RSSDI

Indian Diabetes

EDUCATOR JOURNAL

Theme of the Month

Societal Well-being and Diabetes

To keep Members of Diabetes Care team abreast about
DSME/DSMS - (Diabetes Self management Education/Support) Concepts

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RSSDI Indian Diabetes EDUCATOR JOURNAL

1st time in India
To keep the members of diabetes care team abreast with DSME and DSMS concepts

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*DSME: Diabetes Self-Management Education, DSMS: Diabetes Self-Management Support

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FOREWORD

Research Society for the Study of Diabetes in India (RSSDI) founded by Prof. MMS Ahuja in the year 1972 is the biggest scientific association of healthcare professionals involved in promoting diabetes education and research in India. RSSDI is happy to collaborate with USV to support their endeavour to make India the 'Diabetes care capital of the world'. Through this collaboration, RSSDI would like to strengthen the cadre of diabetes educators by empowering them with recent updates in diabetes management helping bridge the gap between the physician and the patient. Today, the rule of 50% is prevailing in terms of awareness, detection, treatment and control in T2DM. Our aspiration is to achieve 90-90-90-90 i.e.90% of people with diabetes should be made aware, 90% should be detected, 90% of those detected should be treated, and 90% of those treated should reach their goals.

Indian Diabetes Educator Journal (IDEJ) is the first of its kind in India, and the longest running monthly diabetes educator journal since April 2015 and continues its endeavour to spread awareness, knowledge and enable healthcare teams to manage individuals with diabetes and empower them for self-care. RSSDI IDEJ will continue to keep the members of diabetes care team abreast with concepts of Diabetes Self-Management Education/Support (DSME/S) with a reach of 44000 doctors and diabetes educators digitally.

This month's theme, "Societal Well-being and Diabetes" explores the multifaceted relationship between diabetes management and community health. It examines how societal factors, such as the built environment, food environment, and equitable access to healthcare, influence diabetes prevention and care. This edition highlights the role of society in supporting individuals with diabetes. Emphasis is placed on fostering healthy lifestyles, promoting physical activity, and enhancing diabetes education, including initiatives in schools to empower young people. We hope this issue provides valuable insights to inspire diabetes educators to implement strategies that advance societal well-being and promote a healthier, more inclusive future for all.

We sincerely thank our contributors for making this issue delightful reading for our readers. We dedicate this journal to all the healthcare professionals who are working relentlessly towards making "India–The Diabetes Care Capital of the World."

Sincere Regards,

Dr. Sanjay Agarwal
RSSDI Secretary

*DSME: Diabetes Self-Management Education, DSMS: Diabetes Self-Management Support

Expert Contributors
of the month

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Article: Role of Social Factors in Health Literacy, Numeracy, and Glucose Control

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Article: Building Healthier Food Environments for Sustainable Change

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Article: Empowering the Next Generation: Diabetes Education in Schools and Colleges

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Article: Frequently Asked Questions on Societal Well-being and Diabetes

To get featured in the Indian Diabetes Educator Journal you can connect with us on the below mail ID for further communication: info@nurturehealthsolutions.com

RSSDI Indian Diabetes
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Diabetes outcomes are influenced by a wide range of factors, and accumulating evidence highlights the significant role of non-medical influences. Social and environmental factors, together referred to as the social determinants of health (SDOH), account for about 50% to 60% of health outcomes. These factors contribute significantly to health disparities, shaping both individual and population-level health. As per the World Health Organization, SDOH are influenced by the distribution of money, power, and resources across global, national, and local levels and are fundamental drivers of health disparities. To achieve health equity, it is crucial to address SDOH at the structural and systems level, where these disparities originate.

There are broadly five domains of SDOH

Socioeconomic status (SES): This includes income, education, and occupation and is closely linked to diabetes prevalence, complications, and outcomes. Individuals with lower SES are reported to have higher rates of diabetes, associated complications, and poorer disease management. Research highlights the need for interventions that address SES disparities, including better access to education, healthcare, and employment opportunities to improve diabetes outcomes.

Neighborhood and physical environment: This includes housing, built environment, and environmental exposures. Housing instability is linked to poorer diabetes outcomes due to challenges in self-care, access to healthcare, and medication adherence. Interventions providing stable housing and supportive services have shown improvements in diabetes management and health outcomes. The built environment, including walkability and greenspace, influences diabetes outcomes, with more walkable neighborhoods and access to parks linked to better management of diabetes. Neighborhood-level interventions improving infrastructure for physical activity and healthy food access can benefit diabetes prevention and care. Certain marginalized communities face disproportionate exposure to environmental toxins, such as air pollution, arsenic, and endocrine-disrupting chemicals, which are linked to higher diabetes risk. Air pollution and certain metals exacerbate cardiovascular risks in individuals with diabetes. Interventions to reduce environmental exposures, particularly through policy changes, may help prevent or mitigate diabetes and related complications.

Food environment: This includes access to healthy food, affordability, and food insecurity, which significantly influences diabetes risk and outcomes. Poor food access and insecurity are linked to worse diabetes management, while interventions such as supermarket placement in low-income areas show promise in improving health outcomes for those with diabetes.

Healthcare: Healthcare plays a crucial role in diabetes outcomes, with access, affordability, and quality being key factors. Health insurance improves access to care, reducing emergency visits and increasing screenings, while lack of insurance is linked to worse outcomes. Geographic disparities also affect access to specialists and diabetes education. Healthcare interventions, such as community health worker programs and quality improvement efforts, have shown promise in improving diabetes management, particularly in underserved populations.

Social context: This encompasses social capital, cohesion, and support, considerably influencing diabetes outcomes. Higher social capital and neighborhood cohesion are linked to lower diabetes incidence, while greater social support improves glycemic control, quality of life, and self-management. Conversely, racism and discrimination exacerbate diabetes risks, particularly in minority populations. Social support interventions have shown positive impacts on clinical and psychosocial outcomes, with preferences for delivery methods varying by cultural and ethnic groups.

SDOH intervention recommendations

Recommended actions	Description
Design healthcare delivery to integrate social care into healthcare, guided by the five healthcare system activities - Awareness, adjustment, assistance, alignment, and advocacy. Build a workforce to integrate social care into healthcare delivery.	• Establish organizational commitment to addressing disparities and health-related social needs. • Incorporate strategies for screening and assessing for social risk factors and needs. • Incorporate social risk into care decisions using patient-centered care. • Establish linkages between healthcare and social service providers. • Include social care workers in team care.

Diabetes management and prevention are strongly influenced by societal factors. Addressing these elements creates supportive communities that promote diabetes prevention, equitable care, and improved quality of life for individuals living with diabetes.

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Ensuring Health Equity in Diabetes Care

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India is grappling with a diabetes epidemic, with around 101 million adults living with diabetes and about 136 million having pre-diabetes. Diabetes management consumes up to 25% of household income in low-income populations, creating significant barriers to equitable care. It is reported that over 50% of cases in rural areas and about 30% in urban areas remain undiagnosed, often detected only after severe complications arise. Even among diagnosed individuals, many fail to achieve optimal glycemic control, largely due to poor monitoring, medication non-adherence, and limited follow-up care.

