Indian Diabetes

EDUCATOR JOURNAL

RESEARCH SOCIETY FOR THE STUDY OF DIABETES IN INDIA

Theme of the Month

Celebrating World Patient Safety Day: Prioritizing Foot Care in Every Patient

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

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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.

In recognition of World Patient Safety Day, this edition of IDEJ spotlights the critical importance of foot care in people with diabetes—a vital yet often overlooked aspect of patient safety. With diabetes being a leading cause of preventable foot complications, this issue focuses on empowering diabetes educators with practical tools and insights to help patients protect, monitor, and manage their foot health. From early identification of risk factors to timely interventions and patient education, this issue discusses how to prioritize foot safety and uphold the core principles of patient-centered care.

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

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Cover Story: The Diabetic Foot: A Spectrum of Complications and Their Consequences

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Diabetic foot encompasses several complications affecting the feet in people with diabetes, including foot ulcers—open wounds that may extend to deeper tissues—and amputations, defined as removal of non-viable limb parts. The lifetime risk of developing a diabetic foot ulcer (DFU) is estimated at up to 34%.

Pathophysiology: Individuals with diabetes mellitus are at higher risk for foot ulcers due to microvascular, neuropathic, and biomechanical changes linked to poor glucose control.

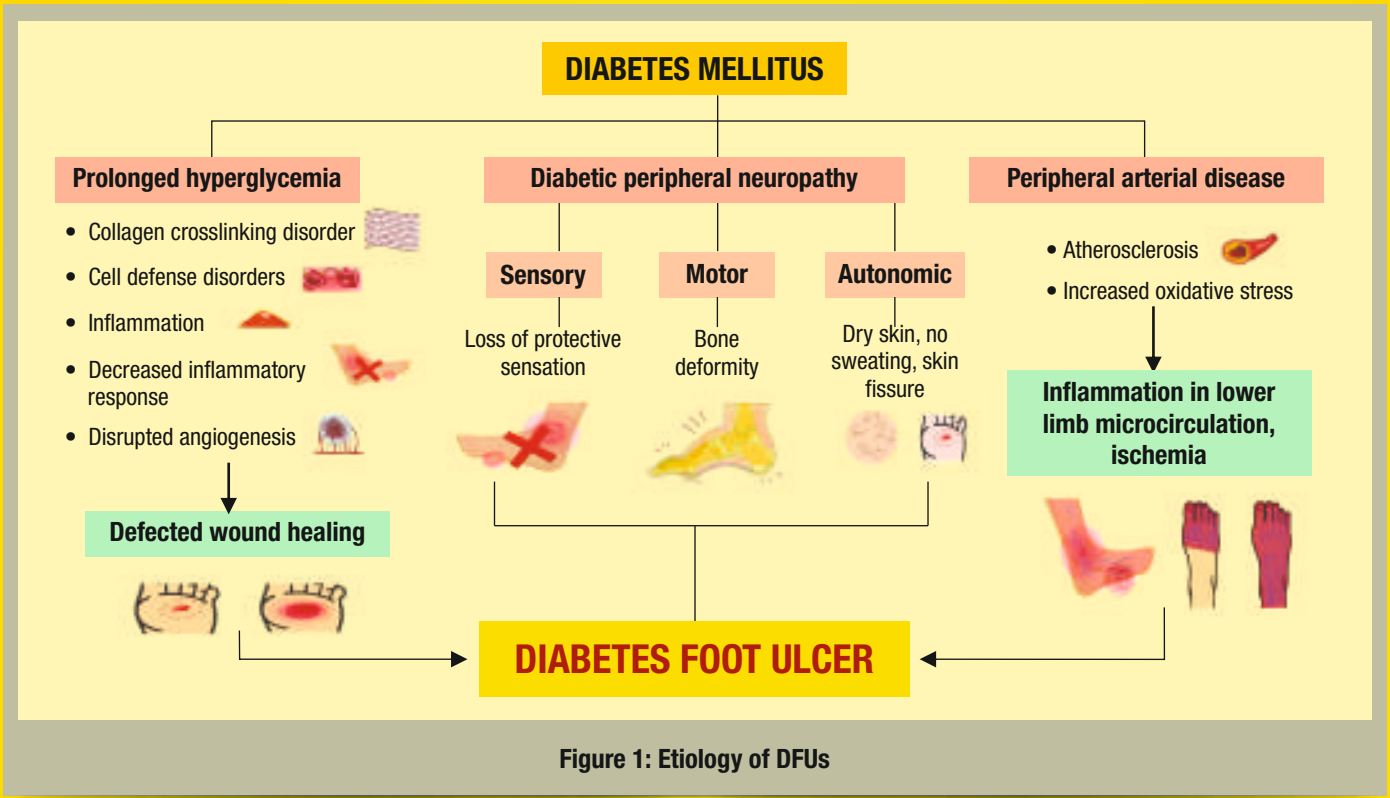

Figure 1: Etiology of DFUs

A 1% increase in glycated hemoglobin (HbA1c) can raise the risk of peripheral vascular disease by 25%–28%. Neuropathy reduces foot sensation, increasing injury risk, while microvascular changes impair blood flow and delay wound healing (see Figure 1).

