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Benefits of timely intervention in high risk people proved

Dr. Asima Khan presents data in WHO-MoH working group meeting

Effects of intervention in Subjects with High Risk of Diabetes Mellitus in Pakistan have now proven," says Dr. Asima Khan addressing to the 2nd meeting of Technical working Group of NCDs And Mental Health, under the ministery of National Health Services, Regulation And Co-ordination, held in IFQ Islamabad on 10 December' 2024.

"The World Health Organization (WHO) has spearheaded development of models and tools to decrease CVD through its Global Hearts initiative. Within this initiative, the HEARTS Technical Package for Cardiovascular Disease Management in Primary Health Care provides a population-based approach to prevent CVD.

Dr. Asima Khan who is the Vive President of Primary Care Diabetes Association (PCDA) Pakistan, is the Diabetes Representative for this technical working group of World Health Organization (WHO) and MoHSRC. She said that Risk reduction in subjects with high risk of diabetes mellitus in Pakistan is approximately 71-76% with early intervention. Dr. Asima Khan is the member of the steering committee "Pakistan Diabetes Prevention Program", which started in 21 August 2022 and approved by NBC



WHO ADA, Integrated Diabetes (IDC). The components of Education and Empowerment,

Nov'22. She said that all this IDC are Multidisciplinary Data Collection and Analysis or Care, Clinical Information and Quality Improvement Ini-PROMPT guidelines focus on System, Standardized Guide- tiatives. Care lines and Protocols, Patient

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Editor's Note:	

2nd Meeting of Technical Working Group for NCDs & Mental Health



Government of Pakistan Ministry of National Health Services, Regulations & Coordination













Explaining based modules: lifestyle

the HEART-D and Systems for moni-Dr. Asima Khan said toring. HEARTS - D module Dr. Asima Khan is also part Mariyam Sarfraz who is the that The HEARTS model on Diagnosis and manage- of PROMPT consists of six evidence- ment of type 2 diabetes com- (Pakistan's Healthy- plements and expands the tions for Optimal Managecounsel- diabetes section of ing, Evidence-based proto- HEARTS Technical Package ry to Tertiary Care Level cols, Access to essential developed for use in primary along with Dr. Zahid Miyan.

Core Te Director Programmes, M/o Recommenda- NHSR&C. the ment of Diabetes from Prima-

> Dr. Musarrat Riaz Khan.

She said that The screeningfor diabetes can be performed using locally validated larly important adults who have a positive family history of diabetes, aged over 30 years and increased waist circumcm, male >90 cm).

Dr. Asima said that discipline of managing diabetes includes stop smoking.

During the meeting other expert and their topics were as fol- Dr. Asima Khan very brillows:

mental health action framework was presented by Dr.

Remarks by WHO Jadambaa, Public Health Specialist, Disease Control &

Cluster Lead NCDs/CDs

and Dr. Riasat Ali Addressing M/o NHSR&C's initiatives for the prevention and control of NCDs and Mental Health Dr. Shabana Saleem, Director General (Health), M/o NHSR&C

tools like Risk As- Cancer landscape in Pakistan sessment of Pakistani and need for Preventive and Individuals for Dia- Control Interventions betes (RAPID) scor- Sameen Siddiqi, Prof. Deing system, particu- partment of Community in Health Sciences, AKU

> Overview of HEARTs Guide Shahzad Alam Khan, National Professional Officer, WHO.

ference (female >80 Prevention and Control of CVDs and Hypertension at PHC level Prof. Khawar Kazmi. HoD Cardiology, **NICVD**

weight management, Integrating Mental health avoid fast food and with a focus on mhGAP eat healthy, Highlighting UNICEF's role sleep well & monitor, in Adolescent mental health active lifestyle and in Pakistan Dr. Usman Hamdani, Founding Director, GIHD Dr. Humaira Irshad, Health officer, UNICEF

> liantly highlighted the role of PCDA Pakistan in the prevention and control of diabetes in Pakistan.



medicines and technology, Risk-based CVD man- health care facilities to im- An overview of NCDs & agement, Team-based care, prove cardiovascular health.

What is D-Module?

type 2 diabetes in one docu- prove cardiovascular health. ment. It is aligned with the WHO Package of Essential Noncommunicable Disease Interventions **Primary** in Health Care (WHO-PEN) and can be used independently or The people who will find the in conjunction with the other modules of the HEARTS technical package.

policy-makers who plan ser- strategies, policies and plans vice delivery of diabetes care, related to service delivery of responsible for training, planning and monitoring service progress and reporting. delivery, and facility managprimary and ers staff involved in clinical care and monitoring processes and outcomes of diabetes care.

Part of the HEARTS technical package for cardiovascular disease management in primary health care.

This new HEARTS – D mod-type 2 diabetes is based on ule on Diagnosis and manage- WHO guidance on diagnosis, ment of type 2 diabetes com- classification and manageplements and expands the dia- ment of diabetes. It is aligned betes section of the HEARTS with the WHO Package of Technical Package devel- Essential Noncommunicable oped for use in primary health Disease Interventions in Pricare facilities to improve car- mary Health Care (WHOdiovascular health. This mod- PEN). It can be used indeule brings together WHO pendently or in conjunction guidance on diagnosis, classi- with the HEARTS technical fication and management of package developed to im-

> Target users may vary, based on context, existing health systems and national priori-

modules most useful are:

National level - Ministry of Health NCD policymakers The module will be useful to responsible for developing national programme managers diabetes, setting national targets on diabetes, monitoring

> Subnational level - Health/ NCD programme managers responsible for planning, training, implementing and monitoring service delivery

Primary care level - Facility managers and primary health clinical management of peocare staff and trainers responsible for assigning tasks, or-Diagnosis and management of ganising training and ensuring



Diagnosis and Management of Type 2 Diabetes







the facility is running smooth- wards diabetes targets.

ple with type 2 diabetes

collecting facility-level data ncd-20.1 on indicators of progress to-

Reference:

https://www.who.int/ publications/i/item/who-ucn-

The HEARTS technical package:

provides a strategic approach to improving cardiovascular health in countries. It comprises six modules and an implementation guide.

This package supports ministries of health to strengthen CVD management in primary health care settings. The practical, step-by-step modules are supported by an overarching technical document that provides a rationale and framework for this integrated approach to the management of NCDs.

Modules:

- Healthy-lifestyle counselling
- Evidence-based treatment protocols
- Access to essential medicines and technology
- Risk-based CVD management
- Team-based care
- Systems for monitoring
- Implementation guide
- Tool for the development of a consensus protocol for treatment of hypertension

All set for the Train Ride on 22 December'24

PCDA's Journey to Defeat Diabetes now with Pakistan Railways

Reports: Dr. Izhan Ali Khan, Head of STEP

The "Journey to Defeat Diabetes" is a unique and inspiring initiative aimed at spreading awareness about diabetes prevention and management. Taking place on December 22, 2024, this event will feature a train ride covering Sukkur, Larkana, Dadu, Sehwan, and Kotri, creating a moving platform for community engagement and health education.

Care Diabetes Association (PCDA) in collaboration with Pakistan Railways SEARLE, this event combines travel and advocacy.

Organized by the Primary Along the route, there will be activities such as free diabetes This is more than just a jour- learn more, this event offers bat diabetes.

screenings, health talks, and ney-it's a step towards beteducational sessions to em- ter health and awareness. power communities with the Whether you're a healthcare join us as we ride together for knowledge and tools to com- professional, a diabetes advo-

cate, or someone eager to an opportunity to make a real difference. Save the date and a healthier Pakistan!







Sukkur, Larkana, Dadu, Sehwan, Kotri

Journey to Defeat Diabetes

In Collaboration With

On December 22, 2024

Launch Meeting of the first

PCDA Diabetes And Foot Care Center

In Karachi

The prayer and launch meeting for the 1st "PCDA Diabetes and Foot Care Center" in Karachi was held at the proposed center's site. The event was attended by Team PCDA and key leaders from various chapters and wings. The primary agenda of



The meeting commenced with prayers led by Dr. Shahid Akhter. Dr. Riasat moderated the session and expressed gratitude to Team PCDA for dedicating their time to support the initiative. Prominent attendees included President PCDA Pakistan, Dr. Zahid Miyan; President Elect, Dr. Riasat Ali Khan; Senior Vice President, Dr. Najum F. Mahmudi; Vice President, Dr. Asima Khan; General Secretary, Dr. Shakeel Ahmed; Finance Secretary, Dr. Iqbal Batavia; Head of Publications, Dr. Shahid Akhter; Head of DEW, Dr. Qazi Mujahid; Head of STEP, Dr. Izhan Ali Khan; Head of Karachi Chapter, Dr. Ashraf Raheem; Head of Kohat Chapter, Dr. Sulaiman Khan; DEW Supervisor, Mrs. Saima Mujahid; and other notable members including Dr. Azeem, Dr. Israr, and Dr. Ishtiaq, along representatives with STEP and DEW.



Participants shared valuable

suggestions to facilitate the smooth and effective opera- tions of the center's various components.

PCDA starts Primary Care Diabetes Clinics under DCN (Diabetes Care Network)

PCDA Pakistan has always been very active to update the PCPs and to upgrade their skills to provide quality care to the people with diabetes. To achieve this noble goal PCDA has left no stones unturned. This new collaboration with Pinnacle Biotech is aimed to develop HCP's of rural areas of by providing free trainings and developing their skills in Diabetes Management also provision of free camps services (Diagnostics and medicines) at their clinics/hospitals so that Diabetes Disease Burden can be minimized.



Under this project of DCN, Executive of their areas. Four PCDA of Pinnacle biotech team

Members, comprehensive training work- ered their presentations to six months. shop is conducted to train train the participants. Diabe- Public awareness material Oct 2025).

Dr. Also a weekly Free Sugar these HCPs, in which PCDA initially 30 HCPs from vari- Fareeduddin, Dr. Shakil Ah- screening camp to these 30 and Pinnacle Biotech team ous cities of Sindh province med, Dr. Shahid Akhter and Diabetes Care Clinics will be will participate. First phase of are registered. A one-day Miss Rabiya Tirmizi deliv- executed with fix calendar for this project will be be com-

them according to the latest tes training and development approved by PCDA team will updates in the field of diabe- process will be done on every be printed for patient guidetes. These HCPs will be 15th Day through Digital Me- lines in local languages Actrained enough to enable them dium by PCDA Executive cording to time and feasibility to be trainers for other PCPs Members with coordination clinic inauguration ceremony Oct'24 will be held at the clinics of

pleted in one year (Nov 2024-

Participants of the first batch also attended the MoU signing ceremony held in Hotel Ramada Creek Karachi on 30



Training Workshop held for the 1st. Batch of DCN project

Initially 30 HCPs from Sindh Province

Report: Dr. Qazi Mujahid



PCDA Pakistan is running many programs of patient's welfare and HCPs uplift through out Pakistan. For this PCDA has signed many MoUs with various pharmaceutical companies and assigned them to facilitate these programs.