Strengthening education and training

The shortage of skilled diabetes educators in India not only increases the load on physicians to educate patients but also leads to a rise in the incidence and prevalence of type 2 diabetes. As suggested by the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS), training nurses as certified diabetes educators could significantly enhance care in underserved regions.

Building healthcare infrastructure

The required number of public health facilities in India is around 74,150 health centers per million people; however, the current number is only half of that. Many Indian states lack testing laboratories, and more than half of those that do exist are inadequately equipped and understaffed. As a result, there is an urgent need to develop a well-organized infrastructure and make existing healthcare facilities healthier in order to improve the quality of diabetes care and outcomes.

Leveraging affordable technologies

Affordable technologies, such as telemedicine, have been shown to reduce glycemic variability significantly and cut hospital visits by 30%. It has also been shown to be beneficial in reducing the risk of microvascular and macrovascular complications in diabetes. Such innovations bridge care gaps, offering real-time monitoring and enhanced communication between patients and healthcare providers.

Encouraging public-private partnerships

Collaborative initiatives, like those between the Public Health Foundation of India and state governments, have demonstrated improved care quality in resource-limited settings. Public-private partnerships can expand resources, improve healthcare delivery, and reach marginalized populations.

Policy advocacy

Nearly half of individuals with diabetes in India experience financial hardship due to high medication and therapeutic device costs. Advocating for national diabetes action plans within universal health coverage frameworks can reduce costs for low-income populations, while legislative support for subsidies ensures sustained access to medications and diagnostic tools. Investing in national diabetes registries, expanding research on cost-effective interventions, leveraging Artificial Intelligence (AI) for predictive analytics, and conducting community-level studies can improve early diagnosis, track disparities, and develop tailored care models for underserved populations.

Addressing disparities in diabetes care requires a comprehensive and forward-looking approach. Prioritizing health equity will ensure all individuals, regardless of socioeconomic or geographic barriers, have the resources to manage diabetes effectively. Strategic public health initiatives paired with robust policy frameworks and data-driven insights are essential to reducing the diabetes burden in India and improving overall quality of life.

Key points

- India faces a diabetes epidemic, with millions affected and significant gaps in diagnosis and care. Key solutions include strengthening education and training, improving healthcare infrastructure, leveraging affordable technologies, and encouraging public-private partnerships.
- Policy advocacy for affordable treatment and national diabetes action plans is crucial to reduce financial barriers and ensure equitable care, particularly in underserved areas.
- A comprehensive, equity-focused approach is essential to effectively manage diabetes and improve quality of life across the country.

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Infrastructure and Health: The Built Environment's Role in Diabetes Care

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The prevalence of diabetes is increasing, prompting public health efforts to examine the role of non-medical factors, such as the built environment. The built environment encompasses man-made features, including housing, transportation systems, urban design, parks, sidewalks, and food outlets. It shapes how people interact with their surroundings and influences behaviors such as physical activity, food consumption, and access to medical services. These factors are particularly relevant to managing diabetes, a chronic disease closely linked to lifestyle and environment.

The built environment's role in diabetes prevention and management

1. Encouraging physical activity

Walkable neighborhoods, characterized by interconnected streets, pedestrian pathways, and safe public spaces, are associated with higher physical activity levels. Studies have reported that individuals living in walkable areas had a lower risk of type 2 diabetes mellitus (T2DM) compared to those in car-dependent neighborhoods. Regular physical activity, facilitated by walkable environments, reduces obesity, a major risk factor for T2DM and improves glycemic control, lowering glycated hemoglobin (HbA1c) levels in people with diabetes.

2. Access to healthy foods

The presence of grocery stores and farmers' markets offering fresh, nutritious foods is inversely associated with diabetes prevalence. In contrast, "food swamps" dominated by fast-food outlets and processed food options increased obesity and diabetes incidence rates by 2.5 and 1.7 times, respectively, among young and middle-aged adults. Urban areas with better access to healthy foods have observed a reduction in obesity-related diabetes risks.

3. Green spaces

Neighborhood green spaces, such as parks, tree canopies, and nature trails, offer significant physical and mental health benefits through mechanisms like environmental protection, stress reduction, social connections, and increased physical activity. Proximity to green spaces has been linked to reduced risks of depression, obesity, diabetes and cardiovascular disease.

4. Healthcare access and infrastructure

The availability and accessibility to diabetes educators, endocrinologists, and pharmacies ensure timely care, regular monitoring, and access to medications. Evidence highlights that regions with limited healthcare infrastructure face barriers to effective disease management, leading to poorer outcomes.

Policy recommendations

Enhancing walkability: Investments in sidewalks, bike lanes, and pedestrian-friendly urban design can encourage daily physical activity.

Promoting healthy food access: Policies that incentivize the establishment of grocery stores in underserved areas and regulate fast-food density can foster healthier eating habits.

Expanding green spaces: Incorporating parks and open spaces in urban planning supports active lifestyles and stress reduction.

Integrating healthcare services: Ensuring proximity to healthcare facilities and diabetes education centers can improve disease management and outcomes.

Transportation and accessibility: Develop reliable public transportation systems to facilitate access to healthcare services and healthy food options.

By fostering physical activity, improving access to nutritious foods, and supporting healthcare accessibility, a built environment can play a pivotal role in mitigating diabetes prevalence and enhancing the quality of life for those living with diabetes. Evidence-based policies and investments in sustainable urban planning are critical to addressing the diabetes epidemic globally.

Key points

- The built environment significantly impacts diabetes prevention and management by shaping behaviors and access to essential resources.
- Walkable areas, healthy food access, green spaces, and healthcare proximity collectively reduce obesity, diabetes risks, and improve overall health outcomes.
- Sustainable urban planning fosters healthier communities, addressing the global diabetes epidemic.

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Exploring the Connection Between Air Pollution and Diabetes

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Air pollution is a growing global concern, affecting not just respiratory health but also playing a significant role in the development and progression of chronic conditions like diabetes. In a number of studies, air pollutants, such as particulate matter (PM), organic carbon, nitrogen oxides, carbon monoxide (CO), and sulfur dioxide (SO_2), have been found to be risk factors for adverse metabolic outcomes, including diabetes. Epidemiological evidence suggests a link between PM exposure and an increased risk of type 2 diabetes mellitus (T2DM). What are $PM_{2.5}$ particles? These are particles that are up to 30 times thinner than human hair, and can enter the bloodstream on breathing, leading to a variety of respiratory and other diseases.

Studies in high-income countries indicate that a 10 µg/m³ increase in $PM_{2.5}$ exposure is associated with a 7%–11% higher risk of developing T2DM and a 19% higher risk of diabetes mortality. However, these regions generally have lower annual average $PM_{2.5}$ levels (2.8 µg/m³ to 21.2 µg/m³). In contrast, studies from more polluted regions, such as China, Hong Kong, and Taiwan, have reported significant associations between $PM_{2.5}$ exposure and increased prevalence and incidence of T2DM, elevated fasting glucose, and glycated hemoglobin (HbA1c). Evidence from India remains inconclusive, primarily due to limitations in $PM_{2.5}$ exposure assessment methodologies.

