Online Newsletter of Primary Care Diabetes Association Pakistan— May 2025

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PCDA Pakistan Broadens Reach to Combat Diabetes with New Regions/ Chapters

Report: **DR. SHAHID AKHTER, General Secretary PCDA Pakistan**

Primary Care Diabetes Association (PCDA) Pakistan has been a leading force in diabetes care and education across the country for the past 16 years. Our efforts have spanned more than 60 cities across five regions, focusing on diabetes prevention and awareness at the grassroots level. From its humble beginnings as a small group of dedicated doctors, PCDA has grown into a nationally recognized organization.

We are proud to share that PCDA is now a full member of the International Diabetes Federation (IDF), and we are actively collaborating with D-Foot International and the World Health Organization (WHO)—a testament to our expanding global presence and impact.

Recently, PCDA was occupied with conducting its general elections and fulfilling the rigorous requirements of IDF membership. It was a demanding journey, but with the grace of Almighty Allah, PCDA is proud to announce that it has been awarded full IDF membership with an overwhelming 94.6% vote in our favor. Regarding PCDA's general elections, the entire process was transparently communicated through PCDA's WhatsApp groups. I deeply appreciate the support and trust shown by the members during this time. Your confidence in PCDA is both humbling and motivating.

As part of continued growth, PCDA Pakistan is undergoing an organizational restructuring. PCDA is in the process of reshaping its teams to better meet the evolving needs of the community. This process is ongoing and, importantly, cannot succeed without your involvement and support. I am pleased to introduce the newly elected members of the central cabinet and regional leadership:

Central Cabinet Members:

Dr. Riasat Ali Khan – President,
Dr. Asima Khan – President Elect,
Dr. Iqbal Batavia – Vice President,
Dr. Shahid Akhter – General Secretary,
Dr. Pawan Kumar – Joint Secretary; and
Dr. Qazi Mujahid – Finance Secretary

Regional Heads:

Dr. Abdul Samad – South Region,
Dr. Ahmad Shahzad – Central Region,
Dr. Firasat Tirmizi – North Region,
Dr. Shehzad Tahir – Federal Region and
Dr. M. Saleem Khan – AJK/GB Region

Important committees have also been restructured to improve efficiency and performance:

1. Newsletter Committee: Dr. Sulaiman Khan (Head), Dr. Khaleeq Warsi, Dr. Zahoor Shaikh, Nohail Ahmed (STEP)

2. Membership Committee: Dr. Ashraf Raheem (Head), Dr. Azeem, Dr. Naresh Kumar, Saud Abbasi (STEP)

3. Media Committee: Dr. Shakeel Ahmed (Head), Dr. Naseer Shaheen, Dr. Nizam Darwesh and Dr. M. Irfan Safi Rizwi

4. Social Committee: Dr. Majid Khan (Head), Dr. Sohail Shokat, Dr. , Dr. Nazeer Soomro and Dr. M. Irfan Shaikh

5. Research Committee: Dr. Fareeduddin, Dr. Izhan Khan, Dr. Faryal Tariq, Dr. Sohail Tariq and Dr. Tariq Hasan

6. Scientific Committee: (To be announced)]

New Team PCDA invite all members and friends of PCDA to actively share their thoughts, ideas, and suggestions to help PCDA continue to grow and improve. Your input is invaluable as PCDA strive to advance diabetes care and awareness throughout Pakistan.
With warm regards,

New

AJK/GB Region of PCDA Pakistan

PCDA AJK/GB Regional Committee

Muzaffarabad Division:
Prof. Dr. Abdul Khalid Awan

Poonch Division:
Dr. Jehangir Zaib

Mirpur Division:
Dr. Usman Shahid

Gilgit Baltistan Division:
Dr. Muzaffar Anjum

Chapter Heads of districts:

Kotli:	Dr. Khawar Ali Shah –
Mirpur:	Dr. Zahid Ahmad Khan –
Bhimber:	Dr. Faiza Parveen –
Rawlakot/Poonch:	Dr. Syed Sajid Bokhari –
Sudhnuti/Pallandri:	Dr. Khaliq Ur Rehman –
Muzaffarabad:	Dr. Umar Abdullah –
Neelum Valley:	]Dr. Khurshid Butt –
Bagh:	Dr. Naveed Akhter –

Members: Prof. Shazia Siddiq, Dr.Amjad Mehmood Khan, Dr. Arooj Sikander Malik, Dr. Intafada Aslam Muzaffer. Dr. Jawed Iqbal, Dr. Jehangeer Ahmed, Dr. Khaliq Ur Rehman, Dr. Khawer Ali Shah, Dr. Muhammed Fareed, Dr. Muhammed Ishaq, Dr. Muhammed Naveed, Dr. Muhammed Mehrban, Dr. Muhammed Umer Abdullah, Dr. Shafaq Asghar, Dr. Shahid Habib Khan, Dr. Syed Anwer Hussain, Dr. S M Sajid Ali Bhukhari, Dr. Zahid Ahmed Khan and 8 more whose membership is process.

Dr Mohammad Saleem Khan

FRCP (Glasgow), FRCP (Edin), FRCP (Ireland)
FACP, FPSIM, FCPS, MCPS, MBBS (Gold Medalist)
Chief Consultant Physician /Head of Department of Medcine. DHQ Teaching Hospital Kotli AJK, Pakistan.

Dr. Saleem Khan is engaged with Health Department og AJK Pakistan for last 34 years. He is Fellowship of Royal College of Physicians & Surgeons of Glasgow.
Fellowship of Royal College of Physicians of Edinburgh.
Fellowship of Royal College of Physicians of Ireland (FRCP).
Fellowship of Royal College of Physicians of London.
Fellowship of American College of Physicians (FACP).
Fellowship of college of Physicians & Surgeons of Pakistan (FCPS)
Membership of college of Physicians &Surgeons of Pakistan (MCPS).
Best Graduate Ayub Medical Colledge Abbottabad Pakistan
Worked as Focal person for arranging Academic Activities in Hospital including Clinicopathological Conferences fort-nightly for updating young Doctors &House Officers.
He has trained various batches of House Officers / Post Graduate Trainees, who did their membership and working in UK & other countries.
Arranged workshops & lectures for updating Doctors, Staff Nurses & all allied staff for preventive measure, treatment and trained the staff on PPEs and supervised departments of Medicine during pandemic of COVID-19.
Actively played role in formulating COVID-19 management guidelines.

Message from the Regional Head

Respected Members /Members Regional committee/ Chapter Heads
Assalam o Alikum.

I welcome all of you to be part of prestigious Diabetes Association which is a member of IDF.
We all need to work under umbrella of PCDA for the prevention of Diabetes and treating our already Diagnosed Diabetic patients increasing their awareness and education to achieve good Glycemic control and preventing / Decreasing Diabetic complications.

All chapters heads are requested to increase membership of PCDA of health professionals involved in treating Diabetic patients and adding them in group .
We also need your support and valuable inputs to achieve this goal.

May Allah shower His countless blessings on all of us Ameen

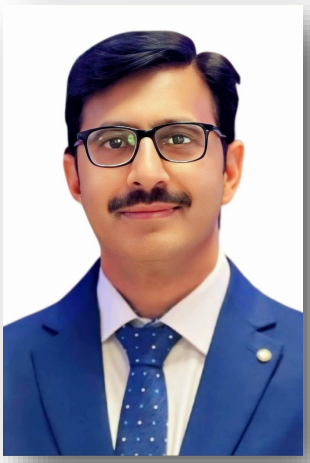
With profound Gratitude. Dr. M Saleem Khan

Pearls & Prides of AJK/GB Region

Dr Muzaffar Hussain Anjum.

Ex Medical Superintendent RHQ hospital Skardu .
Retired as chief consultant medicine and pulmonology.

