

‘Health and hajj’

Outlines:

- I. Personal risk factors in hajj
 - A. Age.
 - B. Immunocompromised patients.
 - C. Lack of immunization.
 - D. Health problems.

- II. Environmental health risk factors in hajj.
 - A. Weather
 - B. Various microbiological agents
 - C. Crowdedness.
 - D. walking for a long distance.

- III. Common diseases during hajj.

- IV. Chronic diseases during hajj.
 - A. Hypertension.
 - B. Diabetes.
 - C. Asthma.
 - D. Epilipsy.
 - E. Renal diseases.

- V. Communicable diseases during hajj.
 - A. Meningococcal disease.
 - B. Respiratory tract infection.
 - C. Yellow fever.
 - D. cholera.

- VI. General tips for preventions.
 - A. Before hajj.
 - B. During hajj.
 - C. After hajj.
 - D. Corona virus.

- VII. Hajj vaccinations

Personal risk factors:

I. Age¹:

Being old increases the risk of many diseases and increases the importance of taking care of yourself and your health.

II. Immunocompromised patients²:

can be caused by a number of conditions: (Genetics, acquired infections Medications, chronic diseases, renal diseases).

III. Lack of immunization:

Pilgrims should take the **required vaccines** to prevent many serious infections. However some **do not** and that will put them at a higher risk. So The Ministry of Health of Saudi Arabia has issued the following requirements and recommendations for entry visas for the Hajj in 2017³.

IV. Health problems

People who suffer from **chronic illnesses**⁴ such as: cardiac, kidney, respiratory diseases and diabetes are at risk of further complications during hajj season, because:

- Many pilgrims are **caught up** by the spiritual experience of hajj.
- They are **immunocompromised**.
- Hajj requires **too much effort**.

Environmental Health Risk Factors in Hajj⁵:

I. Weather:

- Hot weather quickly brings out the worst in odors, and since the trash cannot be removed promptly, it causes odors and attracts flies and an environment is created whereby disease can quickly transfer from one person to another.
- Sunstroke.

II. Various microbiological agents:

- Flies are strongly suspected of transmitting at least 65 diseases to humans, including typhoid fever, dysentery, cholera, poliomyelitis, yaws, anthrax, tularemia, leprosy and tuberculosis.

III. Crowdedness:

- The lack of infrastructure and space (Mecca is a small town), with so many people congregating in the same place yearly, poses an environmental hazard caused by the generation of mounds of garbage.

IV. walking for a long distance (Mina and Arafat is 14.4 Km)

- Muscle Pain, Dehydration

Common Diseases during Hajj:

¹ (n.d.). WHO | Ageing and health. Retrieved November 19, 2017, from <http://www.who.int/mediacentre/factsheets/fs404/en/>

² (n.d.). Overview of Immunodeficiency Disorders - Immune Disorders - MSD Retrieved November 19, 2017, from <http://www.msmanuals.com/home/immune-disorders/immunodeficiency-disorders/overview-of-immunodeficiency-disorders>

³ "WHO | Health conditions for travellers to Saudi Arabia for the" 4 Aug. 2017, <http://www.who.int/ith/updates/20170408/en/>. Accessed 20 Nov. 2017.

⁴ "Health Guidelines - Chronic Diseases." <https://www.moh.gov.sa/en/Hajj/HealthGuidelines/Pages/ChronicDiseases.aspx>. Accessed 20 Nov. 2017.

⁵Solving Environmental Hazards For Millions Of Hajj Visitors Forbes East-Rani Singh - <https://www.forbesmiddleeast.com/en/solving-environmental-hazards-for-millions-of-hajj-visitors/>

- Respiratory diseases.⁶
- Gastrointestinal (digestive) diseases.
- Food poisoning.
- Dermatology (skin diseases).⁷

Chronic Diseases in Hajj⁸:

I. Hypertension:

Dangers in Hajj: Lost medication, noncompliance, Aneurysm, Stroke, Heart Attack, Angina during tawaf or throwing stones, increased physical exertion.

Safety Measures: Consult doctor, store medications safely, comply to medications, especially during forced activity, Angina → SL nitroglycerin, Chest pain → go to nearest hospital, Avoid excessive physical exertion, use a wheelchair if needed, Avoid irritability.

II. Diabetes:

Dangers in Hajj: Hypoglycemia, DKA, coma, lost medications, noncompliance, inadequate food intake

Safety Measures: Wear bracelet, carry medical report, Inform people nearby of your illness, Store and transport insulin in a cool place, Hypoglycemia → Glucagon injection, Avoid walking barefoot, comfortable footwear, Electric shavers, disinfectants; Carry blood-glucose checking kit, Adequate meals.