In a recent advancement, PCDA and Pinnacle Biotech signed a MoU under PCDA's DCN project, to register 30 primary care physicians from all over Sindh province.

The training workshop for the first batch of the DCN project, arranged in Hotel Ramada Creesk Karachi on Sunday, 1st. December'24. The session started with the national anthem and recitation from Holy Quran.

Mr. Zaeem from Pinnacle Biotech started moderation and asked to take the dice. Dr. Riasat then welcomed the participants and gave introduction of the DCN project.





Dr. Fareeduddin, president past and head of supreme council of PCDA delivered his first talk on "DIABETES AND ITS COMPLICATIONS". He told the audience that Diabetes has reached epidemic proportions in China, India and Pakistan. Also According to WHO, the prevalence of diabetes is growing most rapidly in low- and middle-income countries.

He emphasized on the attending HCPs to build a habit of continuously update their knowledge about the management of diabetes, as thing are changing with a very fast pace. Rapid socioeconomic change in conjunction with urbanization and industrialization are the major factors for the global increase in the diabetes epidemic, with other associated risk factors such as population growth, unhealthy eating habits, and a sedentary lifestyle also playing an important role. Diabetes is a progressive disorder that leads to serious complications, which are associated with increased costs to the family, community, and healthcare system. Uncontrolled diabetes leads to increased risk of vascular disease and much of the burden of type 2 diabetes is caused by macrovascular (cardiovascular (CV), cerebrovascular, and peripheral artery disease) and microvascular (diabetic retinopathy, nephropathy, and neuropathy) complications.



Dr. Shahid Akhter, publications Secretary of PCDA Pakistan, was the second presentor of the training workshop. His topic was "UPDATED MANAGEMENT OF DIABETES".

He said that the primary objectives of the treatment of Type-2 diabetes is to Achieve and maintain glycemic control by lowering blood glucose levels to a target range to prevent complications. The target HbA1c level is typically less than 7% for most patients, but individualized goals may vary. To preserve β-cell function in the pancreas to prevent the progression of diabetes. To improve insulin sensitivity and enhancing the body's response to insulin helps in better glucose uptake by cells. To reduce cardiovascular risk, as diabetes is associated with an increased risk of cardiovascular diseases, treatments aim to mitigate these risks. To minimize side effects and hypoglycemia by choosing medications that have a lower risk of causing side effects, especially hypoglycemia, is important for patient safety.





Miss. Rabbiya Tirmizi was the third trainer of the DCN Workshop. Her topic was "UNLOCK THE POWER OF FOOD". She highlighted the components of effective diabetes management. These are carb counting, low GI food, incorporate lean proteins, healthy fats, fiber rich diet and regular meal timings.

How is Carb Counting Done? The answer is know the carb target, work with dietitian, read food labels, focus on the "total carbohydrates" listed on food labels, measure portions, use measuring cups, a food scale, distribute carbs hroughout the day, spread your carb intake evenly across meals and snacks, monitor blood sugar levels, check blood sugar before and after meals to see how different foods and carb amounts affect sugar levels. Balance carbs with insulin (Carb-to-insulin ratios.)

Low GI (55 or less): Non-starchy vegetables, legumes, whole grains. Medium GI (56-69): Brown rice, whole wheat bread High GI (70 or more): White bread, sugary snacks, potatoes. Healthy Diet = Healthy Diabetes Management. Start Small: Begin by incorporating more vegetables, whole grains, and fiber-rich foods. Local and Global Solutions: Combining the best of Pakistani foods with global strategies (like the Mediterranean Diet) is a winning combination

Dr. Shakeel Ahmed. The General Secretary of PCDA Pakistan was the fourth trainer of the workshop. His topic was " ABC OF DIABETIC FOOT ULCER".

He focused on the following questions. How to examine diabetic foot? What are the risk factors for DFU? What are DF deformities? What is the underlying pathology of DFU? How to categorize the foot at risk? What type of dressings are used in the treatment of diabetic foot ulcers? How to classify the diabetic foot ulcer? How to assist the severity of DFU? What type of education is given to DF patients with regard to severity?

Diabetic Foot Ulcer is one of the serious and life threatening complication of diabetes. Over all prevalence of 10-12% people with diabetes are at increase risk of developing diabetic foot ulcer. He said that All people with diabetes should be screened and placed in the appropriate risk category on the basis of

Certificates Distribution among participants

Certificates Distribution among participants

PCDA Screening Camp in Maripur under Seed Project

Report: Saud Abbasi (STEP)

It was Maripur this time, a village in the west of Karachi, nearing Hawk's Bay and Sandspit sea shore of Arabian Sea. SEED is a project of PCDA Pakistan under which dozens od screening camps have been arranged till date. PCDA is putting its best effort through campaigns and different sessions to make the people aware about diabetes and its impact on human health. The fresh move with the support of Discovering Diabetes was part of the same campaign with a larger horizon and effective planning.



The camp was arranged at the hammed Soomro, a primary in this town of heterogenic Dr. Naresh Kumar, Dr. Ash-Mu- Care Diabetologist working demography. As usual a ver raf Raheem and Dr. Irfan Sa-

Khan Teesha Rani Hamna khanani under like Dr. Riasat Ali Khan, Dr. more purposeful. Fareeduddin, Dr. Shahid

Akhter, Dr. Qazi Mujahid,

dynamic team of enthusiastic fi. Many volunteers from volunteers of STEP, Nuhail DEW division of PCDA unand der leadership of Mrs. Saima my Qazi also worked with full supervision made all arrange- dedication, like Mrs. Saeeda ments of collecting clinical Sohail, Mustufa Qureshi and data, physical examination, many others. Pharmevo replabs screening and referring resentatives deployed in the them to the expert doctors of camp also worked hard to PCDA present in the camp, make the camp more and





Prof Aamir Shoukat's talks in Faisalabad Conference

Reports: Dr. Ahmad Shahzad

Prof. Dr. Aamir Shoukat is a very academic and learned personality of Faisalabad city. He was the mastermind behind the



Prof Dr Aamir Shaukat

M. B. B. S, M. R. C. P.(U.K) F.R.C.P(EDIN), F.R.C.P(LOND), F.C.P.S.(MED) Shahzad who could do such miraculous work of gathering all scholars, researchers and stake holders

Pro Vice-Chancellor, FMU

Dean of Medicine & Allied Specialities Dean Post Graduate Medical Sciences.

FMU/Allied Hospital Faisalabad.

rangements of the two days international conference. Starting his talk on "Tailoring Treatment With GLP-1 RA" (Once Weekly Semaglutide) he highlighted the features of Semaglutide (Injectable) their proven effects and benefit in controlling the hyperglycemia of Type-2 diabetes and effective management of obesity. He said only Semaglutide among all GLP-1 RAs, has got proven massive data in terms of remission of Type-2 diabetes, if used timely and intelligently.

GLP-1, a major incretin hor- 31 mented insulin (glucose-dependent), tion of glucagon release and suppressed hepatic gluconeogenesis. It also causes delayed gastric emptying, reduced appetite and energy intake. Various GLP-1 receptor agonists like exendin based therapies (exenatide, lixisenatide) and GLP-1 analogues (liraglutide, semaglutide and dulaglutide) has been used clinically. Both the subcutaneous as well as oral dosage form of semaglutide have been shown to achieve significant cardiovascular improvements in clinical studies. Semaglutide has

amino-acid mone in humans, acts by nu- peptidic structure which is merous mechanisms like aug- 94% homologous to the nasecretion tive GLP-1 for avoiding iminhibi- munogenicity.

> Semaglutide reduces fasting as well as postprandial mg (128) or 1.0 mg (130), or has glucose. Semaglutide shown favorable proinsulin to insulin ratio which suggests improved efficiency of β-cell functioning and augmented production of insulin. It also exhibits improved insulin sensitivity which is likely to be mediated by overall reduction in body weight.

Semaglutide also exhibits weight loss which is attributed to reduced energy intake, delay in gastric motility.

Diabetes (SUSTAIN) trials

containing were meant for studying once oral placebo, or weekly-once

SUSTAIN-1: The study population received either both weekly s.c. semaglutide of 0.5 placebo (129) for 30 weeks through a prefilled PDS290 peninjector. Both the doses of semaglutide significantly decreased the mean FPG, C-(HOMA-B) along good.

> SUSTAIN-2: A study conducted on 1225 type 2 diabetics (received weekly-once 0.5 mg] s.c. semaglutide + daily

KISTAN" in Faisalabad. On the 1st day of the conference he talked on the "Role of GLP-1 receptor agonists in the management of diabetes and metabolic syndrome."

1st ever International Conference "DIABETES PA-

Before start of his presentation he praised the team behind the mega conference on Metabolic Syndrome, the first ever in the history of Faisalabad, even in the history of Punjab, as other guests from Lahore and other parts of Punjab seconded him later in their talks.

a memorable history. He said it was only Ahmad

related to healthcare specially the primary health

care. He commended the efforts of PCDA Punjab

chapter and Lyalpur Diabetes Foundation for all ar-

weekly s.c. semaglutide along 1.0 mg s.c. semaglutide + daiwith active or placebo com- ly-once oral placebo, or dailyonce 100 mg oral sitagliptin + weekly-once 0.5 mg s.c. placebo, or daily-once 100 mg oral sitagliptin + weekly-once 1.0 mg s.c. placebo for 56 weeks) proved that a significant reduction in HbA1c and body weight was exhibited by semaglutide 0.5 mg and 1.0 mg over sitagliptin.

peptide, homeostasis model SUSTAIN-3: A study conassessment of β-cell function ducted on 813 subjects, who with received 1.0 mg weekly-once HbA1c and body weight s.c. semaglutide or 2.0 mg against placebo. Apart from weekly-once s.c. exenatide gastro-intestinal adverse ef- ER (extended release) proved fects, the safety, efficacy was the superiority of semaglutide (associated with significant drop in HbA1c and body weight, improved lipid profile, reduced fasting insulin, proinsulin, plasma glucagon and insulin resistance).