Dr Syed Muhammad Sajid Ali Bukhari
MBBS,FCPS Medicine,CHPE
Assistant professor of medicine Poonch Medical College Rawalakot AJK
Consultant Medical Specialist
SKBZ/ Rawalakot AJK



Dr.Zahid Ahmad khan
MBBS, MCP(Family Med),
M.D.INTERNAL Med.
MRCP(U.K)Member ACCE(USA)
Certificate in Diabetes (AKU/RCP)
Royal college of physicians, London

Dr. Usman Shahid

Diabetologist, Fertility Consultant, Sexologist, Endocrinologist
M.B.B.S, MD, PGD
Clinical Ordinatura (Internal Medicine/ Endocrinology)
Diplomat Diabetes (BMU)
Diplomat American Board Clinical Sexologist (USA)
FSAIHS (Sexology)
Doctor of Human Sexology (South Africa)
CCD-BMJ (Royal College of Physicians & Surgeons, UK)
Certification of Advancement & Innovation in Diabetes Care (Boston University School of Medicine, USA)
Member American Diabetes Association (USA)
Member UK Diabetes (UK)
Member European Association for the Study of Diabetes
Member International Diabetes Federation (IDF)
Member National academy of medical science (EU)

Dr Khaliq ur Rehman

MBBS. FCPS, Centre Islamabad.
Belonging from Kotli AJK. Graduated from Nishtar Medical college Multan. Worked as Registrar in Islamabad Medical and dental college Islamabad and as Consultant Diabetologist in The Diabetes Centre Islamabad.
Currently serving as Classified Medical Specialist in THQ Baloch Sudhanoti and practicing in Anwar Memorial Hospital Kotli AJK.

Dr Muhammad Umer Abdullah

Senior Medical officer, member IDF,
Diabetic Care physician SKBZ CMH Muzaffarabad

*Head of the **GULF** Chapter*

Dr. Arooj Malik

M.B;B.S, M.C.P.S Family Medicine

Consultant at MKD Clinic Peshawer

Dr. Arooj Malik is an MBBS graduate from King Edward Medical University and a multifaceted healthcare professional—family medicine specialist, aesthetic physician, medical educator, entrepreneur, and public health advocate. She holds fellowships in aesthetic medicine (UK, USA), certifications in digital health, telehealth, ultrasound, clinical nutrition, dermatology, elderly care, and alternative medicine. She also has credentials in education (CHPE), digital skills, and Islamic studies. She's visiting faculty of Central Institute of Family Medicine.

Dr. Malik is the founder and admin of the Pakistani Doctors and Paramedics group in Bahrain, connecting over 500 members and managing online communities of 50,000+ across KSA, Bahrain, and Pakistan. She supports professionals with licensing, job guidance, and legal advice and offers volunteer teleconsultations globally. She is also certified by global institutions like WHO, Harvard, Oxford, and Stanford across various medical disciplines.

Find her on: https://www.linkedin.com/in/draroojmalik

Purpose of GCC PCDA chapter

Dr. Arooj Malik has proposed and initiated/founded the establishment of a Gulf Chapter of the Primary Care Diabetes Association (PCDA), aiming to enhance awareness, prevention, and management of diabetes across the region as per PCDA vision.

The GCC chapter will take forward PCDA vision of PREVENTION FIRST and will focus on organizing educational sessions, community outreach programs, and professional training while actively collaborating with local diabetes organizations in Gulf countries.

This initiative seeks to strengthen the role of primary care in diabetes care and promote unified, evidence-based approaches to tackle the growing diabetes burden in the region.

Some Founder Members of the Gulf Chapter of PCDA Pakistan

Dr. Syed Hasnain Gillani from KSA

MBBS,MCPS,MRCGP(INT),MRCPCH, DCH.

Family Physician with around 30 years of experience, working currently as Specialist Family Medicine in a prestigious organisation in Jeddah.
I Came to know recently that PCDA is starting GCC chapter. I would love to serve diabetic patients voluntarily as per my availability. In Sha Allah.

Dr Shazia Alam from Bahrain

The Chair of the Bahrain chapter of APPS ME and holds an MBBS from Dow University and an MSc in Health Policy and Management from Aga Khan University. She currently teaches at the University of Bahrain's College of Health and Sports Sciences.
With over a decade of experience in public health, especially in Maternal and Child Health (MCH) in low-income settings, she has expertise in project management, donor relations, M\&E, advocacy, training, and telehealth. She has led MCH programs for NCMNH in Pakistan and worked with The Aman Foundation and Greenstar. Dr. Alam is deeply committed to improving community health and actively engages in awareness and research efforts. She's willing to create awareness for Diabetes prevention.

Dr Ayesha khalid - Riyadh

Dr. Ayesha Khalid, a General Practitioner with a strong clinical background and ongoing MRCP UK and MCPS training, is dedicated to improving primary care for underserved populations. She has volunteered at the Pakistan Embassy Clinic in Riyadh and participated in multiple free medical camps, gaining insight into the health challenges of the Pakistani community, especially in managing chronic diseases like diabetes. Her interest in community-focused, preventive healthcare aligns with the mission of the Primary Care Diabetes Association (PCDA). She aims to support PCDA through culturally sensitive diabetes education, early screening, and lifestyle modification initiatives, while also organizing outreach and training programs to empower patients and healthcare professionals.

Dr Ghania - Jeddah

Dr. Ghania Ajaz Nadeem is a general practitioner at Sameera Medical Centre in Saudi Arabia with over 15 years of clinical experience. She holds an MBBS from Dow University and is pursuing an MSc in International Public Health from Liverpool John Moores University. With additional certifications in Healthcare Quality Management and Lean Six Sigma, she has contributed to community health through volunteer work, including telehealth services during the COVID-19 pandemic and participation in health camps As a member of the Primary Care Diabetes Association (PCDA), she aims to foster collaboration among diaspora doctors and support public health initiatives, especially through the newly launched PCDA-GCC Chapter.

Dr Sonia Waqar Syed- Jeddah

Dr. Sonia Syed Waqar syed is Jeddah based PMDC-registered General Health Care Physician with a Master's degree in Internal Medicine from the UK and certification in Telemedicine from DUHS. Her clinical approach is grounded in holistic, evidence-based care, with a strong emphasis on preventive medicine and chronic disease management, particularly within community settings.

Diabetes care is a central focus of her practice, both professionally and personally. Having reversed her own prediabetes through lifestyle changes and with a strong family history of the condition, she brings both medical expertise and lived experience to patient care. Dr. Syed delivers accessible, guideline-based care through both in-person consultations and telemedicine platforms.

She seeks to join the Primary Care Diabetes Association to connect with like-minded professionals, stay informed on current best practices, and contribute meaningfully to the advancement of diabetes care in primary healthcare settings.

Dr Faizah From UAE

Dr. Faizah Ayaz Khan, a qualified MBBS doctor from JPMC and a mother of four, has recently completed training in medical coding. Her professional background includes serving as a Medical Specialist with Bupa Medical Insurance and working as a telemedicine doctor for COVID-19 patients and elderly care through the government organization Educast, where she remains actively involved. She has also completed specialized courses from Stanford University focused on managing global healthcare crises. Dr. Khan is keen to join the PCDA – GCC Chapter to contribute to raising awareness about diabetes in the region.

Dr Uzma- Jeddah

Dr. Uzma Waqas Abbasi is a graduate of Liaquat University of Medical and Health Sciences, with 15 years of experience in General Practice across Pakistan and Saudi Arabia. She is currently working at Al Abeer Medical Group in Jeddah. Dr. Abbasi is certified in Clinical Documentation Improvement (CDI) and actively engages in Continuing Medical Education (CME) to remain updated with the latest advancements in her field. She is also enthusiastic about joining the PCDA GCC Chapter to help raise awareness about diabetes and promote its prevention in the region.

Dr Sumaira Arif- Makkah

Dr. Sumaira Arif is a Family Medicine Specialist with over 20 years of experience working under the Ministry of Health.
She has extensive expertise in the diagnosis, treatment, and long-term management of diabetic patients, with a strong emphasis on early detection, lifestyle interventions, and patient-centered care.

Beyond her clinical practice, Dr. Sumaira is an active volunteer with PWS .
She is passionate about raising awareness of diabetes and empowering individuals with the knowledge to make informed health decisions.

Dr. Sumaira is particularly interested in collaborating with PCDA to promote diabetes awareness across the Gulf region. She is eager to contribute her experience to support educational campaigns, preventive strategies, and community engagement efforts aimed at reducing the burden of diabetes in the region.