III. Asthma:

Dangers in Hajj: Crowding, stress, pneumonia, exercise, acute asthmatic attack, fatigue, status asthmaticus, lost inhaler, hypoxemia, hypercapnia, acidosis, respiratory failure, lung collapse

Safety Measures: Consult GP on stability of condition, Take prophylactic *and* rescue medications with you in a safe place, Adherence to medication, Frequent rest, Avoid overcrowding, Wear face-mask, Severe attack → Go to nearest health center.

IV. Epilepsy:

Dangers in Hajj: Sensory triggers, overcrowding, status epilepticus, seizure, hypoxia, acidosis, permanent brain damage, trauma, death

Safety Measures: Consult GP on stability of condition, If epilepsy is uncontrolled: do not to perform Hajj, If epilepsy is well-controlled: medication compliance is critical, Bring family members along, If unable, inform others of your condition and teach them what to do in case of seizure, Avoid exposure to stress and sensory triggers.

V. Renal Disease:

Dangers in Hajj: Uremia, HTN, HF, Pericarditis, Uremic pulmonary edema, nausea, vomiting, uremic encephalopathy, hypocalcemia, restless leg syndrome, AKI in bilateral renal stones

Safety Measures: Consult GP on stability of condition, Take medications with you in a safe place, Adherence to medication, Proper water and salt intake, Consult campaign's doctor in case of gastroenteritis or UTI, Avoid excessive sun exposure to avoid water and salt loss, Avoid eating meat

For All Chronic Diseases :

- Consult your physician beforehand to prescribe the appropriate medications during the pilgrimage.
- Comply and adhere to those medications.

⁶ "Respiratory tract infection during Hajj - NCBI - NIH." <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2700482/>. Accessed 19 Nov. 2017.

⁷ "Articles - Skin Diseases during Hajj." 29 Oct. 2011, <https://www.moh.gov.sa/en/Hajj1432/DataCenter/Articles/Pages/Skin-Diseases-during-Hajj.aspx>. Accessed 19 Nov. 2017.

⁸ "Health Guidelines - Chronic Diseases." <https://www.moh.gov.sa/en/Hajj/HealthGuidelines/Pages/ChronicDiseases.aspx>. Accessed 20 Nov.

- Wear a wrist bracelet showing your name, age and nature of your illness.
- Carry a detailed medical report about your condition and the prescribed treatment.
- Bring a sufficient quantity of prescribed drugs and save them in a safe, suitable, accessible place.
- If you feel you are not able to complete Hajj, you can do your Saiee and Tawaf in a wheelchair .
- Stop any activity when you feel early signs of fatigue and stress .
- Visit the nearest health center in case of not feeling well even after taking rest and treatment.
- Avoid all bad eating habits that would worsen the case, such as excessive tea and coffee intake, eating fatty foods, and smoking.

Communicable disease during hajj⁹:

Meningococcal disease: During the Hajj, carrier rates for meningococcal disease (MCD) rise to a level as high as ¹⁰: 80% due to intense overcrowding, high humidity and dense air pollution. When rates of carriage rise to this level, the risk for meningococcal outbreaks becomes a real concern

Respiratory tract infection: Acute respiratory tract infections are very common during the Hajj, particularly so when the pilgrimage falls in the winter season. The close contact among pilgrims during periods of intense congestion, their shared sleeping accommodations (mainly in tents) and the dense air pollution all combine to increase the risk of airborne respiratory disease transmission.

Yellow fever¹¹: All travelers arriving from countries or areas at risk of yellow fever transmission must present a valid yellow fever vaccination certificate. The life-long certificate of yellow fever vaccination is valid for the life of the vaccinated person, starting from 10 days after the vaccination date.

Cholera¹²: travelers coming from countries with ongoing cholera outbreaks may be at risk and may develop symptoms after arrival to the Hajj premises.

International travellers should take protection measures against food- and water-borne diseases. These measures include: appropriate hygiene, such as hand washing with soap; drinking only clean or bottled water, safe preparation and storage of food.

In case of symptoms of diarrhoea and vomiting, the most important treatment is rehydration. Packets of oral rehydration salts are available from primary healthcare centers and hospitals.

Gastrointestinal disease¹³: Functional disorders are those in which the gastrointestinal (GI) tract looks normal but doesn't work properly. They are the most common problems affecting the GI tract (including the colon and rectum). Constipation and irritable bowel syndrome (IBS) are two common example.

blood borne disease¹⁴Exposure to blood or any body fluid The pathogens of primary concern are the human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV).