A recent study examined the association between air pollution and the risk of T2DM in urban areas of Chennai and Delhi. The findings revealed that higher $PM_{2.5}$ exposure significantly elevated blood glucose levels and the incidence of diabetes. Specifically, for every 10 µg/m³ increase in $PM_{2.5}$, there was a 22% higher risk of diabetes. This effect was observed across short-term, medium-term, and long-term exposure periods. The researchers acknowledged several limitations of this study. It was conducted in two urban areas in India, which may not represent the entire country. The study did not include data on dietary habits, indoor $PM_{2.5}$ exposure, or other pollutants like nitrogen dioxide (NO_2), which could also influence glucose metabolism. These gaps highlight the need for further research to build on these findings.

Mechanisms linking ambient air pollution to increased diabetes risk involve chronic inflammation and oxidative stress, which drive lipid deposition, insulin resistance, and endothelial dysfunction. $PM_{2.5}$ exposure, particularly in individuals with high HbA1c, reduces endothelial function. Experimental studies have shown that $PM_{2.5}$, combined with a high-fat diet, induces a proinflammatory, insulin-resistant state, increases homeostasis model assessment of insulin resistance (HOMA-IR) and postprandial glucose, and alters adipose tissue function, contributing to T2DM pathogenesis.

Evidence suggests that air pollution is a significant risk factor for T2DM, emphasizing the urgent need for strategies to mitigate its health impacts, particularly in regions with high pollution levels. Further research is crucial to understanding exposure pathways and developing effective interventions to protect public health.

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Interview with Dr. Tejal Lathia

Dr. Tejal Lathia

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Consultant Endocrinologist, Apollo, Fortis and MGM New Bombay Hospitals, Navi Mumbai

Dr. Tejal Lathia is a renowned endocrinologist with extensive expertise in managing a wide spectrum of endocrine disorders, including diabetes, thyroid dysfunction, obesity, and osteoporosis. With a patient-centered approach, she blends advanced medical knowledge with compassionate care, ensuring tailored treatment plans for each individual. Dr. Lathia is highly regarded for her commitment to promoting awareness about lifestyle modifications for effective disease management. She has earned accolades for her contributions to clinical endocrinology and regularly participates in national and international medical forums. Dr. Lathia's dedication extends to educating patients and the community about endocrine health, making her a trusted name in her field. Her clinical acumen and empathetic approach have positively impacted countless lives.

Societal Well-being and Diabetes

1. Why is it important for society to address diabetes collectively?

Ans. Two of the most important reasons for the need for diabetes to be addressed collectively by society are:

a) The huge economic burden of diabetes, directly and indirectly, includes productivity of the workforce, absenteeism, cost of diagnosis/treatment, as well as complications.

b) The expected increase in diabetes in more and more people at younger ages is extremely concerning – hence, prevention of diabetes in future generations is a responsibility of society at large.

2. What strategies at the public health level can contribute to effective diabetes prevention and management?

Ans. Though there are many strategies, these, to my mind, are the most important:

a) Promotion of a healthy lifestyle at every stage of the life journey, starting with schools and college.

b) Early screening for diabetes at a young age – starting as low as 30 years of age.

c) Provision of clear nutrition labels on all available food products.

3. How can we reduce the stigma around diabetes, especially children with type 1 diabetes?

Ans. The best way to reduce stigma around type 1 diabetes is to provide accurate information about this condition freely in schools and colleges. Children and young adults are most likely to be open-minded and inclusive and can play a key role in changing behavior in their own families and society at large.

4. What role can employers play in supporting employees with diabetes?

Ans. Though this is a vast topic – one of the most important ways that employees can be supported for their diabetes is by providing access to healthy food at the workplace and availability of exercise spaces for regular physical activity.

Support with digital therapeutic platforms that provide accountability and guidance of lifestyle modifications in a scientifically structured manner can help employees begin and maintain lifestyle modifications.

5. How can schools and colleges foster empathy and support for students with diabetes?

Ans. Normalize students with type 1 diabetes taking insulin injections or using insulin pumps in school, as well as checking blood sugars with glucometers, to reduce stigma and create an inclusive environment.

Educating students on how they can support their peers with diabetes, particularly in managing hypoglycemia, can foster empathy and encourage helpful interactions.

Selecting volunteers and buddies to help children with diabetes through the school day can provide additional support and create a sense of community.

Schools should encourage physical activity and ensure access to healthy food options to help students with diabetes manage their condition effectively.

Providing support for mental health through appropriately trained counselors and psychologists can help address the emotional challenges faced by students with diabetes, promoting their overall well-being.

The Apt Mix of Insulin and Nutrition Therapy: A Doctor's Experience on the MyCare Patient Support Program

Dr. Ramesh Bargav

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DIP-CARS (BOSTON) UNIVERSITY

A 27-year-old female with type 2 diabetes mellitus was managed by Dr. Ramesh Bargav.

Here's what Dr. Ramesh Bargav has to say:

A 27-year-old female with type 2 diabetes mellitus presented with uncontrolled blood glucose levels, averaging 230 mg/dL. Due to persistently high levels, she was initiated on insulin. She also experienced a low appetite, likely due to hyperglycemia, leading to an irregular eating pattern of two meals a day.

To address these concerns, MyCare Diabetes Educator (MDE), Ms. Priyanka Sharma, guided her in improving her eating habits. MDE Priyanka took a detailed dietary recall and considering food preferences, created a customized meal plan that was easy to follow, and aligned with her insulin regimen, facilitating better glucose control and preventing hypoglycemia. MDE Priyanka educated the patient on insulin administration and storage and followed up periodically, including via video consultations. She once guided the patient through an insulin cartridge issue via video call.

The patient was advised to monitor glucose levels regularly and keep records. With dietary counseling and insulin therapy, her glucose levels gradually came under control. Glucose control also restored her appetite, and the advised meal plan enhanced her overall nutrient intake, promoting better health.

During the initial visit, the patient reported experiencing tingling sensations in her feet, a sign of early neuropathy, which is a common complication associated with diabetes. Improved glucose control over the weeks also resolved these symptoms, showing progress in managing the complication.

Ms. Priyanka Sharma

NDEP and T1DE Certified Diabetes Educator

Here's what MDE Priyanka has to say:

The patient achieved remarkable improvement in blood glucose control through a combination of the prescribed insulin regimen, tailored dietary modifications, and consistent follow-up. Continued monitoring and guidance will be crucial in maintaining these positive outcomes and reducing the risk of future complications.