Diabetes prevalence is increasing worldwide million In 2021, 537 million people T2D has a number of risk factors: Established risk factors for T2D include:

Overweight and obesity: significantly increases the risk of T2D:1,2 approximately 90% of people with T2D are overweight or obese1,3* Age: risk increases in those >40 years of age (Caucasian/white) or >25 years (African-Caribbean, Black African or South Asian)^{1,4}

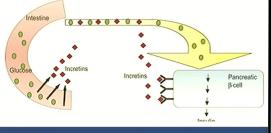
Family history: risk increases approximately threefold for those with a

Ethnicity: risk increases 2-4 times in those of African-Caribbean, Black African Ethnicity: risk increases 2 or South Asian descent^{1,4} Hypertension: risk increases by approximately 2.5 times in those with hypertension

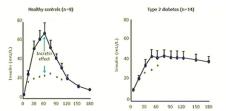
Several parameters impact T2D pathophysiology

THE 'OMINOUS OCTET'

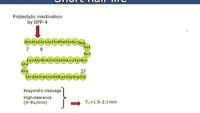




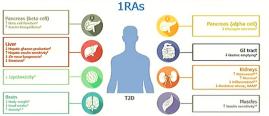
The incretin effect is diminished in patients with T2D



Native GLP-1 has limited clinical value Short half life



GLP-1RAs have Multifactorial Effects PHARMACOLOGICAL EFFECTS OF GLP-



SUSTAIN-4:

1089 subjects, ed. who received either weekly-once semaglutide lowed by dose sclerosis. with both doses outcome semaglutide death, against intestinal frequent semaglutide and pancreatitis. insulin glargine respectively.

ported.

SUSTAIN-5:

betics, who received either weekly-once s.c. semaglutide mg (132), or 1.0 mg (131), or placebo (133)proved the superiority of semaglutide in reduction of HbA1c and body weight.

Effectiveness of mg semaglutide), a malignant were reported. semaglutide and neoplasm and a metastatic glargine pancreatic cancer (1.0 mg was compared on semaglutide) was also report- Effectiveness of semaglutide

SUSTAIN-6:

(360) and daily- renal impairment), reported mg, glargine, initially incidents in semaglutide as it each group). 10 IU/day, fol- checks the progress of athero- (unrelated **Participants** titration (360). A ceived either weekly-once 0.5 retinopathy were reported. significant reduc- mg s.c. semaglutide (826), or tion of HbA1c 1.0 mg (822), or 0.5 mg plaand weight loss cebo (824), or 1.0 mg placebo achieved (825) for 104 weeks. Primary (cardiovascular non-fatal stroke/ insulin myocardial infarction inciglargine. Gastro- dents) were exhibited by 6.6% disor- population of semaglutide. skin Significant reduction problems (rashes, HbA1c and body weight was pruritus, urticar- observed in semaglutide along ia) were more with side effects like retinopawith thy, nephropathy, and acute

SUSTAIN-7:

Four deaths (3 This study involved 1201 subcardiovascular, 1 jects receiving semaglutide pancreatic carci- 0.5 mg (301), or dulaglutide noma) in 0.5 mg 0.75 mg (299), or semaglutide semaglutide and 1.0 mg (300), or dulaglutide two cardiovascu- 1.5 mg (299). Clinically supelar deaths in insu- rior reduction in HbA1c and lin treated popu- weight was observed in both lation were re- the semaglutide groups than dulaglutide. Total 11 malignant neoplasms, 9 diabetic retinopathy cases and 6 deaths Another study on (one from each dose of 397 type 2 dia- semaglutide, and two from

Four cases of neoplasm (0.5 each dose of dulaglutide)

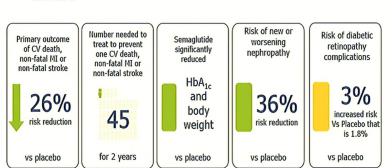
in reducing HbA1c and body weight over canagliflozin (SGLT-2 inhibitor) 0.5 mg s.c. (362), An event-driven trial, con- proved by this study on 788 or 1.0 mg s.c. ducted on 3297 subjects (83% participants receiving weekhave cardiovascular and/or lyonce s.c. semaglutide 1.0 or daily-once once s.c. insulin 26% fall in cardiovascular canagliflozin 300 mg (394 in re- treatment) and few cases of

A sub-study on 178 patients (88 received weekly-once s.c. 1.0 mg semaglutide and 90 received daily-once oral 300 mg canagliflozin) for 52 weeks involved dual energy X -ray absorptiometry (DXA) scanning. Although improvement in body fat composition was reported by both the groups, but no significantly different changes were observed between semaglutide and canagliflozin.

SUSTAIN-9:

This trial compared the efficacy of semaglutide when used along with SGLT-2 inhibitor by taking 302 participants receiving weekly-once 1.0 mg s.c. semaglutide (151) or placebo (151) with a fixed dose escalation period. Semaglutide treatment in conjunction with SGLT-2 inhibitor led to significant reduction in HbA1c and body weight. Mild retinopathy and neoplasms (unrelated to treatment) were reported.





Imeglimin, a novel oral agent for the treatment of T2DM President Dr. Zahid Miyan addresses Faisal Conference

On the 1st. Day of the International Conference on Metabolic Syndrome with the title "Diabetes Pakistan", Dr. Zahid Miyan the president of PCDA Pakistan delivered his talk on Imeglimin, a novel oral agent in the treatment of type 2 diabetes mellitus (T2DM).



Dr. Zahid Miyan explored unique mechanism of action. Imeglimin works by targeting the mitochondrial dysfunction that is often present in T2DM, improving insulin sensitivity and reducing hepatic glucose production. It is a first-in-class drug that acts on multiple pathways involved in glucose metabolism, making it a promising addition to the armamentarium of diabetes treatments. He highlighted Imeglimin's clinical efficacy in improving glycemic control, reducing HbA1c levels, and its safety profile.

Unlike traditional diabetes many treatments. Imeglimin has shown to have minimal risk of hypoglycemia and is not associated with significant weight gain. He also covered how Imeglimin can be used in combination with other antidiabetic agents, such as metformin, to achieve superior control over blood glucose levels. Finally, the potential role of

Imeglimin in addressing the underlying metabolic dysfunctions in T2DM was be examined, alongside future directions for its use in clinical practice.

critical to identify effective metabolism. treatment strategies. In recent years, the novel oral hypoglycaemic drug Imeglimin has attracted much attention in the field of diabetes treatment. The mechanisms of its therapeutic action are complex and are not yet fully understood by current research. Current evidence suggests that pancreatic β -cells, liver, and skeletal muscle are the which main organs in Imeglimin lowers blood glucose levels and that it acts mainly by targeting mitochondrial function, thereby inhibiting hepatic gluconeogenesis, enhanc-

lence of type 2 diabetes melli- moting pancreatic β-cell func- ment

There is growing evidence that the drug also has a potentially volatile role in the treatment of diabetic complicaincluding metabolic cardiomyopathy, diabetic vasculopathy, and diabetneuroinflammation. cording to available clinical studies, its efficacy and safety profile are more evident than other hypoglycaemic agents, and it has synergistic effects when combined with other antidiabetic drugs, and also has potential in the treatment T2DM-related complications. This review aims to dysfunction in T2DM shed light on the latest re-

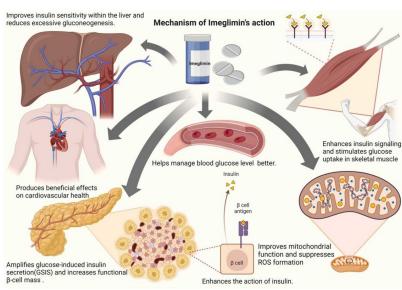
With the increasing preva- ing insulin sensitivity, pro- search progress in the treat- Mitochondrial dysfunction of T2DM with promotes the occurrence and tus (T2DM), it has become tion, and regulating energy Imeglimin, thereby providing development diabetes



clinicians for the treatment of T2DM.

The role of mitochondrial

researchers mellitus through a variety of with the latest insights into mechanisms: 1) it destroys Imeglimin as a viable option the function and promotes apoptosis of pancreatic βcells, leading to a decrease in the function of pancreatic β cells in secreting and (contd)



to insulin in tissues of the to the pathogenesis of diabe- lin granules to the cell mem- affects in the production of ATP, olism, and inducing apopto- interferes with glucose regu- attenuating triggering a cellular energy sis. Therefore, understanding lation. stress response, affecting the and treating mitochondrial expression of genes involved dysfunction is expected to in gluconeogenesis, it causes provide new strategies to abnormalities in lipid metab- ameliorate diabetes and its Mitochondrial olism and excessive accumu- complications. lation of fatty acid intermediary metabolites, thereby interfering with insulin signal- tion and glycaemic reging and exacerbating insulin ulation: resistance. It induces an invated oxidative stress, which damage to the cell structure, but also act as a signaling molecule, participating in the regulation portant intracellular signaland impaired oxidative phosphorylation. leading to disruption of the intracellular located mainly in the cell and cellular signaling. In in- other metabolic disorders. environment.

Mitochondrial dysfunc-

enters the islet protein

membranes of muscle and sulin signaling, mitochondriadipocytes), and generates al dynamics regulate energy ATP via glycolysis and the production and ensure a norof ATP-sensitive potassium chondrial tassium channels

Mitochondrial dynam-

Mitochondria produce ATP -related protein 1 (Drp1) and expression of key proteins in crease in the generation in pancreatic β-cells through other molecules, whereas mitochondrial of reactive oxygen spe- the process of oxidative fusion is regulated by pro- related proteins and relatcies (ROS) and promotes ele-phosphorylation, which is teins such as Mitofusins ed signaling pathways, thereessential for the regulation of (Mfn1 and Mfn2) and optic by affecting insulin signalcan not only produce direct blood glucose. When blood atrophy 1. Mitochondrial dy- ing, insulin resistance, and glucose is elevated, glucose namics is critical for main- the potential for diabetes and β-cells taining cellular function and its through GLUT2 (belonging metabolic homeostasis. It studies confirm the complito the glucose transporter affects mitochondrial mor- cated relationship between family phology, size, and mitochon- mitochondrial dynamics and ing pathways, affecting the GLUTs, GLUT2 is located drial network, which in turn blood glucose homeostasis, cellular energy metabolism mainly in the cell membranes affects mitochondrial func- emphasizing the importance of pancreatic islet β-cells and tion, including energy pro- of this relationship for the hepatocytes, and GLUT4 is duction (ATP production) treatment of diabetes and

TCA cycle within the mito- mal response to insulin in chondria. Increasing ATP/ muscle and fat cells. At the ADP ratios induce a closure same time, a healthy mitonetwork channels in the membrane maintain pancreatic β-cell of the islet β-cells. The clo-function and promotes norsure of ATP-sensitive po- mal insulin secretion. Disleads ruption of these processes to cell membrane depolari- leads to changes in mitosation, prompting the open-chondrial morphology and ing of voltage-dependent function, affecting the ability Ca2+ channels and the in- of mitochondria to respond Increasing insulin, it leads to In conclusion, mitochondrial flux of calcium ions, which to energy demands and insua decrease in the sensitivity dysfunction is closely related promotes the fusion of insu- lin signaling, which in turn skeletal muscle and the liver, tes by affecting insulin secre- brane and the release of insu- take and insulin sensitivity. enhancing insulin resistance tion from pancreatic β-cells, lin. When mitochondrial dys- Del Campo et al. (2014) and resulting in a decrease inducing insulin resistance, function occurs, ATP pro- demonstrated that mitochonin glucose oxidation and uti- increasing oxidative stress, duction is reduced, which drial fragmentation affects lization, it causes a decrease interfering with lipid metab- affects insulin secretion and insulin signaling, specifically stimulated Akt phosphorylaglucose tion, uptake, and cellular respiration rates, by silencing the mitochondridynam- al fusion proteins Mfn2 and ics includes mitochondrial Opa1 in L6 rat skeletal musdivision and fusion, which cle cells. Yifan Wu et al. are regulated by differ- (2022) elucidated through a ent protein complexes; divi- comprehensive review that sion is regulated by dynamin ncRNAs can modulate the complications.

