephone numbers in case of infection and that you have sufficient supplies of medicines (particularly insulin) and consumables for self-testing blood glucose levels, so that you do not have to leave the house, if infected
- 8 Eliminate unnecessary contacts and movements, especially in gatherings of more than 4-5 persons



If you are infected and experience symptoms (particularly from the respiratory system):

- 1 First inform your treating physician before rushing to the hospital
- 2 If communication with your treating physician is not possible, you may contact **EODY (National Public Health Organization) at the four-digit number 1135** (this is country specific)
- 3 If you are eventually instructed to stay at home, virus transmission to those living with you or any visitors must be prevented
- 4 Sleep in a separate room or bed and use a mask, while it is also important not to share the same tableware (spoons, cutlery etc.)
- 5 After thoroughly washing your hands, it is advisable to use single-use, disposable paper towels. If this is not possible, each one must have their own towels, which must be replaced once moist

As with all viral infections, people infected with coronavirus may experience a dysregulation of their blood glucose control. In such cases, they must immediately contact their treating physician, as the body's insulin requirements increase and thus medical treatment and nutrition must be properly adjusted.

GENERAL RULES

- 1 Maintaining **adequate hydration** is absolutely necessary (minimum half a glass of water every hour) in order to keep your circulatory system and cellular metabolism in a good condition
- 2 Monitor your **blood glucose levels** in capillary blood regularly, using self-testing devices and try to maintain them in acceptable levels (80-180 mg/dl) following your treating physician's instructions
- 3 In individuals with type 1 diabetes, as well as with type 2 diabetes on insulin therapy regimens measuring **capillary blood ketones** is necessary. Increased ketone levels may indicate a metabolic switch to fat burning instead of glucose and may lead to ketoacidosis (DKA).
- 4 In subjects with type 2 diabetes treated with anti-hyperglycemic agents and are well regulated, insulin reserves are relatively adequate and they do not develop serious problems during an acute illness. If therapeutic regimens involve metformin or SGLT2 inhibitors (dapagliflozin, empagliflozin, canagliflozin), these must be immediately interrupted with the onset of **acute illness** (particularly if this is accompanied by dehydration) and continued after its resolution. SGLT2 inhibitors are highly effective for glycemic regulation and protection from cardiovascular and kidney complications and are widely used in clinical practice (often combined in a single tablet with metformin)
- 5 Guidelines on treating diabetes in acute disease are available in the "**Guidelines for the Management of Individuals with Diabetes Mellitus**", from the Hellenic Diabetes Association, with free access to its site (www.ede.gr)

Finally, **it is highly important to closely follow the instructions given by the Ministry of Health** to mitigate the spread of coronavirus. The management of this new and potentially dangerous epidemic, both individually and collectively, is a **responsibility of us all**.

Further information is available on the Hellenic Diabetes Association website www.ede.gr



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