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*PWD: People with Diabetes

Contact for more information
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Abridged Prescribing Information

UDAPA-TRIO Forte, UDAPA-TRIO, Dapagliflozin, Sitagliptin & Metformin Hydrochloride Extended Release Tablets

Composition: Dapagliflozin 10 mg, Sitagliptin 100 mg & Metformin Hydrochloride Extended Release 1000 mg tablets Dapagliflozin propanediol monohydrate eq. To Dapagliflozin 10 mg Sitagliptin Phosphate Monohydrate IP Eq. Sitagliptin 100 mg Metformin Hydrochloride IP (as Extended Release) 1000 mg Dapagliflozin 10 mg, Sitagliptin 100 mg & Metformin Hydrochloride Extended Release 1000 mg tablets Dapagliflozin propanediol monohydrate eq. To Dapagliflozin 10 mg Sitagliptin Phosphate Monohydrate IP Eq. Sitagliptin 100 mg Metformin Hydrochloride IP (as Extended Release) 500 mg **Indication:** It is indicated as an adjunct to diet and exercise to improve Glycemic Control adults with type 2 diabetes mellitus **Recommended Dosage:** As directed by the physician. **Method of Administration:** Oral **Adverse Reactions:** Most common adverse reactions reported are: Dapagliflozin - Female genital mycotic infections, Nasopharyngitis, Urinary tract infections. Sitagliptin - Upper respiratory tract infection, nasopharyngitis and headache. Metformin - Diarrhea, nausea/vomiting, flatulence, asthenia, indigestion, abdominal discomfort, and headache. Warnings and Precautions: Dapagliflozin: Volume depletion; Ketoacidosis in patients with Diabetes Mellitus; Urosepsis and Pyelonephritis; Hypoglycemia; Genital mycotic infections Sitagliptin: General: Sitagliptin should not be used in patients with type 1 diabetes or for the treatment of Diabetic Ketoacidosis. Acute pancreatitis: Hypoglycemia is used in combinations when combined with other anti-hyperglycemic medicinal product: Renal impairment: Hypersensitivity reactions including anaphylaxis, angioedema, and exfoliative skin conditions - Steven johnson syndrome; Bullous pemphigoid Metformin Hydrochloride: Lactic acidosis; In case of dehydration (severe diarrhea or vomiting, fever or reduced fluid intake), metformin should be temporarily discontinued and contact with a healthcare professional is recommended. **Contraindications:** Hypersensitivity to the active substance of Dapagliflozin, Sitagliptin & Metformin or to any of the excipients listed. Any type of acute metabolic acidosis (such as lactic acidosis, diabetic ketoacidosis). Diabetic pre-coma; Severe renal failure (eGFR < 30ml/min); Acute conditions with the potential to alter renal function such as: Dehydration, Severe infection, Shock; Acute or chronic disease which may cause tissue hypoxia such as: Cardiac or respiratory failure, Recent myocardial infarction, Shock, Renal Impairment, Acute intoxication, Alcoholism. **Use in special population:** Pregnant women: Due to lack of human data, drugs should not be used during pregnancy. Lactating women: It should not be used during breastfeeding. Pediatric patients: The safety and efficacy of drugs has not yet been established. No data is available. Geriatric Patients: In patients >65 years, it should be used with caution as age increases. For Additional Information/full prescribing information, please write to us: USV Private Limited, Arvind Vithal Gandhi Chowk, B.S.D Marg, Govandi, Mumbai - 400088 Last updated on 02/04/2024.

Reference :

1. Böhm AK et al. Regimen simplification and medication adherence: Fixed-dose versus loose-dose combination therapy for type 2 diabetes. PloS one. 2021 May 4;16(5):e0250993; **2.** DAPAGLIFLOZIN, SITAGLIPTIN, AND METFORMIN ER FDC IN INDIAN TYPE 2 DIABETES MELLITUS PATIENTS WITH INADEQUATE GLYCEMIC CONTROL ON METFORMIN MONOTHERAPY: A MULTICENTER RANDOMIZED Double- Blind Parallel Study" oral paper presented in Diabetes India – Jan 2024; **3.** McMurray JJ et al. Dapagliflozin in patients with heart failure and reduced ejection fraction. New England Journal of Medicine. 2019 Nov;381(21):1995-2008; **4.** Wiviott SD et al. Dapagliflozin and cardiovascular outcomes in type 2 diabetes. New England Journal of Medicine. 2019 Jan 24;380(4):347-57; **5.** Green JB, Bethel MA, Armstrong PW, Buse JB, Engel SS, Garg J, Josse R, Kaufman KD, Koglin J, Korn S, Lachin JM. Effect of sitagliptin on cardiovascular outcomes in type 2 diabetes. New England Journal of Medicine. 2015 Jul;373(3):232-42; **6.** Benes J, Kotrc M, Kroupova K, Wohlfahrt P, Kovar J, Franekova J, Hegarova M, Hoskova L, Hoskova E, Pelikanova T, Jarolim P. Metformin treatment is associated with improved outcome in patients with diabetes and advanced heart failure (HFrEF). Scientific Reports. 2022 Jul;12(1):13038; **7.** Heerspink HJ et al. Dapagliflozin in patients with chronic kidney disease. New England Journal of Medicine. 2020 Oct 8;383(15):1436-46; **8.** Tanner C et al.. Metformin: time to review its role and safety in chronic kidney disease. Medical Journal of Australia. 2019 Jul;211(1):37-42.

USV Private Limited   Corvette Team

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Ref: 1. Ravikumar et al Cardiology and Cardiovascular Medicine. 2023; 7: 141-145.]

Abridged Prescribing Information

Composition: Each Film Coated Tablet Contains Dapagliflozin Propanediol Monohydrate eq. to Dapagliflozin (10 mg) + Sitagliptin Phosphate Monohydrate IP eq. to Sitagliptin (100 mg). **Indications:** For the treatment of type 2 diabetes mellitus inadequately controlled on Metformin monotherapy. Recommended Dosage: As directed by the physician. **Method of Administration:** Oral. **Adverse Reactions:** Female genital mycotic infections, nasopharyngitis, and urinary tract infections are most common adverse reactions associated with dapagliflozin. Whilst, upper respiratory tract infection, nasopharyngitis, and headache are most common adverse reactions associated with sitagliptin. **Warnings and Precautions: Risk of Volume Depletion in Elderly** - Before initiating Dapagliflozin and Sitagliptin, assess volume status and renal function in the elderly, patients with renal impairment or low systolic blood pressure, and in patients on diuretics. Monitor for signs and symptoms during therapy. **Ketoacidosis in Patients with Diabetes Mellitus** - Assess patients who present with signs and symptoms of metabolic acidosis for ketoacidosis regardless of blood glucose level. If suspected, discontinue USAVI®-S, evaluate and treat promptly. Before initiating USAVI®-S, consider risk factors for ketoacidosis. Patients on USAVI®-S may require monitoring and temporary discontinuation of therapy in clinical situations known to predispose to ketoacidosis. **Urosepsis and Pyelonephritis** - Evaluate for signs and symptoms of urinary tract infections and treat promptly, if indicated. Hypoglycemia - Consider a lower dose of insulin or the insulin secretagogue to reduce the risk of hypoglycemia when used in combination with Dapagliflozin and Sitagliptin. **Necrotizing Fasciitis of the Perineum** - Serious, life-threatening cases have occurred in patients with diabetes, both females and males. Assess patients presenting with pain or tenderness, erythema, or swelling in the genital or perineal area, along with fever or malaise. If suspected, institute prompt treatment. **Genital Mycotic Infections** - Monitor and treat if indicated. **Contraindications:** Patients with a history of hypersensitivity reactions to the active substance or to any of the excipients. In patients with varying degrees of renal impairment, adjusting the dosage is advised based on the severity of the condition. Prohibited medications include strong CYP2C8 inhibitors/ inducers, drugs increasing/decreasing hypoglycemic action, drugs known to cause QT prolongation, or other oral hypoglycemic agents other than study medications.