Dr. Aniqa Inam - Joining the PCDA Movement

As a dedicated physician with a strong foundation in medicine, including MBBS and MRCP Part 2 (written), I am deeply committed to patient care and advancing healthcare in Pakistan. Joining the Primary Care Diabetes Association (PCDA) is a natural extension of this commitment, aligning with my passion for improving diabetes awareness, prevention, and management. I aim to contribute to PCDA's mission by empowering patients to take control of their health, reducing diabetes-related complications, and promoting healthier lifestyles. Additionally, I hope to support my fellow healthcare professionals in staying updated on the latest diabetes care practices, ensuring evidence-based, high-quality care for all.

Abstracts from

IDF Global Clinical Practice Recommendations for Managing Type 2 Diabetes

Selected By:

Dr. Suleman Khan
Head of Kohat Chapter of PCDA Pakistan

RECOMMENDATIONS

<table>
<tr><th></th><th colspan="2">Optimal Care</th><th>Basic Care</th></tr>
<tr><td>Criteria for defining diabetes and intermediate hyperglycaemia</td><td colspan="3">
<table>
<tr><th></th><th>WHO criteria</th><th>ADA criteria</th></tr>
<tr><td colspan="3">Diabetes</td></tr>
<tr><td>Fasting plasma glucose (FPG)</td><td>≥7.0 mmol/L (126 mg/dL)</td><td>≥7.0 mmol/L (126 mg/dL)</td></tr>
<tr><td>2 h plasma glucose*</td><td>≥11.1 mmol/L (200 mg/dL)</td><td>≥11.1 mmol/L (200 mg/dL)</td></tr>
<tr><td>HbA1c</td><td>≥6.5% (48 mmol/mol)</td><td>≥6.5% (48 mmol/mol)</td></tr>
<tr><td colspan="3">Intermediate hyperglycaemia</td></tr>
<tr><td colspan="3">Impaired fasting glucose (IFG)</td></tr>
<tr><td>Fasting plasma glucose</td><td>6.1–6.9 mmol/L (110–125 mg/dL)</td><td>5.6–6.9 mmol/L (100–125 mg/dL)</td></tr>
<tr><td colspan="3">Impaired glucose tolerance (IGT)</td></tr>
<tr><td>2 h plasma glucose*</td><td>7.8–11.0 mmol/L (140–199 mg/dL)</td><td>7.8–11.0 mmol/L (140–199 mg/dL)</td></tr>
<tr><td>HbA1c</td><td>–</td><td>5.7%–6.4% (39–47 mmol/mol)</td></tr>
</table>
</td></tr>
<tr><td>Options for screening for diabetes and intermediate hyperglycaemia</td><td colspan="3">Target group: determine locally
Risk assessment:
• Risk scores – developed locally or adapted to local factors
• Risk factors – excessive weight, family history, gestational diabetes history, etc.
Biochemical testing options:
• FPG
• 2 h OGTT
• HbA1c
1 h PG during 75 g OGTT is an emerging option
Select the screening protocol based on available resources and capacity to intervene (in those identified as high-risk) with a diabetes prevention programme</td></tr>
<tr><td>Diabetes prevention programmes for high-risk individuals</td><td colspan="2">• Offer a locally developed or adapted 6–12-month structured lifestyle modification diabetes prevention programme aiming for 5% weight loss if overweight/obese.
• Consider metformin as additional intervention
• Provide regular reassessment of individuals
• Support the programme with data systems
• Regularly monitor and evaluate the programme</td><td>Consider the feasibility of implementing a community-based lifestyle modification diabetes prevention programme</td></tr>
<tr><td>Diabetes prevention population strategies</td><td colspan="2">Implement population programmes to encourage healthier eating, increased physical activity, and healthy weight</td><td>Consider population programme to encourage healthier eating, increased physical activity, and healthy weight</td></tr>
</table>

SCREENING AND PREVENTION

Table 1.1 Comparison of tests to diagnose diabetes and define intermediate hyperglycaemia

	FPG	OGTT	HbA1c
Fasting required	Yes	Yes	No
Test preparation	Fasting	Pretest CHO intake	Nil
Convenience	Reasonable	Low	Good
Global access and affordability	Highest	Intermediate	Intermediate
Pre-analytic stability	Poor – influenced by sample handling		Good
Assay standardisation	Not standardised		Standardised but varies globally
Biological variation	Intermediate	High	Low
Within-person variation	High		Low
Acute factors affecting result	Food intake, stress, activity		Not affected
Other factors affecting results	Diurnal variation Older age Medications		Haemoglobinopathies Altered red cell turnover, uraemia Ethnicity
Diagnostic sensitivity (compared to OGTT)	Lower	Highest	Lower
Identifies IGT	No	Yes	No
Lifestyle prevention intervention effect	Negative (for isolated IFG)	Positive (for IGT +/– IFG)	Limited data

CHO, carbohydrate; FPG, fasting plasma glucose; IFG, impaired fasting glucose; HbA1c, glycated haemoglobin; IGT, impaired glucose tolerance; OGTT, oral glucose tolerance test.

Diabetes

Criteria

Definitions of diabetes are universally agreed, with both WHO and ADA adopting the same FPG, 2 h PG, and HbA1c diagnostic values (Table 1.2).

In asymptomatic individuals, two abnormal values either in the same setting or on separate occasions are recommended for clinical management.[5]

Table 1.2 Criteria for defining diabetes and intermediate hyperglycaemia

	WHO criteria	ADA criteria
Diabetes		
Fasting plasma glucose (FPG)	≥7.0 mmol/L (126 mg/dL)	≥7.0 mmol/L (126 mg/dL)
2 h plasma glucose*	≥11.1 mmol/L (200 mg/dL)	≥11.1 mmol/L (200 mg/dL)
HbA1c	≥6.5% (48 mmol/mol)	≥6.5% (48 mmol/mol)
Intermediate hyperglycaemia		
Impaired fasting glucose (IFG)		
Fasting plasma glucose	6.1–6.9 mmol/L (110–125 mg/dL)	5.6–6.9 mmol/L (100–125 mg/dL)
Impaired glucose tolerance (IGT)		
2 h plasma glucose*	7.8–11.0 mmol/L (140–199 mg/dL)	7.8–11.0 mmol/L (140–199 mg/dL)
HbA1c	–	5.7%–6.4% (39–47 mmol/mol)

*Following a 75 g oral glucose tolerance test.
ADA, American Diabetes Association; HbA1c, glycated haemoglobin; WHO, World Health Organization.

KEY POINTS

- Globally, there is a high number of people with diabetes, which is predicted to continue to increase; almost one in two people living with diabetes are undiagnosed.
- Diabetes can be diagnosed by fasting plasma glucose, 2 h oral glucose tolerance test (OGTT), and glycated haemoglobin (HbA1c) with universally agreed diagnostic criteria. However, there is a lack of congruence between these measures.
- Screening for undiagnosed diabetes will identify individuals who will benefit from early treatment.
- Intermediate hyperglycaemia (IH) (also referred to as "prediabetes") includes impaired glucose tolerance (IGT), impaired fasting glucose (IFG), and intermediate HbA1c. The WHO and ADA criteria for defining IH differ for IFG and WHO does not have an HbA1c criterion.
- The prevalence of IH is higher than diabetes but varies with the screening test – these tests lack congruence. IGT can only currently be detected by a 2 h OGTT.
- The 1 h OGTT test has recently been advocated as another option.
- Screening for IH identifies individuals who can benefit from interventions to prevent type 2 diabetes mellitus (T2DM).
- Strategies for diabetes prevention include the individual-based high-risk approach and the population approach.
- Structured lifestyle modification programmes are effective in preventing or delaying T2DM in people with IGT but not isolated IFG. Data for HbA1c-detected IH are limited. Some medications can prevent or delay T2DM.
- Prevention strategies have been successfully translated in community or national programmes in a number of countries.
- The design of programmes has differed in relation to target group, screening process and test, and intensity and method of delivery of the lifestyle intervention. Little data are available on the impact on diabetes prevention, but weight reduction and increased physical activity are encouraging.
- A decision to implement a high-risk individual diabetes prevention programme should be guided by local resources, health system capacity, and cost. Local design and adaptation are important.
- Population approaches aiming to reduce modifiable diabetes risk factors in the whole population include healthier eating, regular physical activity, and preventing and managing overweight and obesity.
- Encouragingly, there appears to be a stabilisation or decline in diabetes incidence in many higher-income countries.