Polio myelitis: Poliovirus is spread by the fecal-oral route and by aerosol droplets. The poliovirus is shed in oral secretions for several weeks and in the feces for several months. The poliovirus destroys the anterior horn cells in the

⁹ "News - MOH Tightens Preventive Measures during Hajj Season to" <https://www.moh.gov.sa/en/Hajj/News/Pages/News-2016-08-11-003.aspx>. Accessed 20 Nov. 2017.

¹⁰ "WHO | Health conditions for travellers to Saudi Arabia for the" 4 Aug. 2017, <http://www.who.int/ith/updates/20170408/en/>. Accessed 20 Nov. 2017.

¹¹ "Health Regulations - Yellow Fever." <https://www.moh.gov.sa/en/Hajj/HealthGuidelines/HealthGuidelinesDuringHajj/Pages/YellowFever.aspx>. Accessed 20 Nov. 2017.

¹² "WHO | Health conditions for travellers to Saudi Arabia for the" 4 Aug. 2017, <http://www.who.int/ith/updates/20170408/en/>. Accessed 20 Nov. 2017.

¹³ "Digestive Disorders & Gastrointestinal Diseases | Cleveland Clinic." <https://my.clevelandclinic.org/health/articles/gastrointestinal-disorders>. Accessed 20 Nov. 2017.

¹⁴ "CDC - Bloodborne Infectious Diseases - HIV/AIDS, Hepatitis B Virus" 5 Apr. 2017, <https://www.cdc.gov/niosh/topics/bbp/default.html>. Accessed 20 Nov. 2017.

spinal cord.

General tips for preventions¹⁵:

1-Before hajj :

- Necessary vaccinations.
- Seeing a doctor before travelling
- Sufficient medications
- Enough cloths
- A report of the medical diagnosis
- Personal bag
- Blood sugar measurement device.
- Walk for a while every hour or two hours
- Medical tests for tuberculosis

2- During hajj :

- Hygiene and General Cleanliness Tips
- Protection Against Food Poisoning During Hajj
- Protection Against Heat Exhaustion and Sun Strokes

3- After hajj¹⁶ :

- Common complaints after Hajj include: Strain, muscle pains and aches, headache, cold, laziness, irregular sleep, and complexion-darkening
- Flue and how to manage it including how to make a point of not transmitting to others by (Using handkerchiefs, washing hands ,rest and drinking fluids,Taking analgesics) and seeing a doctor when necessary .
- Chronic diseases diagnosed during Hajj
- Physical fitness (so make the Hajj journey a motive to advance the general health and physical fitness)
- Health instructions during Hajj : 1-How to protect your health and health of others 2-How to protect yourself from food poisoning during Hajj 3-How to manage chronic diseases during Hajj
- Educational videos from the ministry of health

Corona virus: ¹⁷

- Symptoms: (fever, cough, shortness of breath, congestion of nose and throat, Diarrhea).
- How to prevent transmission:
 1. Wash your hands well and continually with water and soap, or with other disinfectants used for hand washing, especially after coughing, sneezing and using toilet.
 2. don't forget to wash your hands before and after handling or preparing foods, and when dealing with patients or their personal belongings
 3. Try as much as possible to avoid touching the eyes, nose and mouth with your hand, because it can transmit the virus after touching surfaces contaminated with the virus.
 4. Avoid as much as possible contacting with infected people.
 5. Use handkerchief when coughing or sneezing and cover your mouth and nose with it, then get rid of the handkerchief in a waste basket and make sure to wash your hands. If there are no handkerchiefs, it is preferred to cough or sneeze in the top of your arm, not in the hands (palms)

¹⁵ "Health at Hajj & Umrah | CBHUK." <http://cbhuk.org/health-hajj-umrah/>. Accessed 20 Nov. 2017.

¹⁶ "Publications - Health Instructions Brochure for Hajj And Umrah." <https://www.moh.gov.sa/en/Haji/PublicationsAwareness/Publications/Pages/Health-guidelines.aspx>. Accessed 20 Nov. 2017.

¹⁷ "Health Guidelines - Health Guidelines." <https://www.moh.gov.sa/en/CCC/InformationCenter>. Accessed 20 Nov. 2017.

6. Adhere to hygiene.
7. Pay attention to other health habits as the nutritional balance and physical activity, as well as taking enough share of sleep, as it helps to increase the body's immunity.

Hajj Vaccinations:

18

- Compulsory vaccinations:
 - Vaccination against yellow fever:
 - Meningococcal vaccination.
 - Polio vaccination.
- Additional recommended vaccinations.
 - Vaccination against seasonal influenza.
 - Respiratory Diseases Vaccines.