For additional information/full prescribing information, please write to us:

USV Private Limited, Arvind Vithal Gandhi Chowk, B.S.D. Marg, Govandi, Mumbai - 400088

Updated on 28th March 2024

PV - In case of any adverse events, kindly contact pv@usv.in

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USV Private Limited
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Enhancing Diabetes Care Through Cultural Competency

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Cultural competency in diabetes care involves understanding and addressing the unique cultural, social, and economic factors that influence an individual's health behaviors, beliefs, and access to care. Cultural beliefs and practices around health, diet, and medicine can significantly influence treatment adherenc.

As diabetes disproportionately impacts racial and ethnic minorities, embracing culturally sensitive approaches can reduce health disparities and improve outcomes.

Strategies include:

1. Cultural humility: Health providers should maintain an open mindset, acknowledging that they are lifelong learners in understanding the cultural perspectives of their patients. This approach goes beyond simply recognizing cultural differences; it involves integrating patients' values and traditions into their care plan. This helps build trust and foster deeper connections with patients. Studies have shown that when providers acknowledge and respect cultural nuances, patients are more likely to feel valued and adhere to treatment plans.

2. Tailored interventions: Tailoring interventions involve understanding and incorporating patients' cultural norms, dietary habits, and communication preferences. For instance, when educating about nutrition and lifestyle changes, it is helpful to integrate familiar foods, local cuisine, and traditional cooking methods into the plan. This makes the advice feel more achievable and practical. Programs that reflect these considerations have proven to be more effective in helping individuals manage their diabetes.

3. Community-based programs: Empowering communities to take charge of their health is an essential strategy in diabetes management. Community resources such as local support groups, peer education, and outreach programs help patients learn from each other and share strategies for managing their diabetes in culturally relevant ways. These programs can serve as a platform to discuss challenges specific to the community while honoring their traditions. Working within the cultural framework of a community promotes sustainable health improvements and encourages social support, which helps maintain long-term health behavior changes.

4. Training for providers: Ongoing education in cultural competency is vital for healthcare providers to stay responsive to the diverse needs of their patients. Such training helps clinicians understand the social, economic, and cultural barriers that may affect patient care. By fostering cultural competency, providers can build trust, reduce misunderstandings, and deliver care that aligns with individual's values, ultimately improving health outcomes in diverse populations. This continuous learning ensures that care remains relevant, respectful, and responsive to the unique challenges each patient faces.

By integrating cultural competency into diabetes care, healthcare systems can provide equitable and effective treatment for all individuals. This approach not only improves outcomes but also fosters a healthcare environment of inclusivity and respect.

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Role of Social Factors in Health Literacy, Numeracy, and Glucose Control

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The role of social factors in health literacy, numeracy, and glucose control is a critical area of study in diabetes management. Health literacy and numeracy are essential for effective self-care and understanding of diabetes management, yet social determinants significantly influence these competencies.

Health literacy and numeracy: Health literacy refers to the ability to obtain, process, and understand basic health information needed to make informed health decisions. Numeracy, a component of health literacy, involves the ability to use numerical information effectively. Both are crucial for managing diabetes, as they affect patients' understanding of medication dosages, dietary choices, and self-monitoring practices. The social factors influencing include:

Socioeconomic status: Lower socioeconomic status is often linked with lower health literacy and numeracy. Individuals from disadvantaged backgrounds may have limited access to educational resources and healthcare information, resulting in poorer diabetes management outcomes.

Education level: Higher educational attainment is associated with better health literacy and numeracy skills. Studies indicate that individuals with higher education levels tend to have greater diabetes knowledge and are more likely to engage in effective self-care practices.

Cultural factors: Cultural beliefs and practices can influence health literacy. For instance, individuals from certain cultural backgrounds may have different approaches to health management or may prioritize traditional remedies over conventional medical advice, impacting their understanding of diabetes care.

Social support: The presence of supportive family and community networks can enhance health literacy. Social support has been shown to mediate the relationship between health literacy and glycemic control, as individuals with strong support systems are more likely to engage in healthy behaviors.

Access to healthcare: Limited access to healthcare services can exacerbate issues related to health literacy and numeracy. Patients who face barriers in accessing medical care may struggle to receive adequate education about their condition, leading to poorer management of their diabetes.

Impact on glycemic control: Research indicates a complex relationship between health literacy, numeracy, and glycemic control (measured by glycated hemoglobin [HbA1c] levels). While some studies suggest that higher health literacy correlates with better glycemic control, others indicate that this relationship may also be mediated by factors such as diabetes knowledge and self-care behaviors.

Diabetes knowledge: A literate patient with insufficient knowledge may still struggle with effective self-management. Comprehensive knowledge tailored to the individual's cultural, social, and economic context is essential. Beyond literacy, hands-on learning and support systems nurture confidence and adherence to care plans.

Self-care behaviors: These include routine practices such as healthy eating, regular physical activity, blood glucose monitoring, etc. In addition to having diabetes knowledge, implementing and maintaining healthy behaviors is also essential for effective healthcare.

Therefore, many social factors play a significant role in shaping health literacy and numeracy among individuals with diabetes. Addressing these factors through targeted interventions such as community education programs, improved access to healthcare services, and culturally sensitive resources can enhance individuals' abilities to manage their condition effectively. By improving health literacy and numeracy, healthcare providers can help mitigate the negative impacts of social determinants on glycemic control outcomes.

Key points

- Health literacy and numeracy are essential for diabetes management, affecting medication understanding, dietary choices, and self-monitoring.
- Social factors such as socioeconomic status, education, cultural background, social support, and healthcare access significantly impact health literacy and numeracy.
- Improved health literacy is linked to better self-care and glycemic control, while education and social support enhance patient outcomes.
- Addressing social determinants through targeted interventions can improve individuals' ability to manage diabetes effectively.

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2. Abdallah SMA, Ayoub AI, Makhlouf MM, Ashour A. Diabetes knowledge, health literacy and diabetes self-care among older adults living with diabetes in Alexandria, Egypt. *BMC Public Health.* 2024;24:2848. doi:10.1186/s12889-024-15406-3
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Building Healthier Food Environments for Sustainable Change

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Diabetes, driven by a sedentary lifestyle, poor diet, and obesity, is influenced by personal choices as well as family, community, and social factors. Multi-level approaches that address interpersonal, community, organizational, and policy factors are key to promoting healthy behaviors. Evidence highlights the link between diabetes and the local food environment, emphasizing the need for community-level interventions.

What is a food environment?

The physical, social, and economic factors that affect the availability and consumption of food are collectively referred to as the "food environment." It includes cultural norms, price, food availability (e.g., fast-food outlets vs. supermarkets) and marketing tactics. Research shows that areas with many fast-food restaurants, or "fast-food swamps," are linked to higher risks of obesity and type 2 diabetes. Access to affordable, healthy food is crucial for making better dietary choices. Promoting environments that encourage healthy eating is an essential public health strategy.

Building healthy food environments

Healthy food environments can be achieved through a variety of strategies. These consist of:

(a) Implementing dietary guidelines in workplaces, schools, hospitals, and childcare centers.