Table 3.4 Top 10 countries or territories by number of adults (20–79 years) with diabetes in 2024 and 2050.

2024			2050		
Rank	Country or territory	Number of people with diabetes (millions)	Rank	Country or territory	Number of people with diabetes (millions)
1	China	148.0	1	China	168.3
2	India	89.8	2	India	156.7
3	United States of America	38.5	3	Pakistan	70.2
4	Pakistan	34.5	4	United States of America	43.0
5	Indonesia	20.4	5	Indonesia	28.6
6	Brazil	16.6	6	Egypt	24.7
7	Bangladesh	13.9	7	Brazil	24.0
8	Mexico	13.6	8	Bangladesh	23.1
9	Egypt	13.2	9	Mexico	19.9
10	Japan	10.8	10	Turkey	14.1

Table 3.5 Top 10 countries or territories with age-standardised diabetes prevalence in adults (20–79 years) in 2024 and 2050.

2024			2050		
Rank	Country or territory	Age-standardised diabetes prevalence (%)	Rank	Country or territory	Age-standardised diabetes prevalence (%)
1	Pakistan	31.4	1	Pakistan	34.2
2	Marshall Islands	25.7	2	Marshall Islands	28.7
3	Kuwait	25.6	3	Kiribati	28.5
4	Samoa	25.4	4	Kuwait	28.2
5	Qatari	24.6	5	Samoa	27.2
6	Kiribati	24.6	6	Qatar[i]	27.0
7	Saudi Arabia	23.1	7	Egypt	25.7
8	French Polynesia	22.8	8	Saudi Arabia	25.4
9	Egypt	22.4	9	Bahrain	25.3
10	Bahrain	22.1	10	French Polynesia	23.9

i. Countries without in-country data sources. Estimates are extrapolated.

Dr. Muhammed Irfan Shaikh reports from Multan Chapter of PCDA

Dr. Irfan Shaukat is a very competent and learned physician and diabetologist of Multan. He is very dynamic personality and always keeps himself moving to serve the ailing community of his city and the province of Punjab.

This particular "Free Medical Camp held in Multan is an example of hid devotion, dedication and sincerity for achieving the noble goals of PCDA Pakistan.

Hundreds of people from Multan and adjacent town attended the camp and screened free for diabetes, hypertension and the related metabolic diseases. Many people were newly diagnosed as diabetes patients who were not aware of their condition. They were ultimately picked up, examined thoroughly, educated about their disease and prescribed necessary medicines, initially provided free from the camp.

Dr. Muhammed Irfan Shaikh arranges certificate course for the HCPs of Multan city

Continued medical education (CME) for primary care physicians managing diabetic patients is crucial, as new medications, technologies and updated clinical guidelines emerge frequently. CME ensures physicians stay up to date and can offer the most effective and safest treatment options.

Dr. Irfan Shaukat understands that updated knowledge helps physicians make better decisions regarding glycemic control, prevention of complications like nephropathy, retinopathy, and cardiovascular disease, and individualized care plans — ultimately leading to better patient outcomes.

Diabetes management isn't just about blood sugar — it involves managing comorbidities like hypertension, dyslipidemia, obesity, and mental health. CME supports a holistic approach to care.

PCDA, like any international organization periodically arranges update sessions to improve the standards of care of the diabetic patients. Such CMEs helps physicians remain compliant with evidence-based practices and avoid outdated or ineffective interventions.

Dr. Irfan Shaukat conducted as Trainer AACME certified "COURSE IN T2DM", at RAMADA hotel Multan, on 07 May'2025. Twenty knowledge seeking physicians from Multan participated in the course,

Multan Chapter of PCDA Pakistan organized this certificate course in collaboration with of Hilton pharma.

Dr. Shehzad Tahir reports from Federal Region of PCDA Pakistan (Islamabad Chapter)

Free Sugar Camp

at Gulshabad organized by
PCDA Rawalpindi /Islamabad chapter
conducted by **Dr. Shehzad Tahir**
Head of Federal Region of PCDA Pakistan
200 plus patients checked and
free medicines given with curtisy
by Getz Pharma

200 plus patients checked and free medicines

Dr. Shehzad Tahir and his dedicated team examined the people from Islamabad and adjacent areas, who attended the FREE MEDICAL CAMP. During the camp they were screened for blood sugar, cholesterol, hypertension and other metabolic issued.

The diagnosed patients were provided free consultation and provided basic knowledge about their disease. Free medicines were also distributed among the diagnosed patients. Head of Federal region of PCDA Pakistan, Dr. Shehzad Tahir arranged this camp in collaboration with Getz Pharma.

Free Sugar Camp

By Islamabad Chapter of PCDA Pakistan

Dr. Shahid Iqbal Gill reports from Kamalia chapter of PCDA Pakistan

Free Sugar Screening Camp Held at Sakeena Hospital, Kamalia

A free sugar screening camp was successfully organized at Sakeena Hospital, Kamalia, Kamalia on May 13, 2025: under the joint collaboration of the PCDA and the LDF. The initiative was led by Dr. Shahid Iqbal Gill, Chapter Head PCDA Toba Tek Singh and Executive Member LDF.
The event was held with the valuable cooperation of Dr Ahmad Shehzad, Regional Head of PCDA Punjab & President LDF Pakistan; and Dr Riasat Ali Khan, president of PCDA Pakistan

During the camp, over 60 patients were screened. The tests done free of cost included Random Blood Sugar (RBS), Serum Cholesterol, Uric Acid and HbA1c. The patients were consulted by Dr. Shahid Iqbal Gill and after examination and diagnosis, they were also provided medicines free of cost.

The camp aimed to raise awareness about early detection and management of diabetes and related metabolic disorders. This community welfare effort was made possible with the generous support of Getz Pharma.

Prevention First
PCDA
Primary Care Diabetes Association Pakistan

مفت طبعی کیمپ ذیا بیطس کی تشخیص کیلئے

ساہیوال کے مایہ ناز ڈاکٹر

ڈاکٹر سہیل شوکت

مریضوں کا فری چیک اپ کریں گے

Getz pharma

Prevention First
PCDA
Primary Care Diabetes Association Pakistan

مفت طبعی کیمپ ذیا بیطس کی تشخیص کیلئے

ذیابیطس کنٹرول
زندگی انمول

Getz pharma

Prevention First
PCDA
Primary Care Diabetes Association Pakistan

Affection Health Sciences

Affection Health Sciences in Collaboration with Primary Care Diabetes Association Pakistan(PCDA) invites you to:

Diabetes Therapeutic Advancement & Lifestyle Integration Symposium

Chairman

Dr Riasat Ali Khan
Consultant Diabetologist
President PCDA

Moderator

Dr Shehzad Tahir
Specilaist Family Physcian & Diabetologist
Head-Federal Region PCDA

Speaker

Dr Farhan Ali
Consultant Physician/HOD
Medicine Capital Hospital
Islamabad

Speaker

Dr Asima Khan
Consultant Diabetologist and
Endocrinologist
President-Elect PCDA

Speaker

Ms Rabbiya Tirmizi
Consultant Dietitian
Head Diet Education
Wing(DEW) PCDA Karachi

Speaker

Ms Mehwish Sheraz
Consultant Dietitian
Co-chair Islamabad Chapter
PNDS

Speaker

Dr M.Mujeeb Khan
Consultant Physician,
Diabetologist,Infectious
Disease Specialist,
Endocrinologist

Panel of Expert

Prof. Dr Jamal Zafar
Medical Specialist & Diabetologist
Ex-Chairman Department of
Medicine, PIMS

Panel of Expert

Dr. Shajee Siddique
Consultant Medical Specialist,
General Physician, Family
Physician

Panel of Expert

Col. Dr. Shakeel Ahmed Mirza
Gastroentrologist &
Diabetologist

Panel of Expert

Brig Naseer Ahmed Khan (R)
Consultant Physician,
Ex HOD Medicine
CMH Rawalpindi

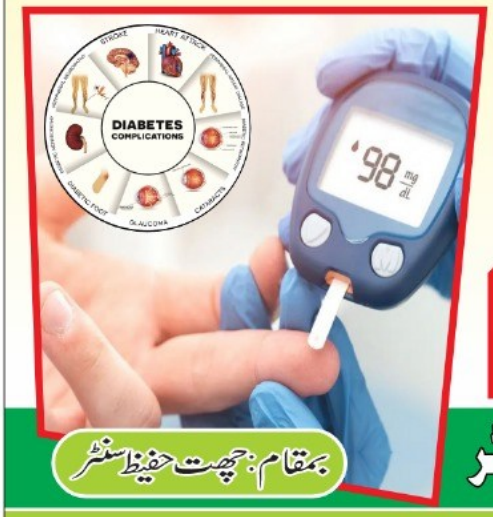
Venue:
Mövenpick Hotel
The Centaurus Mall, Islamabad