ROS production:

There is an important relationship between mitochondrial dysfunction and oxidative stress. Mitochondria are one of the major sources of ROS production in cells. Impaired mitochondrial function can lead to overproduction of ROS, which in turn triggers oxidative stress. However, oxidative stress not only further damages the mitochondria themselves, leading to a further decline in their function, but also causes various degrees of damage to other components of the cell (e.g., proteins, lipids, and DNA), which can interfere with islet signaling pathways and induce insulin resistance.

Sergio Di Meo et al. suggest-

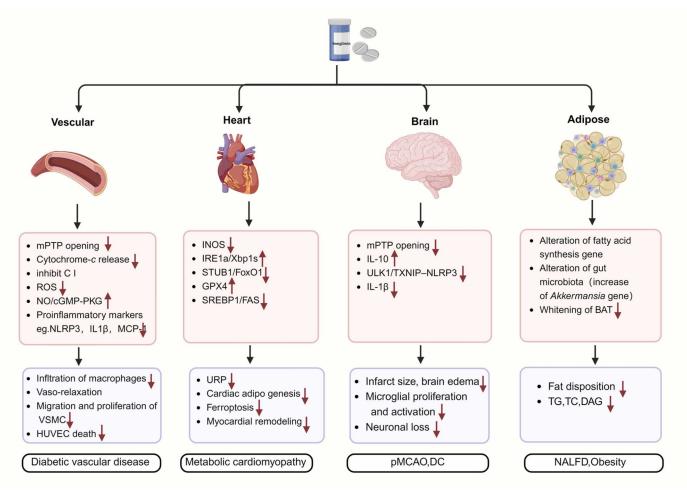
dysfunction and ROS production can form a deleterious positive feedback loop. Rabab A1-Lahham et al. demonstrated that ETC-CI dysfunction-induced ROS production can be induced not only through the p38 MAPKdependent mechanism of IRS-1 phos-Ser307 phorylation, but also inhibits the inhibition of downstream insulin signaling **AKT** Ser473 phosphorylation and activation through p38MAPK nondependent manner, i.e., through

Marilena Lepretti et al. demonstrated that Omega 3 PUFA modulates mitochondrial bioenergetics and kinetics, reduces ROS production, and improves mitochondrial function. In addition, Omega 3 PUFA attenuates endoplasmic reticulum (ER) stress and associated disruption of Ca2+ homeostasis and activation of Together, these studies illusinflammatory sulin signaling is enhanced, production, insulin resistance, and glucose homeostasis is and glucose homeostasis, emregulated. He F et al. showed phasizing potential therapeuthat mitochondrial dysfunc- tic targets for alleviating insution in white adipose tissue lin resistance and maintaining (WAT) is accompanied by an glucose homeostasis. increase in ROS, which influences systemic energetic ho- Diabetic central nervmeostasis, leading to hepatic ous system disease insulin resistance and T2DM. hyperlipidemia- In the cellular context, the A large number of studies induced ROS production in overproduction of ROS acti- have demonstrated that the skeletal muscle leads to mito- vates multiple inflammatory development of diabetic neuchondrial dysfunction, lipid pathways such as the NF- ropathy involves a variety of accumulation, and insulin re- kB, MAPK, and JNK path- complex molecular mechasistance. In addition, it was ways, thereby promoting in- nisms, including the polyol mentioned that mitochondrial flammatory cellular responses path-

GSK3β Ser9 phosphorylation. to insulin and T2DM. path- way, hexosamine pathway ways, thereby promoting the (hexosamine), PKC signaling, and expression of inflammatory cytokines, oxidative stress, the AGE such as tumor necrosis factor- pathway, the PARP pathway, α (TNF-α), interleukin 6 (IL- the MAPK pathway, and 6), and interleukin 1β (IL-1β), the NLRP3 and NF-κB sigetc. ROS can also contribute naling pathways. Under hyto inflammation by oxidizing perglycaemic conditions, high low-density (LDL).

pathways. trate the complex interactions Through these pathways, in- between mitochondrial ROS

secretion mitochondrial dysfunction, lipoprotein glucose-induced oxidative stress in neurons can activate ways [79], [80], [81]. Recent studies have shown that mitochondrial dysfunction is not only a key pathogenesis of diabetic neuropathy but also a central driver of neurodegenerative changes in Alzheimer's disease (AD). Oxidative stress and deficient energy metabolism triggered by mitochondrial dysfunction pathological exacerbate changes in AD, leading to synaptic decline and cognitive dysfunction [82]. Therefore, interventions targeting these pathways are expected to be effective targets for the treatment of diabetic neuropathy.



Fatty acid oxidation:

Mitochondrial fatty acid βof energy production and is tosis of great importance for blood glucose regulation. Mitochondrial dysfunction leads to incomplete fatty acid oxidation, accumulation of lipid intermediates, and ectopic lipid deposition, which are responsible for insulin resistance in muscle and liver tissues, ultimately leading to dysregulation of glucose homeostasis and triggering the progression onset and of metabolic disorders such as diabetes.

The important role of mito-nome, altered lipid metabolism in a chondrial

Vamecq et al. It emphasizes that mitochondrial dysfunction can lead to lipotoxicity and contribute to disease progression through complex interactions. Sander M Houten et al. emphasized the importance of mitochondrial fatty acid β -oxidation (FAO) in the maintenance of energy homeostasis, especially under conditions of limited glucose supply. It discusses how FAO de-

fects affect glucose metabolism and elucidates the critical role of FAO in glucose homeostasis. These studies suggest that mitochondrial dysfunction and altered fatty acid oxidation processes significantly affect glucose homeostasis, with implications

diabetes and obesity.

oxidation is a key component Pancreatic β-cell apop-

It has been shown that mitochondrial function regulates beta-cell apoptosis. In the diabetic state, mitochondrial dysfunction can trigger the apoptotic pathway in pancreatic β -cells, reducing their number and insulin-secreting capacity, thereby disturbing glucose homeostasis. Sachin Supale et al. (2012) reviewed the link between mitochondrial dysfunction due to multiple factors (including mitochondrial gechondrial dysfunction and stress, lipotoxicity, and mitomorphological variety of diseases(including changes) and pancreatic β- Several studies have shown tion in diabetic patients. The diabetes, cancer, and cardio- cell apoptosis. J M van den that mitochondrial dysfunc- above vascular disease), is empha- Ouweland et al. (1992) tion is closely related to duce myocardial sized in a review by Joseph showed that the A3243G mu- T2DM and its associated tion efficiency, thereby im-

for metabolic diseases such as DNA (mtDNA) mutations on thy, diabetic neuropathy, and et al. (2016) suggested that tions. mitochondrial dysfunction leads to reduced oxygen consumption and increased reactive oxygen species (ROS) production, inducing endoplasmic reticulum (ER) stress and that sustained dysfunction of these functions activates the pancreatic β -cell death pathway. These studies have elucidated the interrelated roles of mitochondrial dysfunction and ER stress in β cell apoptosis and the pathogenesis of diabetes mellitus.

Mitochondrial dysfunction and diabetic complications

β-cell function and glucose diabetic cardiovascular dishomeostasis. Milagros Rocha ease, among other complica-

Diabetic cardiomyopathy

Diabetic cardiomyopathy is an important cause of death in diabetic patients. It has been shown that mitochondrial dysfunction and the associated mechanisms it triggers are key contributors to the increased risk of developing cardiovascular disease in diabetic patients. Mitochondrial dysfunction induces increased expression of the nuclear receptor transcription factors PPARα/ δ/β , which in turn leads to increased fatty acid oxidation and ROS producchanges contrac-

> pairing function. The significant increase in ROS production in patients with heart failure (HF) is mainly due to the dysfunction electron transport chain I and III complexes. Moreover, mitochondrial dysfunction leads to increased levels of ROS and oxidative damage to proteins, lipids, and DNA, exacerbating the damage to cardiac cells in diabetic patients. It is suggested

that oxidative stress and increased ROS production affect multiple signaling pathways in the development of diabetic cardiomyopathy, which in turn leads to mitochondrial damage, cellular inflammation, and cell death.



Key messages

- Imeglimin is a novel, first in-class, glucose-lowering agent for the management of type 2 diabetes
- Imeglimin acts via a mitochondrial mechanism to increase glucose uptake by skeletal muscle, decrease hepatic glucose output and increase glucosedependent insulin secretion
- Initial clinical trials show that imeglimin reduces HbA_{1c} and fasting plasma glucose in type 2 diabetes, and is generally well tolerated

tation in mitochondrial tRNA complications, especially mi--Leu in maternally inherit- tochondrial ed mitochondrial diabetes and induced affect β-cell function, which is a major cause of diabetesleads to defective insulin se- related complications, such cretion and diabetes onset, as was the first to demonstrate thy, the effect of mitochondrial

dysfunctionoxidative deafness (MIDD), was able to (excessively increased ROS) diabetic nephropadiabetic retinopa-

Well-Bing Badminton Tournament-

A WDD'24 Event by PCDA Pakistan

Report by: Nohail Khan Member of STEP

On the occasion of World Diabetes Day this year, PCDA Pakistan organized a Badminton Tournament at Nazimabad Karachi, as a part of its ongoing efforts to combat diabetes and promote its prevention. The event aimed to encourage healthy physical activities among the community, fostering awareness about the importance of an active lifestyle in managing and preventing diabetes. Near all the cabinet members of PCDA Pakistan along with their families and friends participated enthusiastically making the tournament a success in promoting fitness and well-being.