(b) Encouraging supermarkets or farmers' markets to open in underprivileged regions.

(c) Providing calorie counts and nutritional data on menus for fast food and restaurants.

CDC (Centers for Disease Control and Prevention) suggests the following actions to be taken to improve access to healthy food:

Communities and states	Schools	Early care and education programs	Worksite	Restaurants
a) Can help establish new food retail establishments in underprivileged communities to expand access to more wholesome food and drink options	a) Can ensure that the food and drink offerings are healthful by adhering to dietary standards	a) Can employ best practices to boost breastfeeding and intake of nutritious foods and beverages	a) Can include food service and nutrition guidelines in organizational policies and food contracts	a) Can promote healthier meals and food items
b) Can encourage the existing stores to increase the quantity, variety, and quality of healthy foods and drinks	b) Can encourage children to consume meals that satisfy dietary guidelines for whole grains, fruits, vegetables, and dairy items that are low in fat	b) Childcare facilities can evaluate their food surroundings	b) Can increase the availability of healthier food and beverage options at food service venues, including cafeterias, snack bars, and vending machines	b) Can set nutrition standards for children's meals
c) Can assist in marketing and promoting healthier foods and drinks to consumers	c) Can promote children to drink water instead of sugary drinks and make sure they have free access to it before, during, and after school	c) Can create policies and action plans that support a healthy diet	c) Can increase healthier food and beverage options at worksite meetings, parties, conferences, and events	c) Can implement food labeling

For creating healthier, sustainable food systems, it is important to integrate policy, environmental reforms, and community engagement. It's essential to understand the mechanisms and evaluate the causal implications of these findings, given the intricate interactions between food outlets and their in-store food environment. By giving these initiatives a priority, one can promote a more sustainable and healthy future for all.

Key points

- Diabetes is closely linked to the local food environment, highlighting the need for community-level interventions to promote healthier eating habits and reduce risk factors.
- The food environment refers to the physical, social, and economic factors influencing food availability and consumption, with research linking "fast-food swamps" to higher obesity and diabetes risks.
- Building healthy food environments involves implementing dietary guidelines in various settings like workplaces, schools, hospitals, and childcare centers, promoting food access in underprivileged areas, and providing nutritional information in restaurants and fast-food outlets.
- Transforming food systems requires integrating environmental, community, and regulations initiatives to create healthier, sustainable settings.

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2. Liu B, Sun Y, Bao W. Creating and supporting a healthy food environment for type 2 diabetes prevention. *Lancet Planet Health.* 2018;2(10):e423–e424. doi:10.1016/S2542-5196(18)30211-0
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5. What are 'food environments'? European Public Health Alliance. Updated December 20, 2019. Accessed November 23, 2024. Available at: https://epha.org/what-are-food-environments/
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Empowering the Next Generation: Diabetes Education in Schools and Colleges

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With approximately 1.1 million children and adolescents globally living with type 1 diabetes mellitus (T1DM), schools and colleges are critical in shaping a healthy and supportive future for these students. By incorporating diabetes education and promoting healthy practices, educational institutions can foster a nurturing environment that empowers students with type 1 diabetes (T1D) to thrive academically and socially. The Centers for Disease Control and Prevention (CDC) emphasizes implementing clear policies and practical programs to address diabetes in schools. These measures include training staff to recognize and manage symptoms, creating a diabetes-friendly environment, and supporting students in managing their care through targeted educational initiatives. Ensuring students with diabetes receive necessary health services in schools requires accessible medical care and effective education initiatives. Additionally, such programs help peers develop empathy and understanding, reducing the social isolation often faced by children with diabetes.

The Kids and Diabetes in Schools (KiDS) project, launched in 2013 by the International Diabetes Federation (IDF) and the International Society for Pediatric and Adolescent Diabetes (ISPAD), aims to reduce diabetes-related stigma, create supportive learning environments, and promote healthy behaviors. It provides resources for managing diabetes, including blood glucose monitoring and insulin administration. In Delhi, the initiative trained 1,149 teachers, reached 27,937 students, and engaged parents via social media, with over 80% of teachers expressing satisfaction. This highlights its potential to shape future diabetes management and prevention policies.

The IDEAS initiative (Initiative for Diabetes Education and Awareness for Schools), developed by pediatric endocrinologists and T1DM educators, began on August 6, 2023. It started with interactive virtual sessions in English, later expanding to regional languages like Hindi, Kannada, Tamil, Gujarati, and Telugu. While live sessions were initially successful, scheduling challenges and recording quality issues led to a shift toward pre-recorded sessions in multiple languages. These videos are freely circulated for further dissemination to parents. So far, English, Tamil, Gujarati, and Kannada, have been released, and Telugu, Bengali, Malayalam, and Hindi are in the pipeline. Information given in the local language would improve understanding and acceptability. Printable educational pamphlets supplement these videos. The IDEAS initiative delivers information in easy-to-understand simple language and is neither expensive nor time-consuming making it an effective and sustainable educational tool with a potential for wide reach.

Initiatives like KiDS and IDEAS showcase the impact of targeted education in reducing stigma, improving care, and promoting prevention, paving the way for healthier, more inclusive educational spaces. Future perspectives include integrating diabetes education into school curriculums to address the dual challenges of managing current cases and preventing future ones. These programs not only enhance immediate care but also foster a culture of prevention and awareness, ultimately improving public health.

Resources:

1. CDC Healthy Schools. Centers for Disease Control and Prevention. Updated August 18, 2022. Accessed November 18, 2024. Available at: https://www.cdc.gov/healthyschools/npao/diabetes.htm
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Frequently Asked Questions on Societal Well-being and Diabetes

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1. I'm a 35-year-old man recently diagnosed with type 2 diabetes (T2D). I travel frequently for work and have many social commitments. How can I effectively manage my diabetes while traveling and attending social events?

Ans. Managing T2D while traveling or attending social events is possible with some planning and a few lifestyle adjustments.

- **Plan your meals:** Before traveling, research dining options that offer balanced meals with whole grains, lean proteins, and plenty of vegetables. For social events, eat a small, healthy snack beforehand to avoid overeating or consuming foods that may spike your blood glucose levels. Begin your meal with soup or salad and a protein source (curd/chicken/fish/paneer) followed by roti/rice or carbohydrate main course to prevent a post-meal spike in glucose levels.
- **Carry essentials:** Always keep your diabetes supplies (glucometer, medications, insulin if needed, and snacks for emergencies) in your carry-on bag or somewhere easily accessible. Bring a small pack of nuts, seeds, or low-sugar granola bars for unexpected delays.
- **Stay hydrated:** Drink plenty of water and limit sugary drinks or alcohol. If you consume alcohol, do so in moderation and pair it with food to reduce the risk of blood sugar fluctuations.
- **Stick to your routine:** Try to take your medications at the same time every day, even when traveling across time zones. Adjust timing with the help of your doctor if needed. Keep up with regular meals and avoid skipping them, even during busy work schedules.
- **Monitor your blood glucose:** Check your blood glucose levels more often, especially if your schedule or food intake changes. This helps you understand how your body reacts to different foods and activities.
- **Stay active:** Include light physical activity like walking or stretching during travel breaks or at social gatherings. Physical movement helps regulate blood glucose levels.