Date:
Sunday, 18th May 2025

Time:
1:00 PM Sharp

Smart Approach to
Control Blood Sugar

051-2754574 affectionhealthsciences@gmail.com



DOCTORSCON

فری شوگر کیمپ

Prevention First
PCDA
Primary Care Diabetes Association Pakistan

7 مئی 2025 بروز بُدھ
صبح 11 تا شام 4 بجے

ان ٹیسٹوں کی سہولت بھی موجود ہو گی

- Uric Acid
- Bone Strength
- Blood Group
- Sugar (BSR)
- BP Check-up
- Cholesterol
- Physicians Checkup
- Health Education

بمقام: چھت حفیظ سنٹر

خدمت گروپ یونین حفیظ سنٹر

K.HIDMAT GROUP

تعاون: پی سی ڈی اے لاہور
PAFP / DOCTORSCON

Dr. Lajpat Thakwani posts a brief review of the Type-II Diabetes

TYPE II DIABETES

1. Definition

🔴 Type II Diabetes is a chronic metabolic disorder characterized by insulin resistance (cells do not respond to insulin properly) and inadequate insulin secretion by the pancreas. This leads to high blood glucose levels (hyperglycemia).

2. Pathophysiology

🔵 The underlying causes of Type II Diabetes include:

1. Genetic link - The exact mechanism is not fully understood, but there is a genetic predisposition.
2. Insulin resistance - Cells have unresponsive insulin receptors, meaning glucose cannot efficiently enter cells.
3. Fatigued B-cells - The pancreas' beta B cells, which produce insulin, become overworked and lose their function over time, reducing insulin secretion.
4. Active α-cells - Alpha α cells of the pancreas continue to produce glucagon, which raises blood glucose levels, worsening hyperglycemia.
5. Adipokines & Chronic Inflammation - Fat cells release substances that contribute to insulin resistance and chronic inflammation.

3. Clinical Manifestations Symptoms

- 🟣 Polydipsia excessive thirst
- 🟣 Polyuria frequent urination
- 🟣 Polyphagia increased hunger
- 🟣 Recurrent infections e.g., skin infections, UTIs
- 🟣 Vaginal yeast or candidal infections
- 🟣 Prolonged wound healing
- 🟣 Visual changes e.g., blurred vision
- 🟣 Fatigue

4. Diagnostic Studies

To diagnose Type II Diabetes, the following tests are used:

- 🟠 HbA1C ≥ 6.5 percent measures average blood sugar over 3 months
- 🟠 Oral Glucose Tolerance Test OGTT ≥ 200 mg per dL
- 🟠 Fasting Plasma Glucose ≥ 126 mg per dL
- 🟠 Random Plasma Glucose ≥ 200 mg per dL

5. Normal vs. Diabetic Physiology

🟢 After eating, blood glucose rises.

🟢 In normal physiology, the pancreas' beta cells release insulin, which helps glucose enter cells, lowering blood sugar levels.

🟢 In Type II Diabetes, insulin does not work properly due to insulin resistance, leading to persistently high blood glucose.

6. Role of Glucagon in Hyperglycemia

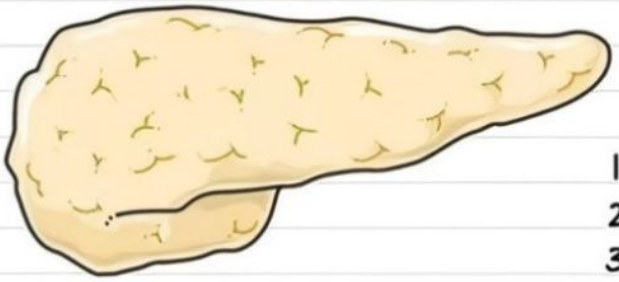
🔵 When a person is hungry, α-cells release glucagon.

🔵 Glucagon stimulates the liver to break down glycogen into glucose glycogenolysis.

🔵 This increases blood glucose levels, worsening hyperglycemia.

Type II Diabetes

↳ a combination of inadequate insulin secretion and insulin resistance.



pathophysiology:

1. genetic link not fully understood
2. insulin resistance (unresponsive receptors)
3. fatigued B-cells (↓insulin)
4. active α-cells (↑glucagon)
5. adipokines (chronic inflammation)

risk factors:

- obesity, being overweight
- older age
- family hx of Type II DM

clinical manifestations:

- polydipsia
- polyuria
- polyphagia
- recurrent infections
- vaginal yeast or candidal infections
- prolonged wound healing
- visual changes
- fatigue

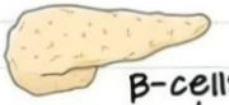
normal physiology:

after eating

↑blood glucose

binds to glucose
blood → cells

↓blood glucose



B-cells

insulin

(Type II DM: insulin doesn't work)

diagnostic studies:

- Hgb A1C >6.5%
- OGTT >200 mg/dL
- fasting plasma glucose ≥ 126 mg/dL
- random plasma glucose >200 mg/dL

later:

hungry

α-cells

glucagon

glycogen

glycogenolysis

glucose

@jasmine.ipg

↑blood glucose

Prediabetes

↳ risk for development of type II diabetes

impaired glucose tolerance (IGT)

OGTT 140–199 mg/dL

impaired fasting glucose (IFG)

fasting blood glucose 100–125 mg/dL

(usually asymptomatic)

Dr. Mutayyaba Majeed reports from Toba Tek Singh Chapter of PCDA Pakistan

Alhamdulillah SWT continuing the execution of best quality preventive , screening as well as therapeutic services provision at Aman Hospital Toba Tek Singh, under supervision of of PCDA Pakistan, LDF and Pakistan Endocrine Society, Assistant Professor, PHD Scholar in Reproductive Neuroendocrinology Dr.Mutayyaba Majeed ,

Free Diabetes and Endocrinology camp successfully organized from 26/04/2025 to 27/04/2025. I am so grateful for PCDA, LDF And P.E.S, for providing us a worthy platform where we are being encouraged and motivated to serve at our best

An **ANMOL CAMP** by the head of Jacobabad chapter of PCDA Pakistan, Dr. Nazeer Soomro

An **ANMOL CAMP** by the head of Sialkot chapter of PCDA Pakistan, Dr. Muhammad Hanif

Dr. Muhammad Hanif is renowned physician and diabetologist of Sialkot City, working at Sakina diabetes care center and Al Shifa Clinic, green wood street miana Pura Sialkot, the 12th most populous city in Pakistan. The boundaries of Sialkot are joined by Jammu in the north east, the districts of Narowal in the southeast, Gujranwala in the southwest and Gujrat in the northwest.
Sialkot city is the birthplace of Allama Muhammad Iqbal (the National poet of Pakistan) and Asghar Sodai (the poet behind the famous slogan 'Pakistan Ka Matlab Kya La Ilaha Ill Allah') who were both leading figures of the Pakistan Movement.The city has been noted for its entrepreneurial spirit and productive business climate which have made Sialkot an example of a small Pakistani city that has emerged as a "world-class manufacturing hub."

The relatively small city exported approximately $2.5 billion worth of goods in 2017, or about 10% of Pakistan's total exports. The city has been labeled as the *Football manufacturing capital of the World*, as it produces over 70% of all footballs manufactured in the world. Sialkot is also home to the Sialkot International Airport; Pakistan's first privately owned public airport.

Glimpses of the Camp

Type 2 Diabetes Management

Step One

Metformin

In Addition

SGLT2i

Only if:
Chronic heart failure
Established CVD
QRISK >10%

Commence MTF first then SGLT2i once MTF is confirmed to be tolerated

If MTF CI

DPP4i
Pioglitazone
SU
SGLT2i

Mono-therapy Not Effective

Metformin + DPP4i / Pioglitazone / Sulfonylurea

Preferences

CVD/HF/High Risk CVD/CKD
SGLT2i

Weight is a concern
GLP-1

Osmotic symptoms
SU

Triple Therapy

Metformin + **SGLT2i** + DPP4i / Pioglitazone / Sulfonylurea

Tip!