Experts say that Sports and sorb glucose from the blood, lin, which allows more glu-

lower blood pressure. People who walk at least two hours a week are less likely to die from heart disease. Exercise can help with weight management and can help reduce stress. Exercise can improve overall quality of life. Sports can enhance cognitive development through memorization, repetition, and skill set learning. Sports can help build strong and toned muscles.

Not only Team PCDA but the families of the doctors of PCDA, representatives pharmaceutical companies, volunteers of STEP wing of PCDA, members of the Town



physical activity can be im- which can lower blood glu- cose to be absorbed into cells. portant for people with diabe- cose levels. It also improves Sports activities also strengthtes because it helps cells ab- the body's sensitivity to insu- en the cardiovascular system

Committee with their chairman and many area youngsters entered their teams in



The audience, mostly family first round matches and 7 of honestly. the area residents were fully round. charged and constantly shouted and raised whistles and slogans.

The winner teams of the qual- Dr. Qazi / Nuhail ifying round then played next Saud / Abdul Nafay round through which finalist Zubair/ teams were decided.

The first finalist team was Dr. Riasat+Usama; and the second on was Nayyer+ Ahmed

the tournament and contested Wagas/ with each other. The activity Mustafa/ was fully supported by the Dr Irfan/ area people.

members of the players and these qualified for the next

Dr. Fareed / Izhan Wasif / Izhar Usman / Dr. Najam Dr. Riasat / Usama Osama / Asim Nayyer / Ahmed Hameed Uddin/ Saad / Saif

Dr. Asima Khan was the 14 teams comprised of the chief referee with 3 assisfollowing players, contested tants, who did her job very

The final was played as if BWF World Championships is being played. It took about 25 minutes to finish. And finally team comprised of Ahmed and Nayyar won the final, leaving the team of Dr. Riasat and Usama as Runners.

ly match was played between tes" Dr. Zahid Miyan's team and Dr. Fareed's team. The audience enjoyed it a lot.

the chief Guest Dr. Zahid Mi- pressed their views in the troyan, who praised the enthusi- phy distribution ceremony.

asm and eagerness of the players. Dr. Zahid Miyan congratulated team PCDA for organizing this very healthy activity. He commended the efforts made by Fareeduddin in the renovation of the park to promote thee healthy activities in the city. This is exactly in accordance with the IDF slogan of the After the final match a friend- year "Well-Being and Diabe-

Dr. Fareeduddin, r. Riasat, Dr. Asima Khan, Dr. Iqbal Batavia, Dr. Shakeel, Dr. The Winners and Runners Shahid Akhter and Mr. Faraz Trophies were awarded by from Scicon-Pharma also ex-



Team PCDA renovates abandoned park and inaugurates Badminton Court

Reports: Nohail Khan

PCDA, in collaboration with the Local Government and Administrative Offices, has successfully renovated a park in Nazimabad to promote a healthier lifestyle among residents. As part of this

eral of Pakistan Khawaja Nazimuddin. It Muzaffer assured Dr. Fareed for his full

of Karachi Central District, and is subdi- sary arrangements at administrative lev-

initiative, a badminton court has been inaugurated to encourage physical activity and community engagement. This project reflects PCDA's commitment to combating lifestyle-related diseases like fostering active livdiabetes by ing and wellness.

subdivision administrative in Karachi, Pakistan, that lies in the asked Dr. Fareed to move ahead.

vided into 7 union councils.

The park just located behind the PCDA Head office in the town was in pathetic condition and was not used by the area residents as it was not regularly cleaned and maintained. Dr. Fareeduddin, the head of Supreme council and past president of PCDA Pakistan discussed the Nazimabad Town (ناظم آباد ٹاؤن) is an idea of renovation of the park with Tewith- ram PCDA who supported the idea and

northern part of the city. It is named af- Dr. Fareed met with Syed Muhammad ter the suburb of Nazimabad, which is Muzaffar, chairman of Nazimabad Town named after the second Governor Gen- and discussed with him the idea. Mr. formed in January 2022 as part support in this regard and made necesel. The renovative work was done by the municipal staff and the beatification process and court marking were made by volunteers of STEP. A Badminton tour-



nament was planned on the occasion of World Diabetes Day'2024 in the renovated park, to inaugurate it on Sunday, 24 November 2024.



Promoting Health Through Unity Diabetes Awareness Walk 2024 in Karachi

Report by Dr. Izhan Ali Khan, Head of STEP



On November 17th, 2024, the cise, balanced diets, and regu- diagnosis and effective man- ensured an engaging and inma, hosted an impactful Dia- managing betes Awareness Walk at the

World Diabetes Day 2024, brought together healthcare professionals, students, pharmaceutical representatives, and families unite against diabetes and

promote

healthier

Primary Care Diabetes Asso- lar health checkups in com- agement ciation (PCDA) and the Stu- bating diabetes. This was foldent Taskforce for Education lowed by cycling rounds, Dr. Qazi Mujahid highlighted and Public Health (STEP), in symbolizing the need for ac- the significance of lifestyle By uniting diverse particicollaboration with Getz Phar- tive living in preventing and interventions and their role in pants, the event underscored

of

diabetes. preventing

Astola Facility in Karachi. After the physical activities, Yogi Wajahat captivated the ment to the power of commu-The event, which marked an awareness session was audience with a session on nity-driven initiatives in cre-

diabetes. teractive experience for all attendees.

complications. the collective responsibility to tackle diabetes. It was a testa-

> ating awareness and encouraging healthier living.

We thank all tendees. speakers, and partners for their invaluable contributions in



The day began with a spirited the field: awareness walk, where partic-

lifestyles. held, featuring enlightening stress management and its making this event a success. talks by prominent experts in role in controlling diabetes. Together, we pledge to defeat

diabetes!

ipants carried banners empha- Dr. Shahid Akhtar shed light The session was skillfully For more details about upsizing the importance of exer- on the importance of early moderated by Dr. Riasat, who coming

All chapters of PCDA Pakistan got indulged into healthy awareness activities throughout the month of November, the month of diabetes awareness. This year on Sunday 17th. November Karachi chapter arranged its walk and awareness seminar in Korangi Industrial Area of Karachi. The event was very beautifully arranged by Getz Pharma.

World Diabetes Day (WDD) is the world's largest diabetes awareness campaign reaching ing a global audience of over 1 billion people in over 160 countries. It is marked every

year on 14 November, the birthday of Sir Frederick Banting, who co-discovered insulin along with Charles Best in 1922.

WDD was created in 1991 by International Diabetes Federation (IDF) World and the Health Organization and became an official United

Resolution 61/225.

PCDA Pakistan since its



awareness

foundation has been arrang- The initiative was arranged to on Pakistan, with risk factors programs raise awareness about the es- including unhealthy diets, across the country. Karachi calating diabetes crisis in Pa- sedentary habits, genetic pre-Chapter in the past has been kistan, a disease that affects dispositions, and managing walks and seminar more than 33 million Paki- awareness regarding preven-

tion and management.

The walk is part of the PCDA's broader initiative to teach and train youth in health awareness and proactive behaviors among laborers, students and the community, aligning with the industrialist's commitment to a collaborative efforts of all components of the community. Furthering its dedication to health advocacy, PCDA Pakistan recently signed a Memo-

randum of Understanding (MoU) with global healthcare leader Getz Pharma, during International Conference in Faisalabad earlier this year.



passage of United Nations city. This year this program among the highest in diabetes was organized in the Industri- prevalence worldwide. Diaal stat of Korangi.

Nations Day in 2006 with the on the sea beach and DHA stanis and ranks the country betes poses a significant health and economic burden



This collaboration has led to the launch of a nationwide program, Diabetes Control, Zindagi Anmol, aimed at educating people across Pakistan's communities on diabetes prevention and promoting healthier lifestyles. The program promises to expand PCDA's impact on the community, embedding health consciousness into educationframeworks nationwide and offering hope for a healthier future.

Cycling to combat Diabetes



Expert Diabetes Advice by Team PCDA





Empowering patients through Education

Raising public awareness about prevention, management and complications of diabetes is one of the objective of celebrating World Diabetes Day 2024.

During the WDD'24 program in Korangi Industrial Area, a public awareness session was held during which speakers enlighted the audience about diabetes.

Dr. Riasat Ali Khan, Dr. Qazi



Mujahid, Dr. Shahid Akhter and Yogi Wajahat addressed to the seminar and gave them practical tips to overcome various difficulties and myths which are reason for increase in the miseries of the people with diabetes.

Head of Sales of Getz Pharma Mr. Shakeel thanked Team PCDA and the attending public who made the program a success.





Dr. M Irfan Rasheed reports from Toba Tek Singh

Health Screening Camp on WDD



Head of Toba Tek Singh Chapter of PCDA Pakistan, Dr. Muhammed Irfan **D**r. Muhammed Irfan Rasheed further organizers and volunteers. Rasheed in collaboration with Lyalpur Diabetes Foundation, District Polic Toba betics Tek Singh and Pakistan Medical Association Gojra, arranged a "Health Screening Camp" at District Head Quarter of Police, on the occasion of World Diabetes Day.

It may be noted that the World Diabetes at risk of life Day became an official United Nations -long Day since 2006 and is marked every plications. year on 14th November, the birthday of Those com-Frederick Banting, who discovered insulin along with Charles include: am-**Best** in

Dr. Muhammed Irfan Rasheed is the provincial clinical advisor and master trainer at Hepatitis & Infection Control

Home of Hepatology.

Talking to the attendees of the Awareness Seminar Dr. Irfan highlighted the importance of prevention and early diagnosis several risk factors that increase the chance of developing type-2 diabetes. These include positive family history, weight, age, ethnicity, inactivi- During the camp hundreds of the atty, and diabetes during pregnancy, some of which can be reduced through healthy eating habits and increased physical activity. **Improving** standing and awareness of the early diagnosis and timely treatment, he said.

said that diayounger and in the absence effective treatment are co- plications 1922. putation, heart disease, and kidney damage vision loss or in some cas-

Program Punjab, finance sec- es, premature death. Dr. Irfan, on behalf retary at Faisalabad Society of of PCDA Pakistan and Lyalpur Diabetes Gastroenterology & Hepatolo- Foundation, thanked the polic officials at gy and member at EASL - The District Head Quarter for giving him an opportunity to serve the community. He assured them for the continuation of such efforts in the coming future.