With preparation and mindful choices, you can manage your diabetes effectively without letting it interfere with travel or social commitments. Always consult your healthcare provider for personalized advice before making any significant change in your routine.

2. My wife recently delivered our baby and had gestational diabetes mellitus (GDM) during her pregnancy. What precautions should we take to ensure her long-term health, and when should she check her blood glucose levels to monitor her condition?

Ans. GDM usually resolves after delivery, but it significantly increases the risk of developing T2D later in life. To safeguard your wife's long-term health, these steps are essential:

- **Postpartum glucose testing:** A blood glucose test should be done 6–12 weeks after delivery using an oral glucose tolerance test (OGTT) or fasting blood glucose levels. If these tests are normal, testing should continue every 1–3 years as per healthcare provider recommendations.
- **Healthy lifestyle:** Encourage a balanced diet rich in whole grains, lean proteins, healthy fats, and vegetables. Limit sugary and processed foods. Incorporate regular physical activity such as walking, yoga, or light aerobics, aiming for at least 150 minutes per week.
- **Breastfeeding:** Breastfeeding can improve glucose metabolism and may lower the risk of diabetes for both mother and baby.
- **Weight management:** Postpartum weight management is critical. Reaching a healthy weight can significantly reduce the risk of developing T2D.
- **Future pregnancy planning:** For any future pregnancies, screening for diabetes early is crucial, as the risk of GDM recurrence is high.
- **Monitoring for symptoms:** Regularly monitor for symptoms such as fatigue, excessive thirst, or frequent urination, which could indicate elevated blood glucose levels.

Taking these proactive measures can greatly reduce her risk of T2D and support her overall well-being. Be sure to maintain regular follow-ups with her healthcare provider for personalized advice and updates based on her progress.

3. I'm 15 and was recently diagnosed with type 1 diabetes. I feel embarrassed when my friends ask why I'm eating differently or checking my blood sugar. How can I manage my condition without feeling so self-conscious or isolated?

Ans. Managing type 1 diabetes as a teenager can be overwhelming, especially when it feels like your condition sets you apart from your peers. Understanding your condition is key.

Type 1 diabetes means your body doesn't produce insulin, so you need to check your blood glucose levels regularly and take insulin to manage it. Explaining this simply to friends can help them understand and offer support.

It's also important to know that you can still enjoy the foods you love in moderation–working with a dietitian to find healthier alternatives or appropriate portions as per insulin dosage can help.

Try shifting social events away from food by focusing on fun activities like sports, movies, or hanging out. It's also crucial to surround yourself with a support system, whether that's family, friends, or a support group, as they can offer empathy and advice.

Lastly, managing stress is vital–practices like mindfulness or talking to a counselor can help you cope emotionally. By focusing on both your physical and mental health, you can live a fulfilling, active life while managing your diabetes.

Super Food - Chickpeas (*Chana*)

Chickpeas (also called *Bengal gram*), widely grown in India and globally, is a popular pulse crop. India is the leading producer of chickpeas, contributing approximately 6 million tons annually. It is followed by Pakistan, with other significant producers including countries in southern Europe, North Africa, Australia, and the Americas. A total of 70% of the world's chickpeas production comes from Turkey, Iran, Pakistan, and India.


Desi chana


Kabuli chana

Desi and *Kabuli* are the two distinct varieties of chickpeas. The *Kabuli chana* (*white chana*) is larger with a smooth, light cream-colored seed coat, while the *Desi chana* (*brown chana* or *kala chana*) is smaller, with a rough seed coat that may vary in color from reddish to black. Both varieties are staple ingredients in various Indian dishes and are known for their versatility.

Nutritional content

Per 100 g	Energy (kcal)	Protein (g)	Carbohydrate (g)	Fat (g)
Chickpeas	279	18.7	39.5	5.1

Chickpeas are a good source of energy, protein, lente carbohydrates, fiber, vitamins and minerals like folate, iron, magnesium, etc. It has been found to be beneficial for people with diabetes due to the following health benefits:

Glucose control: They contain lente carbohydrates, which are slow-digesting and help regulate blood glucose levels. Their high fiber content further slows glucose release, aiding in blood glucose control. With a low glycemic index, they prevent spikes in glucose levels and help maintain steady blood glucose levels.

Heart health: Their high fiber content helps to reduce cholesterol levels contributing to heart health as well. In addition, they contain bioactive substances having antioxidant and anti-inflammatory potential.

Weight management: Consuming foods rich in fiber creates a feeling of fullness. They take longer to chew and remain in the intestine for an extended duration, helping to restrict caloric intake and aiding in weight loss.

Improves gut health, immunity, and constipation: The high fiber content promotes the growth of beneficial gut microbes, enhancing immune function. It also adds bulk to stools, helping to alleviate constipation.

How to consume

It is important to soak and pressure cook them. They can be incorporated into salads or mixed with spices to create a flavorful, healthy evening snack (*chana chat*). They can also be consumed as curries with roti or rice. Roasted chickpeas are often used as a convenient and nutritious snack, while chickpea flour (*besan*) is widely used to prepare healthy snacks like *dhokla, chilla*, etc.

Resources:

1. Begum N, Khan QU, Liu LG, Li W, Liu D, Haq IU. Nutritional composition, health benefits and bio-active compounds of chickpea (*Cicer arietinum L.*). *Front Nutr.* 2023;10:1218468. Published 2023 Sep 28. doi:10.3389/fnut.2023.1218468
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Dia-Games

Fill in the blanks

1. D _ _ B E _ _ S
2. C _ M _ _ N _ T _
3. W _ L _ N _ S _
4. S _ _ P _ _ T
5. _ U _ T _ R _ L
6. E _ _ A _ _ Y
7. P _ _ V _ _ _ I _ _
8. P _ _ _ U _ _ _ N
9. E _ _ I _ Y
10. _ D _ _ A _ _ O _

Answers:

1. Diabetes
2. Community
3. Wellness
4. Support
5. Cultural
6. Empathy
7. Prevention
8. Pollution
9. Equity
10. Education

In PwD Uncontrolled on Dual OADs,

Choose

UDAPA GOLD

Metformin HCL 500mg ER + Glimepiride 1/2 mg + Dapagliflozin 10 mg

GOLDEN CARE

For

Golden Control

Golden Adherence

Golden Protection

Dapagliflozin, Glimepiride and Metformin Hydrochloride (Extended Release) Tablets

Composition:

Each film coated bilayered tablet contains: Dapagliflozin Propanediol USP Eq. to Dapagliflozin 10 mg, Glimepiride IP 1mg, Metformin Hydrochloride IP (As Extended release) 500 mg. Each film coated bipolayered tablet contains: Dapagliflozin Propanediol USP Eq. to Dapagliflozin 10 mg, Glimepiride IP 2mg, Metformin Hydrochloride IP (As Extended release) 500 mg **Indication:** As an adjunct to diet and exercise to improve glycemic control in adult patients with type 2 Diabetes Mellitus(T2DM). **Recommended Dosage:** As directed by the Physician **Method of Administration:** Oral **Warnings and Precautions:** Dapagliflozin, Metformin and Glimepiride should not be used in patients with type 1 diabetes and must not be used for the treatment of diabetic ketoacidosis. **Lactic acidosis** - Lactic acidosis, a rare but serious metabolic complication, most often occurs at acute worsening of renal function or cardiorespiratory illness or sepsis. Metformin accumulation occurs at acute worsening of renal function and increases the risk of lactic acidosis. **Hypotension** - Dapagliflozin causes intravascular volume contraction. Symptomatic hypotension can occur after initiating dapagliflozin particularly in patients with impaired renal function (eGFR less than 60 ml/min/1.73 m2), elderly patients, or patients on loop diuretics. Before initiating dapagliflozin in patients with one or more of these characteristics, volume status should be assessed and corrected. Monitor for signs and symptoms of hypotension after initiating therapy. **Genital Mycotic Infections** - Dapagliflozin increases the risk of genital mycotic infections. Patients with a history of genital mycotic infections were more likely to develop genital mycotic infections. Monitor and treat appropriately. **Hypoglycemia** - Patients receiving Insulin and insulin secretagogues (e.g., sulfonylurea) may be at risk for hypoglycemia. Therefore, a reduction in the dose of the sulphonylurea or insulin may be necessary **Precautions for use: Pregnancy** Limited data on Dapagliflozin, Glimepiride & Metformin Tablets use during pregnancy. Advise patients to inform their healthcare provider if pregnant or planning pregnancy before initiating treatment. **Nursing Mothers** Udapa Gold is not recommended in breastfeeding. Hence, if you are breastfeeding, inform your doctor if you are breastfeeding or planning to breastfeed. **Pediatric Use** The safety and effectiveness of Udapa Gold in pediatric patients under 18 years of age have not been established. **Renal Impairment Dapagliflozin** - Use of dapagliflozin is not recommended when eGFR is less than 45 mL/min/1.73 m2.

Glimepiride - To minimize the risk of hypoglycemia, the recommended starting dose of glimepiride is 1 mg daily for all patients with type 2 diabetes and renal impairment.

Contraindications: Udapa Gold is contraindicated in patients with: Severe renal impairment (eGFR below 30 mL/min/1.73 m2), end stage renal disease or patients on dialysis; History of a serious hypersensitivity reaction to any of the excipients of this Tablet, dapagliflozin, such as anaphylactic reactions or angioedema, or hypersensitivity to metformin HCl, Sulfonamide derivatives, such as glimepiride, other sulfonylureas, other sulfonamides; Acute or chronic metabolic acidosis, including diabetic ketoacidosis, with or without coma. Diabetic ketoacidosis should be treated with insulin ; Hepatic insufficiency; Acute alcohol intoxication, alcoholism; Lactation.

For Additional Information/full prescribing information, please write to us: USV Private Limited, Arvind Vithal Gandhi Chowk, B.S.D Marg, Govandi, Mumbai - 400088

Updated on 01st June'24, Expiry by 01st June'25

In T2DM Across Continuum,

START STRONG STAY LONG

Glycomet®-GP 0.5
Metformin Hydrochloride 500 mg SR + Glimepiride 0.5 mg

Glycomet®-GP 1
Metformin Hydrochloride 500 mg SR + Glimepiride 1 mg

Glycomet®-GP 2
Metformin Hydrochloride 500 mg SR + Glimepiride 2 mg

Glycomet®-GP 0.5 FORTE

Glycomet®-GP 3/850

Glycomet®-GP 1 FORTE

Glycomet®-GP 2/850

Glycomet®-GP 2 FORTE

Glycomet®-GP 3 FORTE

Glycomet®-GP 4 FORTE

Abridged Prescribing Information

Active Ingredients: Metformin hydrochloride (as sustained release) and glimepiride tablets **Indication:** For the management of patients with type 2 diabetes mellitus when diet, exercise and single agent (glimepiride or metformin alone) do not result in adequate glycaemic control. **Dosage and Administration:** The recommended dose is one tablet daily during breakfast or the first main meal. Each tablet contains a fixed dose of glimepiride and Metformin Hydrochloride. The highest recommended dose per day should be 8 mg of glimepiride and 2000mg of metformin. Due to prolonged release formulation, the tablet must be swallowed whole and not crushed or chewed. **Adverse Reactions:** For Glimepiride: hypoglycaemia may occur, which may sometimes be prolonged. Occasionally, gastrointestinal (GI) symptoms such as nausea, vomiting, sensations of pressure or fullness in the epigastrium, abdominal pain and diarrhea may occur. Hepatitis, elevation of liver enzymes, cholestasis and jaundice may occur; allergic reactions or pseudo allergic reactions may occur occasionally. For Metformin: GI symptoms such as nausea, vomiting, diarrhea, abdominal pain, and loss of appetite are common during initiation of therapy and may resolve spontaneously in most cases. Metallic taste, mild erythema, decrease in Vit B12 absorption, very rarely lactic acidosis, Hemolytic anemia, Reduction of thyrotropin level in patients with hypothyroidism, Hypomagnesemia in the context of diarrhea, Encephalopathy, Photosensitivity, hepatobiliary disorders. **Warnings and Precautions::** For Glimepiride: Patient should be advised to report promptly exceptional stress situations (e.g., trauma, surgery, febrile infections), blood glucose regulation may deteriorate, and a temporary change to insulin may be necessary to maintain good metabolic control. Metformin Hydrochloride may lead to Lactic acidosis; in such cases metformin should be temporarily discontinued and contact with a healthcare professional is recommended. Sulfonylureas have an increased risk of hypoglycaemia. Long-term treatment with metformin may lead to peripheral neuropathy because of decrease in vitamin B12 serum levels. Monitoring of the vitamin B12 level is recommended. Overweight patients should continue their energy-restricted diet, usual laboratory tests for diabetes monitoring should be performed regularly. **Contraindications:** Hypersensitivity to the active substance of glimepiride & Metformin or to any of the excipients listed. Any type of acute metabolic acidosis (such as lactic acidosis, diabetic ketoacidosis, diabetic pre-coma). Severe renal failure (GFR<30ml/min). In pregnant women. In lactating women Acute conditions with the potential to alter renal function (dehydration, severe infection, shock, intravascular administration of iodinated contrast agents); acute or chronic disease which may cause tissue hypoxia (cardiac or respiratory failure, recent myocardial infarction, shock); hepatic insufficiency; acute alcohol intoxication; alcoholism. **Use in a special population:** Pregnant Women: Due to a lack of human data, drugs should not be used during pregnancy. Lactating Women: It should not be used during breastfeeding. Pediatric Patients: The safety and efficacy of drugs has not yet been established. Renal impairment: A GFR should be assessed before initiation of treatment with metformin containing products and at least annually thereafter. In patients at increased risk of further progression of renal impairment and in the elderly, renal function should be assessed more frequently, e.g. every 3-6 months.

Additional information is available on request.

Last updated: March 13, 2023

*In case of any adverse events, kindly contact: pv@usv.in

For the use of registered medical practitioner, hospital or laboratory.*

USV Private Limited

Corvette Team

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