Avoid GLP-1 and DPP-4i together

Triple Therapy Not Effective

Consider switching one drug out for a GLP -1

BMI >35
BMI <35 if insulin is not suitable or weight loss would benefit other comorbidities

Only continue if

HbA1c reduction of at least **11mmol/mol**
Weight loss of at least **3%** in 6 months

Insulin

Isophane Insulin (OD or BD)
First line

Isophane + Short Acting (Mixed)
If HbA1c >75mmol/mol

Detemir/Glargine
If assistance needed (carers)

HbA1c Targets

Diet
48mmol/mol

Metformin/Single drug not associated with hypos
48mmol/mol

Drug treatment associated with hypos
53mmol/mol

Step up in treatment when HbA1c
58mmol/mol

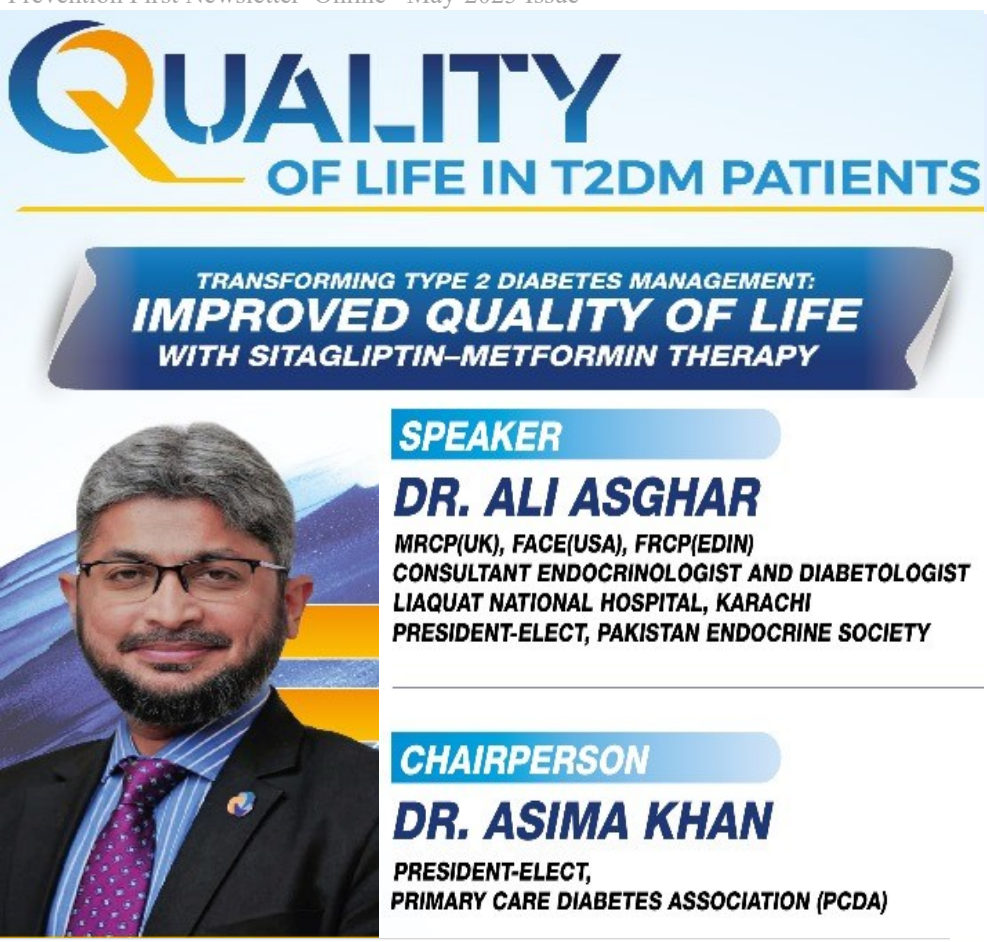
Individualise treatment targets in frailty!

CVD Risk Reduction

QRISK >10%
Atorvastatin 20mg

Hypertension (No CKD)
<80 Clinic: <140/90mmHg
>80 Clinic: <150/90mmHg
<80 HBPM: <135/85mmHg
>80 HBPM: <145/85mmHg

Anti platelet
Not advised unless CVD



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https://doi.org/10.1186/s12902-023-01492-2

BMC Endocrine Disorders

RESEARCH Open Access

Impact of Treviamet® & Treviamet XR® on quality of life besides glycemic control in type 2 DM patients

Asima Khan[1], Muhammad Adnan Kanpurwala[2*], Riasat Ali Khan[3], Najum F. Mahmudi[4], Verumal Lohano[4], Shakeel Ahmed[5], Majid Khan[6], Fareed Uddin[6], Syed Mohammad Ali[7], Maliha Saghir[8], Syed Hussain Baqar Abidi[9] and Jahanzeb Kamal[10]

Abstract

Background Maintaining the quality of life is the main objective of managing type 2 diabetes (T2DM) (QoL). Since it is a key factor in patient motivation and adherence, treatment-related QoL has always been considered when choosing glucose-lowering medicines. The objective of the study was to evaluate the quality of life besides glycemic control among type 2 diabetes mellitus patients receiving Treviamet® & Treviamet XR® (Sitagliptin with Metformin) in routine care.

Methods It was a prospective, open-label, non-randomized clinical trial including T2DM patients uncontrolled on Metformin therapy. All patients received Treviamet® & Treviamet XR® for six months. Sequential changes in QoL, fasting plasma glucose, HbA1c, body weight, and blood pressure were monitored from baseline to 3 consecutive follow-up visits. The frequency of adverse events (AEs) was also noted throughout the study.

Results A total of 504 patients were screened; 188 completed all three follow-ups. The mean QoL score significantly declined from 57.09% at baseline to 33.64% at the 3rd follow-up visit ($p < 0.01$). Moreover, a significant decline in mean HbA1c and FPG levels was observed from baseline to 3rd follow-up visit ($p < 0.01$). Minor adverse events were observed, including abdominal discomfort, nausea, flatulence, and indigestion. Gender, HbA1c, diarrhea, and abdominal discomfort were significant predictors of a patient's QoL, as revealed by the Linear Regression Model ($R2 = 0.265$, $F(16, 99) = 2.231$).

Conclusion Treviamet® & Treviamet XR® significantly improved glycemic control (HbA1c levels) and QoL in T2DM patients without serious adverse events.

Trial registration ClinicalTrials.gov identifier (NCT05167513), Date of registration: December 22, 2021.

Keywords Quality of life, Type 2 Diabetes Mellitus, Sitagliptin, Metformin

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BMC

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A Great Applause for PCDA by the speaker Dr. Ali Asghar

Report: **Dr. Shahid Akhter**

"Transforming Type-2 Diabetes Management: Enhanced Quality of Life with Sitagliptin-Metformin Therapy" was the subject of a presentation by Dr. Ali Asghar, a consultant endocrinologist and diabetologist, as well as the President-elect of the Pakistan Endocrine Society. The session was chaired by Dr. Asima Khan, President-elect of the Primary Care Diabetes Association (PCDA) Pakistan. This event took place during the International Symposium organized by the Pakistan Society of Internal Medicine, held at Hotel Movenpick, Karachi, on Sunday, April 20, 2025.

During his talk, Dr. Ali Asghar commended Team PCDA for their significant contributions to research in diabetes care. He specifically highlighted a study evaluating the quality of life in patients with Type-2 Diabetes Mellitus treated with Sitagliptin, both alone and in combination with Metformin, which was published in a well-regarded international journal. He described the study as a testament to Team PCDA's dedication and stated, "PCDA truly deserves great applause — please join me in applauding this remarkable work."

Dr. Asima Khan, chairing the session, expressed her gratitude to Dr. Asghar for his kind and encouraging words. She promised more quality research projects in the near future, from the platform of PCDA Pakistan. She reminded that the primary objective of PCDA is the primary prevention and the quality care of the people with diabetes in Pakistan. who has one of the highest prevalence rates of diabetes in the world. PCDA, as a member of IDF, now has to play more important role in reducing this.