Dr. Mutayyaba Majeed who is very faof diabetes. He said there are mous physician of the area also delivered her talk for the audience and gave them tips to prevent from falling victim of these non communicable diseases.

> tendees were screened for diabetes, high cholesterol, obesity and high blood pres-

DPO Mr. Ibadat Nisar thanked Dr. Murisk factors is therefore im- hammed Irfan Rasheed and his team for portant to support prevention, his valuable support for screening the police community for these non communicable diseases. Certificates of appreciation were distributed among the



Glimpses of the Police Health Screening Camp at Toba Tek Singh















Toba Tek Singh-WDD Walk and Seminar for HCPs at DHQ hospital



Seminar for HCPs







Dr. Irfan Rasheed organizes

Diabetes Awareness Camp at Agriculture University

Toba Tek Sigh Campus

Assistant Professor Dr. Mu- trol Program and the first Dr. Irfan is a very academic enthusiastic community hammed Irfan Rasheed, head gastroenterologist & hepatol- physician and loves to teach worker. His current activity

of Toba Tek Singh chapter of PCDA Pakistan and District Focal Person for DHQ Hospital Toba Tek Singh, organized an awareness session and walk for WDD in Agriculture University Toba Tek Singh Campus.

This session was collaborated by Getz Pharma under

"Defeat Diabetes" program. Dr. Irfan is also focal person for the Punjab Hepatitis Con-



betes" campaign of Getzs pharma under PCDA Pakistan, is a prove of his dedication and devotion for the ailing community and people with diabetes. Head of PCDA Punjab, Dr. Shahzad Ahmad praised Dr. has Irfan Rasheed for arranging the successful activity.

under "Defeat Dia-

ogist of district Toba Tek and spread awareness about Here are some glimpses of Singh.

diseases and their manage- this awareness session and ment. He is a dynamic and walk.







Dr. Mutayyaba Majeed reports from Toba Tek Singh

On the occasion of World Diabetes Day 2024 a "Free Diabetes screening Camp" was organized at Aman Hospital Toba Tek Singh. In this camp Random Plasma Glucose Levels, HBA1C, Blood cholesterol, Uric Acid tests were done. The diagnosed patients were the examined and advised appropriate treatment.













Dr. Syed A Dewan reports from Karachi East



Dr. Syed A Dewan is very famous family physician, a social worker and a primary Care Diabetologist of Karachi.

A Free Medical and Screening Camp was held on 24th. November 2024 under the umbrella of PCDA Pakistan, . During the camp dozens of the area residents were screened for Blood Sugar, Cholesterol, Uric Acid, Blood Pressure and BMI etc.

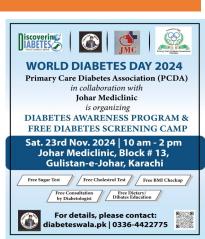
The diagnosed persons were then provided appropriate treatment and guided about lifestyle changes to improve their quality of life and prevent from complications of diabetes.

The Camp at Dr. Dewan's Clinic was a part of the month wide activities by PCDA Pakistan. Undoubtedly hundreds of the events were managed all over Pakistan under the guidance of PCDA Pakistan and in line with theme by International Diabetes Federation (IDF). World Diabetes Day is celebrated on November 14th each year to raise awareness about diabetes and to highlight ways to improve its prevention, diagnosis, and treatment. To prioritize well-being, to raise awareness and to improve lives.

Dr. M Irfan Safi Rizwi reports from Gulistan-e-Johar Karachi



Past President and Head of supreme Council, Dr. Fareeduddin was the guest speaker at the Free Screening camp arranged by Dr. M Safi Rizwi at his clinic at Gulistan-e-Johar Karachi. People attending the camp were screened for diabetes, hypertension, dyslipidemia and obesity. Experts delivered awareness lectures for the participants of the camp.





Diet & Diabetes: Current Facts And Previous Fallacies

Saima Rasheed (Dietitian)

Nutrition plays a crucial role in the management of diabetes, as what a person eats can directly affect their blood sugar levels. However, there are many myths surrounding the dietary needs of people with diabetes, leading to confusion about what they should and shouldn't eat.

Fallacy: Diabetics can eat as Fact: The jaggery contains much sorbitol as they want.

Fact: Sorbitol (E-420) is a sugar alcohol found naturally in fruits like apples, pears, and peaches, and is produced by hydrogenating glucose. While generally safe healthy individuals, it can pared to Table salt. cause gastrointestinal issues like bloating, flatulence, and diarrhea, especially in doses above 10 g per day. The body metabolizes sorbitol by converting it into fructose, which is then processed in the liver into glucose, glycogen, and Fallacy: The idea that frucother byproducts. Though sorbitol is commonly used as a sweetener, its high osmotic load can lead to laxative effects, especially at higher doses.

Fallacy: substituted with sugars

approximately 60-85% sucrose, 5-15% glucose and fructose. The glycemic index (GI) is 56, whereas GI of Jaggery is 84.8.

Fallacy: Pink and Black salt are healthier options as com-

Fact: Salt Type: Source: Na+ content (mg/1 tsp): Table salt Sea 2325, Pink salt Khewra Salt Mine 1680, Black salt, Himalayan black rock 1909

tose is bad for blood sugar is not entirely true.

Fact: While fructose from fructose—especially idly induce insulin resistance, volved in energy production promotes triglyceride formati-

fruit is not as harmful, exces- high triglyceride levels, and but aids in liver glycogen sive consumption of dietary elevated blood pressure, more synthesis, overlapping with from so than glucose or starch. gluconeogenesis. In Metabol-Jaggery can be processed sources—can rap- Fructose is not directly in- ic Syndrome (MetS), fructose



GI and GI load

- Glycemic index indicates the blood sugar raising effect of a food compared to that of reference food (Glucose Gl 100).
- Example-If a person consumes a food with GI of 60, the blood sugar would increase over a two hour period by 60% as compared to sugar level rise after consuming the same amount of pure glucose.
- Glycemic load (GL) is GI x amount of CHO in food.
- □ Lower GI & GL diets associated with ↓ diabetic risk; ↓ cardiac events.

High and low: GI-GI Load

	Glycemic Index	Glycemic Load
High	70 or more	20 or more
Intermediate	55 - 69	11 - 19
Low	54 or less	10 or less

KANANI 2017

GI and GI Load - List of Foods **GI Load**

Pulses & · Oranges, legumes apple, grapes (kathol) Sweet potato · Milk (whole) · Tomato, Curd cucumber · Most leafy veg Potato boiled · Bajra · Mango, papaya · Raisins White rice Beetroot Corn (makai) · Idli with White bread chutney Wafer, biscuits Watermelon Rava upma Puffed rice-

mamra

Dates

 Bran cereals Apple Orange Rajmah

Brown rice

Oats

 Groundnuts Most beans Carrots · Pearl barley- jau · Whole grain breads · Whole-grain pasta/noodles Candy bars

Baked potato French fries White basmati

Breakfast cereal

 Sugar-Maida productsweetened pasta, noodles beverages

S. KANANI 2012

Lentils-masoor

. Skim milk

Cashews

ion. Unlike glucose, fructose does not stimulate insulin or the hormonal responses that regulate appetite and energy balance, such as leptin and ghrelin, which can impair hunger regulation and energy homeostasis. Therefore, while fructose from fruit may not have the same negative effects, excessive intake of fructose in other forms can disrupt metabolic processes. Meta analysis

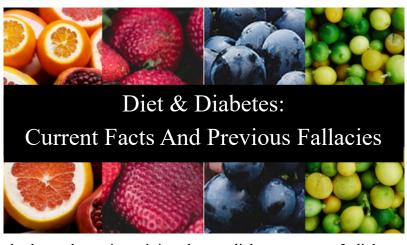
The effects of food sources of fructose-containing sugars on source dependent. sugars, especially fruit, substituted for equal amounts of calories from other macronutrient sources (mainly refined starches) led to improvements in HbA1c without adversely affecting fasting blood glucose or insulin. However, when several food sources of fructose-containing sugars added excess energy to the diet, especially sugar sweetblood glucose and insulin fasting glucose were observed.

Fallacy:

Bittegourd (Momordica charantia)

Fact: Properties such as charantin, vicine, and polypeptidep, as well as other unspecific bioactive components such as antioxidants.

Charantin: In a study, two aglycones of charantin were isolated and identified as sitosterol and stigmastadienol glycosides, however, when tested separately for their hypoglycemic effects in vivo, these two constituents did not produce any notable changes in blood glucose levels. This is an indication that charantin may contain other specific components, yet to be identified, that are responsible for



the hypoglycemic activity ob- prediabetes or type 2 diabetes served in diabetics.

glycaemic control appear to Vicine: a glycol alkaloid be both energy and food known as vicine. Further stud-Food ies are required to ensure the sources of fructose-containing safety and efficacy of using vicine to treat hyperglycemia.

> Polypeptide-p: Bitter melon is one of the most commonly used vegetable that contains polypeptide-p and is used to control diabetes naturally Polypeptide-p or p-insulin is an hypoglycemic insulin-like protein, shown to lower blood glucose levels in humans when injected subcutaneously

ly assigned participants with meat:

to receive either one egg per day, or an equivalent amount of egg substitute over weeks. They found that the participants eating eggs had better fasting blood glucose levels, with no changes in cholesterol levels.

researchers reviewed 10 stud- iron. ies on egg intake for people with diabetes. They found that eating six to 12 eggs per week tered dietitian is key to had no impact on cholesterol, creating a personalized ened beverages (SSBs), sig- Fallacy: Prohibition of egg triglycerides, fasting glucose nutrition plan for mannificant increases in fasting in Diabetes for cholesterol & or insulin levels for people aging diabetes. Their exwith diabetes.

searchers in the U.S. random- tes should not consume red control blood sugar, and

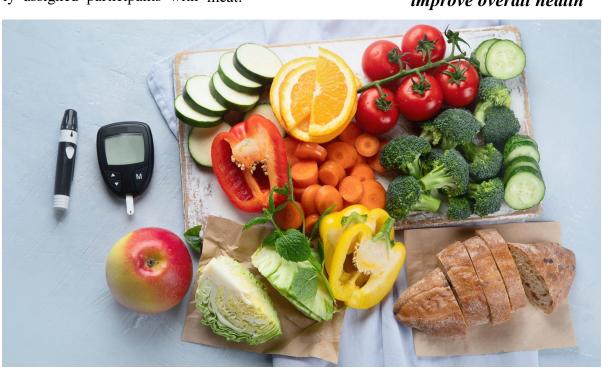
Moderate consumption of red meat has no adverse effect on cardio-metabolic factors and blood pressure in adults with type 2 diabetes.