An ANMOL CAMP by the head of Tandlianwala chapter of PCDA Pakistan, Dr. Imranullah Chauhdary

Dr. Imranullah Chauhdary is one of the most active and dynamic chapter heads of PCDA Pakistan. He has been arranging mega camps fot the welfare of the people of his area, and screening them for the common NCDs. Also he is very fond of participating in the academic programs, to keep him updated and make himself fit to provide quality care to the diabetic patients.

Tandlianwala is named after a medicinal plant called "Tandla"(digera arvensis) which was present abundantly near this town. The plant is used as a famine food in some regions of India and Pakistan, with the leaves and seeds used for culinary purposes.

Tandlianwala is located 40 km from the city of Faisalabad and 45 km from Okara. It is a sub-division of Faisalabad District and has a Tehsil municipal administration.

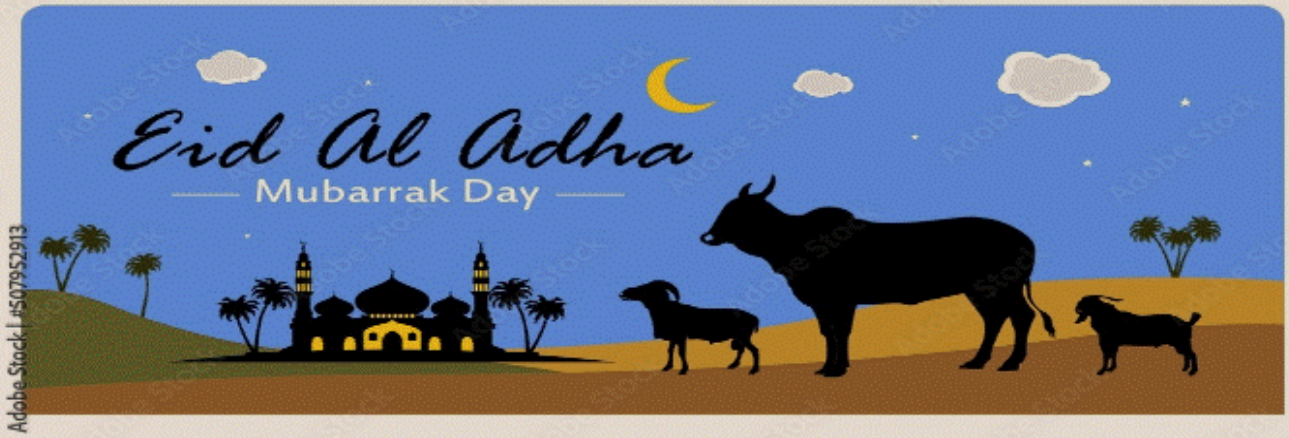
Glimpses of the Camp

پریوینشن فرسٹ نیوز لیٹر پی سی ڈی اے

کی جانب سے

عید الاضحی اور حج 1446ء

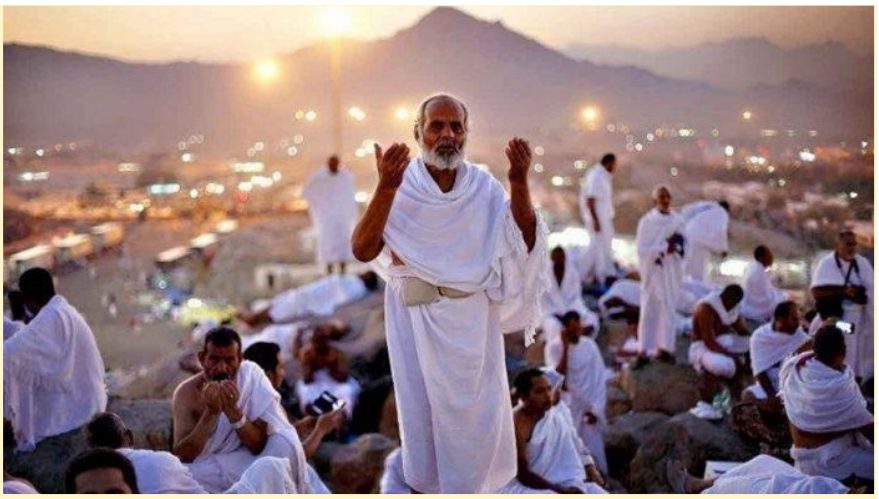
مبارک ہو



وزارة الصحة
Ministry of Health

Diabetes And Hajj

Before you travel to perform Hajj:



1. Visit a physician to discuss with the diabetic patient about his ability to perform Hajj, as well as about continuing taking medication during the Hajj peri-od. It is possible to reduce doses for the presence of high effort such as long walks.
2. Take care to carry a detailed medical report on the health condition, it is allowed to bring syringes (if any) in case of travel by plane.
3. Make sure to put a bracelet around the wrist or car-ry an identification card stating that the person has diabetes and treatment type, so that the necessary assistance can be provided when needed.
4. Bring a sufficient amount of medications and sy-ringes, make sure to take the necessary vaccina-tions before traveling.
5. Make sure to take a glucometer to measure the rate of blood glucose daily and regularly, especially when you feel the blood glucose level imbalance.
6. Accompanying a companion familiar with the patient's condition.
7. Carry a candy bar or juice and snacks to use in case of flight delays and emergencies.
8. If there is an insulin pump and travel by plane, sufficient information should be obtained about the possibility of its use.
9. **Traveling Bag Contents:** It is advisable to allocate a bag dedicated to diabetes equipment, as it includes: Medical report.
10. Identification card for the person and his illness.
11. Adequate amount of insulin and medications.
12. Glucagon injection syringe (Glucagon Emergency Kit).
13. Glucometer and its accessories.
14. Umbrella.
15. Sweets or juice and a snack.
16. Notebook and pen to write down any notes or changes for doctor's review after return.

Health guidelines for people with diabetes during Hajj:

Make sure to inform the nearby person at the place of residence and the campaign doctor of having diabetes, as well as informing the companions of ways to treat high and low blood glucose level.

- Ensure that the diet is followed according to the profession-al's instructions.
- Ensure that insulin is cooled during transportation and stor-age, by placing it in a suitable case or refrigerator at the place of residence.
- Carry candy or juice in case of Low blood glucose level.
- Take care to carry the glucagon syringe (after the doctor's recommendation) to be used in case of low blood glucose level.

During the Hajj, be sure to wear comfortable socks to protect the feet from any sores, avoid walking barefoot

• It is advisable not to perform Tawaf and Sa'i until after taking adequate treatment and food, to prevent a low blood glucose level in the body.

 Make sure to drink water in appropriate quan-tities and frequently.

 Avoid overcrowding and sun's heat as much as possible.

 Temporary cessation of the continuation of performing the rituals in case of symptoms of Low blood glucose level.

 Use your own electrical shaving machine ra-ther than the razor to avoid wounds and inflamma-tion as much as possible.

 Maintain basic and light meals during travel and perform pilgrimage "Hajj" to reduce exposure to very low blood glucose levels.

 Be sure to take some disinfectants to treat skin inflammations when it occurs.

 If there are complications (e.g., skin infections and ulcers) consult a doctor.

 Carefully trim nails.

 Drying the feet well, especially between the fingers, using a cotton towel after ablution.

 Be sure to check your feet thoroughly twice a day and moisturize the feet thoroughly to avoid ulcers and cracks in the foot.

 See the nearest health center or hospital when needed.

 Washing hands with soap and water (unscented) frequently, especially before eating and after using the bathroom

 Use hand sanitizers (unscented) in crowded places.

 Do not touch your eyes with your hands, especially when in crowded places.

 Eat well-cooked food in places that are as clean as possible.

 Take care of the etiquette of coughing and sneezing using elbows or wipes and get rid of them.

 Wear a mask especially in crowded places.

 After returning from Hajj: See your doctor to rearrange your insulin doses and medications if needed and discuss any changes or complications dur-ing Hajj. Not to neglect the following cases:

 Any health problem (such as: High fever, flu). Sensation of any complications.