They found no significant differences in changes of FBG, fasting insulin, HbA1c, QUICKI score, serum lipids, FRS, and systolic and diastolic blood pressure among the 3 groups. Within group analysis showed that FRS reduced significantly in all groups (P<0.05). In addition, systolic (P=0.01)diastolic and (P=0.03) blood pressure reduced within red meat group.

2013 META ANALYSIS:

A diet moderate to low in red meat, unprocessed and lean, and prepared at moderate These two newer studies add temperatures is probably the merit to the landmark pub- best choice from the public lished in 2017 in the Canadian health prospective and red Journal of Diabetes, in which meat is excellent source of

In conclusion, a regispertise helps individuals Fact: In a 2018 study, re- Fallacy: patients with diabe- make informed choices, improve overall health





The Cool Path to Fitness

By: Dr. Qazi Mujahid

Head of DEW wing of PCDA Pakistan

Exercising regularly, every- brain. Strengthen your bones they improve cardiovasday if possible, is the single and muscles. most important thing you can do for your health. In the short term, exercise helps to Commonly aerobic and anaercontrol appetite, boost mood, and improve sleep. In the Aerobic: Aerobic exercise, day? long term, it reduces the risk which speeds up your heart of heart disease, stroke, dia- rate and breathing, is imbetes, dementia, depression, portant for many body funcand many cancers.

What is Exercise?

Any physical activity results in increasing the heart rate beyond resting levels. OR any movement that works your body at a greater intensity than your usual level of daily activity.

Why is exercising important?

It is an important part of a routines will help burn fat and especially healthy prevents health problems, amples of anaerobic exercise. fat. builds strength, boosts ener- It include running and biking *How* gy, and can help you reduce sprints and high-intensity walk per day? stress

ercising?

structure and function of your strength training, and yoga, as

tions. Examples of aerobic exercise include jogging, biking at a moderate pace, or hiking.

Anaerobic Exercise: Anaero- body's capabilities. bic exercise is an exercise or movement that will break down the glucose in your When combined with a body without the use of oxy- healthful diet, walking gen. Incorporating anaerobic can have a direct impact exercise into your workout on body composition, lifestyle. Exercise build lean muscle mass. Ex- comes to stubborn belly weight training.

everyday?

to release proteins and other healthy, fit, and safe include on most days of the week. chemicals that improve the walking, swimming, cycling,

cular health, build muscle, enhance flexibility, and reduce the risk of injury.

Can I exercise every

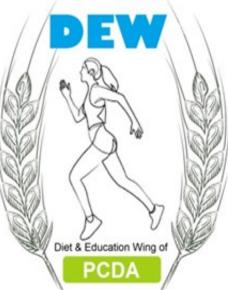
If anybody wants to do some type of moderateintensity exercise every day,it'll be fine. In all cases, you must listen to your body and avoid beyond going your

Does walking burn fat?

minutes

Walk for 30 minutes a What is the main idea of ex- What is the best exercise for day. To get the health benefits, try to walk for at least 30 Exercise stimulates your body The best exercises to stay minutes as briskly as you can

While a combination of aero-



bic and anaerobic exercise provides the most benefit, any exercise is better than none for people who currently have an inactive lifestyle.



Islamabad Chapter of PCDA arranges

BEAT DIABETES CRICKET TOURNAMENT

On the occasion of World Diabetes Day 2024, Islamabad Chapter of PCDA Pakistan in collaboration with Academy of Family Physicians of Pakistan, organized a cricket tournament in Sabih Azhar Cricket Academy. This unique cricket match dedicated to diabetes awareness and well-being. This fun-filled event highlights the importance of holistic health, combining physical activity with knowledge about managing and preventing diabetes.

Dr. Shahzad Tahir, Dr. M Iqbal, Dr. Imran and many other prominent physicians of Islamabad and Rawalpindi played the matches. Among othe participant doctors were Dr. Zahid Mehmood. Dr. Manzoor Ahmed. Dr. Waseem Ahmed. Dr. Hina Hafeez. Dr. Rabia Siddiqui. Dr. Nadia Dr. Naveed Qasim. Dr. Hamza Ehsan. Dr. Ahmed saeed Qureshi. Dr. Muneer Ahmed. Dr. Nouman Khan. Dr. Shabir Hakeem uddin . Dr. Khalid Ansari Dr. Zia ul Haq Qmer.Dr.Ayaz Salem





WDD Celebrations by PCDA Jacobabad Chapter

Dr. Nazeer Soomro, head of Jacobabad chapter of PCDA Pakistan organized a walk, screening and medical camp, awareness session for general public and an academic session for the area doctors. These activities are in line with the ongoing awareness campaign by PCDA Pakistan in the light of IDF's slogan, Well-Being and Diabetes. A large number of area G.Ps and elites participitated in the walk and awareness session.

Dr. Nazeer Soomro distributed free glucometers and insulin packs among the Type-1 patients. General people were also screened for diabetes, high blood pressure, high blood cholesterol and obesity.











The Public Awareness Session



Routine wise diabetic camp at diabetic unit Civil Hospital Jacobabad under supervision of diabetologist Dr Nazir Soomro on 9th. December'24

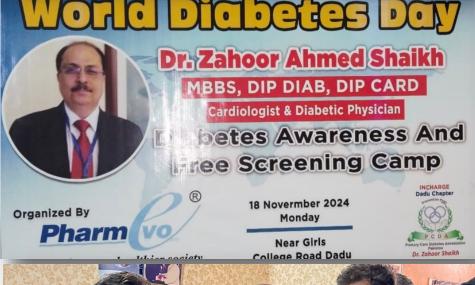




Dr. Zahoor Ahmed Shaikh reports from Dadu Chapter

Head of DADU Chapter of PCDA Pakistan Dr. Zahoor Ahmed Shaikh organized a Diabetes Screening and Awareness camp at Girls College Road Dadu on 18 November 2024











Dr. Pawan Kumar reports from Larkana Chapter

December 2024 issue



WDD 2024 events were organized across major and minor cities of Pakistan under the supervision of various chapters of the Primary Care Diabetes Association (PCDA) Pakistan. In Larkana, Dr. Pawan Kumar, Joint Secretary of PCDA Pakistan, led multiple screening camps and public awareness sessions. During these events, the public was screened for various non-communicable diseases (NCDs) such diabetes. hypertension, dyslipidemia, and obesity. Free laboratory tests, including blood sugar, cholesterol, HbA1c, and serum uric acid, were provided. Additionally, all attendees received lunch boxes as part of the event.

The special guest, Senator Nisar Khuhro, praised Dr. Pawan Kumar for his dedication and commitment to serving the community, particularly individuals with diabetes. He emphasized the importance of collective efforts to combat diabetes, describing it as a national duty and urging everyone to contribute to eradicating this growing health challenge.

Dr. Pawan Kumar expressed his gratitude to the senator for supporting the efforts of the PCDA Pakistan. He also expressed hope that authorities at all levels would take practical steps to prevent diabetes and ensure its effective management.



Glimpses of the camp







Dr. Tanweer Ahmed reports from Sargodha Chapter





Dr. M Iqbal reports from Rawalpindi Chapter

Awareness walk on the occasion of World Diabetes day was organized by Dr. M. Iqbal Diabetologist, the head of Rawal-pindi Chapter of PCDA Pakistan at Cena Medical center Chakri road, which was attended by hundreds of community persons and patients. Screening of diabetes, high blood cholesterol, high blood pressure and obesity were done. Expert physicians examined them and advised appropriate treatment.

Free lab tests were done and free medicines were distributed among the needy patient.











Dr. Ahmad Shahzad reports from Faisalabad Chapter













360°APPROACH TO MANAGE TRIOPATHY



A Cerified course for the **MANAGEMENT OF TRIOPATHY**

6 MODULES | 5 CITIES | 4 MONTHS

Academic partner:





MODULES

Module 1: Adiposity Metabolic syndrome & Insulin Resistance

- 1. ABCD (Adiposity based chronic disease) & MASLD (Metabolic Dysfunction Associated Liver
- 2. Metabolic syndrome, Insulin Resistance, Prediabetes & Lifestyle interventions for Prevention

Module 2: Epidemiology Pathophysiology & Diagnosis of DM

- 1. Diabetes Mellitus: Epidemiology, Pathophysiology & Manifestations.
- 2. Diabetes Mellitus: Diagnostic work up & follow up of a diabetic patient.

Module 3: Recent Advances in Type 2 DM management

- Diabetes Mellitus: Role of Oral Hypoglycemic Agents in Diabetes Management.
 Diabetes Mellitus: Insulins and GLP1 Agonists in Diabetes Management.

Module 4: Diabetes and Co-Morbidities

- 1. Diabetes and Hypertension Treatment and Goals
- 2. Diabetes and Dyslipidaemias: Targets, Goals & Novel therapies

Module 5: Cardiorenal Assessment and Monitoring in Diabetes Mellitus

- 1. ASCVD Risk calculation & Cardiovascular Health Metrics 2. Diabetic kidney Disease Diagnosis & Management

Module 6: Holistic approaches to improve Cardiovascular and Renal Outcomes in DM

- 1. Cardiorenal-Metabolic triopathy & CVD outcome trials in DM
- 2. A Holistic approach towards triopathy management



TRIOPATHY



PROGRAM FEATURES











CAPACITY BUILDING LECTURES









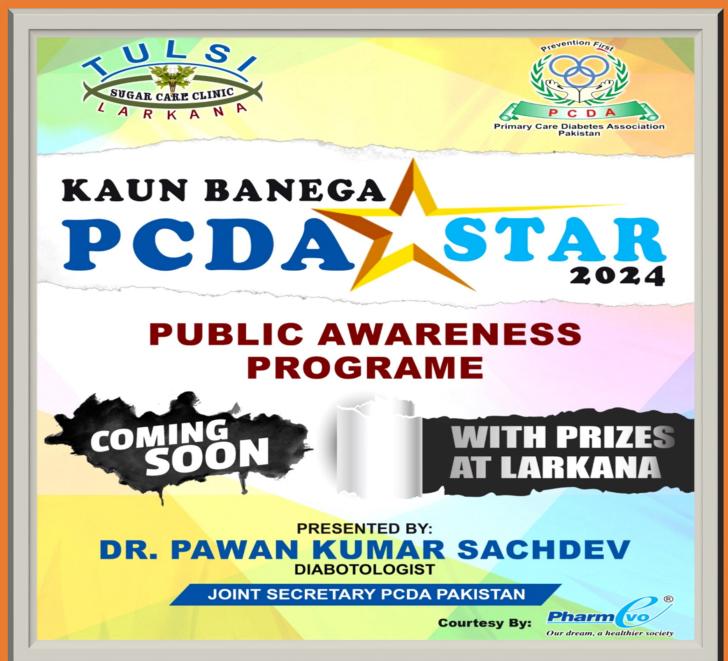
GET YOURSELF REGISTER

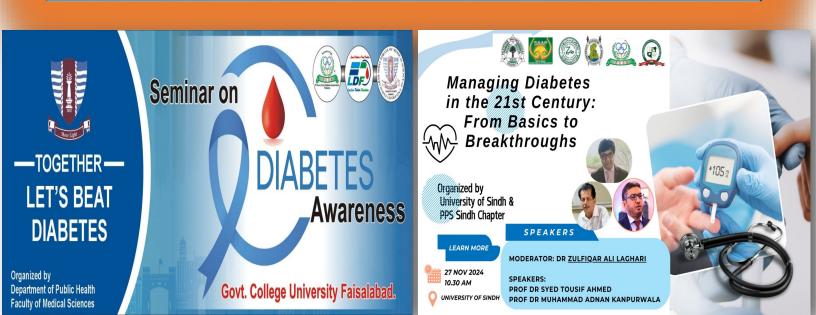


SCAN QR CODE



Miscalleneous Events by PCDA on World Diabetes Day'24





Awareness Session on the occasion of World Diabetes Day 2024.

Dr. Shakeel Ahmed, General Secretary of PCDA Pakistan

talked to the audience at AMC in FB area Karachi on 24 Nov'2024.

Here are som glimpses of the Awareness Session



Dr. Ahmad Shahzad, Head of PCDA Punjab proudly reports

FMU Faisalabad starts Diploma in Diabetes

The Three heroes behind this achievement:

Prof. Aamir Shoukat, Dr. Ahmad Shahzad and Dr. Ijaz Anwer



Dr. Ahmad Shahzad and Dr. Yusuf Ikram at Radio Pakistan Faisalabad



FAISALABAD MEDICAL UNIVERSITY
FAISALABAD

Applications are invited from medical graduates (MBBS / BDS or equivalent) for admission in 2 years Clinical Diploma Courses for the session 2024-25 at Faisalabad Medical University, Faisalabad clinical courses.

SR. #	DIPLOMA PROGRAM	No. of seats		
1	1 DA (Diploma in Anesthesia)			
2	DGO (Diploma in Gynecology and Obstetrics)	10		
3	DMRT (Diploma in Medical Radiology Therapeutics)	10		
4	DCP (Diploma in Clinical Pathology)	10		
5	DPM (Diploma in Psychological Medicine)	10		
6	DMRD (Diploma in Medical Radiological Diagnosis)	10		
7	DTCD (Diploma In Tuberculosis & Chest Diseases)	10		
8	DMJ (Diploma in Medical Jurisprudence)	10		
9	Diploma in Diabetololgy	10		
10	Diploma In Family Medicine	10		
11	Diploma in Dermatology	10		

The following are the guidelines for applicants.

- The candidate should apply to the Faisalabad Medical University, Faisalabad on the printed forms available from the Book shop of the University or it can be downloaded from website: www.pmc.edu.pk or Facebook Page FMU-Official.
- Duly filled application forms should be submitted in Registrar Branch, Faisalabad Medical University Faisalabad along with entry test fee of Rs. 3,000/- before the last date.
- Eligible candidates will be called for interview along with original documents. No TA/DA will be given.
- Selected Diploma Courses candidates will deposit course fee of Rs. 75,000/- per annum and University registration fee of Rs.10,000/-.
- Admission is liable to be cancelled during the course if any discrepancy is found in the submitted documents or in case of poor conduct.
- 6. Applicants who are employed in Government service must submit their applications through the appropriate channels. Successful candidates in regular positions should obtain study leave or extraordinary leave (EOL), while those on an ad-hoc or contract basis are required to resign before the start of classes.
- Last date for the receipt of the applications is 16-12-2024 during office hours (Mon to Thu 09:00AM to 01:00PM & Friday 09:00AM to 11:30AM). No application will be entertained after due date.
- Candidates have to pass the FMU Postgraduate Entrance Test for Admission to Clinical Diplomas to be held on 20-01-2025 (Monday).

Sr. #	Test	Date & Reporting Time	Pattern	Pass marks	Time Allowed	Venue
1	Postgraduate Entrance Test for Admission to Diploma courses	20-01-2025 10:00AM	Basic Medical Sciences:70% Subject Specific: 30 %		2 Hours	Examination Hall, Punjab Medical College, Faisalabad Medical University Faisalabad

- All the applicants shall be issued roll number slips/admittance cards from Examination Department, FMU.
- The candidates will be required to bring their roll number slips/admittance cards along with their original CNIC on the test day.
- Please note that it is mandatory for a candidate to qualify the FMU Postgraduate Entrance Test for admission to any postgraduate programme being offered by FMU.

DR. AKMAL RASHID, Registrar Faisalabad Medical University, Faisalabad

Email: registrar.fmuf@gmail.com Facebook Page: FMU-Official

Website: www.pmc.edu.pk

Paracetamol has new side effects, says studies How to avoid medication overuse?

Selection by: Dr. Riasat Ali Khan (President Elect PCDA)

New side effects of overconsumption of paracetamol, which is the most prescribed painkiller in the world, have been discovered. The 2023 STADA Health report warns against the unchecked use of paracetamol. In Germany, a significant increase in revenue has been noted in the sale of painkillers every year. As per reports, one in four persons consume painkillers at least once a week.

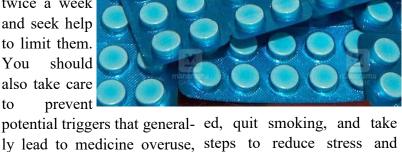
From headaches to fever, pa- actions in kidney patients as headaches racetamols are prescribed by well. health practitioners. So, para- How to prevent such potencetamol, which is the most tial used painkiller around the If you have the habit of turnworld, is often stored in all households. However, studies say that overconsumption of paracetamols can lead to acidification. The experts at the Federal Institute Drugs and Medical Devices have reportedly discovered metabolic acidosis as a major side effect of paracetamol. This causes hyperacidification of blood. Metabolic acidosis could lead to severe re-

addictions

ing to particular drugs like paracetamol at the mere smell of symptoms like headaches or random pains, you might need expert help to keep it in check. Medication overuse can also cause issues like 'medication overuse headaches,' according to the Mayo Clinic. Experts don't know yet why such conditions occur but say that they can cause a history of lifelong

and substance use disorders. should contact your doctor if you are taking a medicine more than twice a week and seek help to limit them. should You also take care prevent

get enough sleep, eat your manage the condition better. meals regularly, stay hydrat-



General adverse events of **Paracetamol**

In general, Paracetamol is well-tolerated when administered in therapeutic doses. The most commonly reported adverse reactions have included nausea. site pain and injection site hypersensitivity reactions. reaction have been reported with the IV product.

10%): Increased aspartate re aminotransferase

Rare (less than 0.1%): Increased hepatic transaminas- Dermatologic: Liver failure.

Gastrointestinal: Very com-

mon (10% or more): Nausea tous Abdominal pain, constipation, dyspepsia, en- phigoid reaction, larged abdomen. Frequency rash, Lyell syndrome. not reported: Dry mouth.

constipation. Injection keting reports: Anaphylaxis, breath sounds,

Hematologic; Common (1% to 10%): Anemia, postopera-Hepatic: Common (1% to tive hemorrhage. Very ra- Cardiovascular: (less Thrombocytopenia, edema, 0.01%): leucopenia, neutropenia.

Comes. Frequency not reported: mon (1% to 10%): Rash, pru- Metabolic; Common (1% to Other:Common ritus. Rare (less than 0.1%): 10%): Hypokalemia, hypergly Serious skin reactions such as cemia acute generalized exanthema-

pustulosis, Stevens- Nervous (up to 34%), Vomiting (up to Johnson syndrome, and toxic mon (1% to 10%): Headache, 15%). Common (1% to 10%): epidermal necrolysis. Very dizziness. Frequency not rediarrhea, rare (less than 0.01%): Pem- ported: Dystonia. pustular

Respiratory: Common (1% spasms, trismus vomit- Hypersensitivity: Postmar- to 10%): Dyspnea, abnormal pulmonary edema, hypoxia, pleural effustridor, wheezing, sion, coughing.

> Comthan mon (1% to 10%): Peripheral hypertension, hypotension, tachycardi a, chest pain.

Musculoskeletal: Common (1% to 10%): Muscle

Psychiatric; Common (1% to 10%): Insomnia, anxiety

Genitourinary: Common (1% to 10%): Oliguria

Local:Common (1% 10%): Infusion site pain, injection site reactions

Ocular: Common (1% to 10%): Periorbital edema

(1% 10%): Pyrexia, fatigue. Rare (0.01% to 0.1%): Malaise.



Dr. Sulaiman Khan reports from Kohat Chapter

World Diabetes Day was celebrated at DHQ Hospital in Kohat, in collaboration with the hospital administration and the PCDA (Primary Care Diabetes Association Pakistan) Kohat Chapter.

The event featured a walk and awareness campaign to educate participants about diabetes management and prevention. Dr. Sulaiman Khan, Head of the PCDA Kohat Chapter, delivered key messages highlighting the importance of diabetes awareness, healthy lifestyle choices, and proactive measures to prevent and manage the disease.

The event emphasized the hospital's and PCDA's commitment to improving community health through education and support for individuals affected by diabetes.





rrevention 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.

Prevention First Newsletter has limited circulation, to be circulated among members only.

PFN-Online is the online version of Prevention First Newsletter, which is published to the social media groups of PCDA Pakistan on the 15th. day of every month.

PFN-Online publishes the reports and photographs of the activities of PCDA and its chapters across the country.

Reports of only those events are included in PFN-Online which are managed under the platform of PCDA. Better choose and send the pictures with name or logo of PCDA.

The Publications Committee and the Editorial Board of Prevention First Newsletter, have right to accept or reject any material sent for publication.

Articles, pictures or any other material for PFN-Online can be directly sent to any member of the Publications Committee and the Editorial Board.

Or E-mail to:preventionfirstnewsletter@gmail.com and pcda.pak@hotmail.com

In charge PFN-Online

SCAN FOR THE MEMBERSHIP OF **PCDA STEP DEW**