Various Ritiuals during Hajj

Diabetes Care During Hajj

Diabetes mellitus affects over 463 million individuals world-wide. Religious activities such as the Hajj pilgrimage have a major impact on patients with diabetes mellitus, including increasing the risk of hyperglycaemia and hypoglycaemia. This increased risk is due to dietary changes and intense physical activity during pil-grimage while being on antidi-abetic medications. Approxi-mately 20% of the pilgrims with underlying illnesses who visit Mecca are diabetic, and complications, such as diabetic ketoacidosis, nonketotic hyperosmolar state, and fatigue/unconsciousness due to hypo-glycaemia, have been observed among these patients. Diabetic patients are also at a high risk for foot complications and in-fections. To avoid any aggravation of the diabetes, a com-plete biochemical evaluation of the patient must be conduct-ed before Hajj, and the patients must be provided contextual-ized educational guidance to avert these potential health challenges. This counselling should include the importance of carrying with them at all time their relevant medical his-tory, summaries of the current treatment regimen and emergency snacks. In addition, to reduce the risk of hypoglycae-mia, the dosage of insulin should be reduced in selected patients by 20% and that of sulfonylurea should be re-duced as needed. Basal insulin and glucagon-like peptide 1 receptor agonists are associat-ed with fewer complications and can be preferentially prescribed. Those patients with type 1 diabetes can continue with the use of insulin pump with suitable education prior to Hajj. For the prevention of foot problems, the use of padded socks and well-fitting shoes is recommended along with an insistence on not walking barefoot. After Hajj, the patient must be followed up, and necessary investigations must be made along with readjustment of insulin dosage in those patients for whom it was reduced. Until the pandemic situation abates, all diabetic patients should avoid making the Hajj journey.

The Hajj pilgrimage poses certain challenges to those persons living with diabetes.

A comprehensive pre-pilgrimage medical checkup in combination with focussed health education is necessary to ensure a safe pilgrimage.

Appropriate attention must be paid to diet, glucose monitoring, dose titration, maintenance of fluid balance and foot hygiene.

Understanding these aspects of diabetes care will help ensure a fulfilling pilgrimage for the believers who undertake the Hajj.

Risk stratification table for persons with diabetes wishing to go on Hajj

Parameter	Low risk	Moderate	High risk	Very high risk
Glycaemia related	<7.0Good control; No h/o hypoglycaemia	7.0-8.5Fair control; No h/o severe hypoglycaemia	>8.5Poor control; h/o recent episodes of severe hypoglycaemia, DKA	Recurrent hypoglycaemic episodes along with hypoglycaemic unawareness
Therapy related	Sensitizers, DPP4 inhibitors GLP1RA	Modern sulfonylureas, SGLT2i Basal, premixed, co-formulation insulin analogues	Glibenclamide Premixed human insulin, basal bolus insulin	Premixed human insulin, basal bolus insulin
Diabetes complicatio n related	No acute or chronic complication, no risk factors for acute complication	Foot ulcer in remote past. Chronic microvascular or macrovascular complication but under control	Recent/active episode of foot ulcer Recent/acute exacerbation of chronic complication; severe sensory neuropathy Foot ulcer in remote past	chronic kidney disease requiring dialysis Acute myocardial infarction or stroke within last 6 months or presence of advanced macrovascular and microvascular complications Patients with heart failure or unstable angina Patients with peripheral vascular disease and recurrent foot ulcers
ADL	Optimal	Near optimal	Impaired	Severely impaired
Self - care capacity	Good self-care; good social support	Good social support during Hajj	Poor self - care/ social support during Hajj	Poor self - care/ social support during Hajj
Recommen dation for Hajj	May perform	Can Perform	Postpone until medical state improves	Not recommended

Preparing for Hajj

Checklist of items to be carried:

Blood glucose monitoring device, band aids and extra batteries for the glucometer along with sufficient quantity of all medications.
If on insulin, sufficient amount of insulin stored in a pouch with cooling pad in it.
Thermally insulated flask for storing insulin in a cool and dry environment or 'cool wallets
Diabetes identification and a copy of the treatment regimen and medical record, which needs to be carried on the person at all times
Sugary foods and beverages
Masks, umbrella, good-fitting shoes, cotton socks and non-scented hand sanitizer.

Hajj Pilgrimage

Pre-Hajj

Risk Stratification

Parameter	Low risk	Moderate	High risk	Very high risk
Glycemia related	<7.0 Good control; No h/o hypoglycaemia	7.0-8.5 Fair control; No h/o severe hypoglycaemia	>8.5Poor control; h/o recent episodes of severe hypoglycaemia, Diabetic Ketoacidosis (DKA)	Recurrent hypoglycaemic episodes along with hypoglycaemic unawareness
Therapy related	Sensitizers, Dipeptidyl-peptidase 4 (DPP4) inhibitors GLP-1 Receptor Agonists (GLP1RA)	Modern sulfonylureas, Sodium-glucose Cotransporter 2 Inhibitors (SGLT2i) Basal, premixed, co-formulation insulin analogues	Glibenclamide Premixed human insulin, basal bolus insulin	Premixed human insulin, basal bolus insulin
Diabetes complication related	No acute or chronic complication, no risk factors for acute complication	Foot ulcer in remote past. Chronic microvascular or macrovascular complication but under control	Recent/active episode of foot ulcer Recent/acute exacerbation of chronic complication; severe sensory neuropathy Foot ulcer in remote past	Chronic kidney disease requiring dialysis Acute myocardial infarction or stroke within last 6 months or advanced macrovascular and microvascular complications Heart failure or unstable angina Peripheral vascular disease and recurrent foot ulcers
Activities Daily Living	Optimal	Near optimal	Impaired	Severely impaired
Self - care capacity	Good self-care; good social support	Good social support during Hajj	Poor self - care/ social support during Hajj	Poor self - care/ social support during Hajj
Recommendation	May perform	Can Perform	Postpone until medical state improves	Not recommended

During Hajj

Patient Profile	Adjustments needed
Type 1 diabetics	Combination of basal and rapid–acting insulin analogues 20 % dosage reduction of short and intermediate – acting insulin Continuation of Insulin Pump therapy Once daily premixed dosage of 0.1–0.2 U/kg / day can be split into a pre–breakfast and pre – dinner dose Frequent monitoring of blood glucose levels
Type 2 diabetics	Metformin if GFR is above 30mls/min/1.73m^2 Can be combined with SGLT2 to reduce the risk of hypoglycemia
Foot problems	Use of padded socks, shoes and prophylactic antibiotics Use of motored vehicles / wheelchairs for travelling long distances
Kidney disorders	Dose reduction of diuretics, especially thiazide diuretics to prevent the risk of hyperglycemia
Cardiovascular conditions	Regular glucose monitoring to prevent hypoglycemia

Pre – Hajj education

- Insulin use and dosage
- Self-monitoring and adminstration
- Insulin storage and injection techniques
- Use of insulin pumps in a hygienic environment
- Nutrition counseling
- Prevention of hypoglycemia through the intake of carbohydrates when symptoms are faced
- Infection prevention through hygiene maintenance and distancing

Post Hajj

Follow – up considerations
Complete biochemical investigation and foot examination
Dose adjustment of the patient at 10 to 14 days post-arrival to comply with reduced activity levels and optimal environments
Treatment of diagnosed ulcers / infections along with rest and hydration

Dietary Considerations During Hajj

Regular meals must be encouraged in patients as well as between-meal snacks. In case of irregular meals, patients can be advised to consume nuts, fruits and dairy products, which are readily available at Mec-ca. They must be instructed to avoid sugary drinks unless respond-ing to hypoglycaemia.

Eating one to two dates, which are easily available at pilgrim locations, or a high carbohydrate drink/ meal is recommended in response to symptoms of hypoglycaemia or in situations where a meal is skipped or delayed.

Before Tawaf and Sai, it is advisable to consume complex carbohydrates and dates, if required, because they can be carried inside the mosque.Tight glycaemic control must not be at-tempted during

Hajj journey be-cause hyperglycaemia has less se-vere consequences than hypogly-caemia during Hajj, with the latter having the potential to be fatal.

(Full article can be viewed by clicking the link.
https://adisjournals.figshare.com/articles/figure/Diabetes_Care_During_Hajj/13050551)

Prevention First Newsletter-Online

Dear Readers;

Prevention First Newsletter is the official newsletter issued by the Publications Committee of PCDA (Primary Care Diabetes Association Pakistan). The paper version is printed on the occasion of every mega event by PCDA Pakistan.

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