Individuals with diabetes are at high risk for lower extremity amputations, higher healthcare costs, and lower quality of life. A systematic analysis of non-traumatic amputations in individuals with diabetes and peripheral vascular disease reported 5-year mortality rates ranging from 40% to 82% after below-the-knee amputation, and 40% to 90% following above-the-knee amputation.

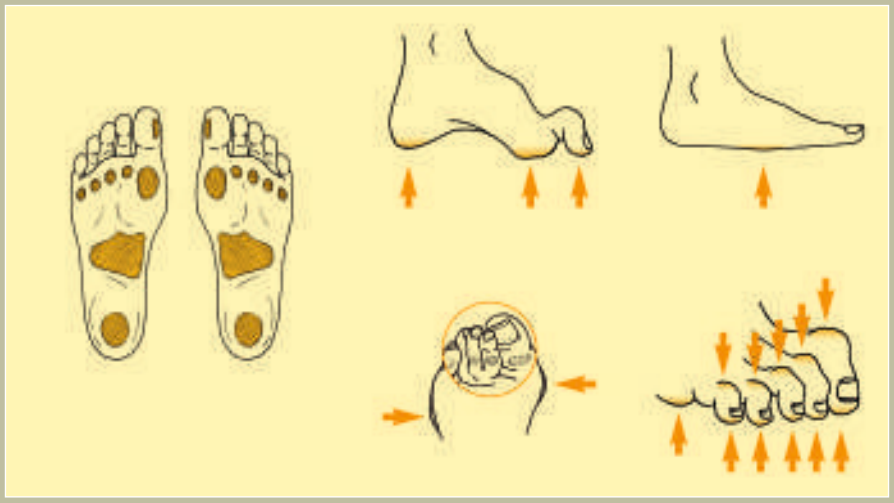

Figure 2: Areas of the foot at highest risk for ulceration

Following examination of the foot, stratify each patient using the International Working Group on the Diabetic Foot (IWGDF) risk stratification category system to guide subsequent preventative screening frequencies and management. Areas of the foot most at-risk are shown in Figure 2. A person with a healed foot ulcer has the highest risk of ulceration, and the foot should be considered in remission. This requires lifelong ulcer prevention strategies with an appropriately trained team of healthcare professionals that addresses all ulcer prevention cornerstones as part of integrated care.

Ensuring safety in diabetes care is critical, given the constant need for medication, monitoring, and comprehensive management. World Patient Safety Day, observed on 17 September, reinforces this message by emphasizing the importance of safe, timely, and integrated healthcare, especially for chronic conditions like diabetes. Proper foot care is a vital aspect of diabetes management, requiring timely intervention, patient education, and support from a multidisciplinary team—including endocrinology, podiatry, wound care, and infectious disease specialists that significantly reduces amputation risk. Standard treatments like debridement, off-loading, vascular evaluation, and infection control remain the foundation of effective care.

On this World Patient Safety Day, let's pledge to prioritize patient safety at every level—through awareness, early action, and collaborative care—to prevent complications and enhance the quality of life for people living with diabetes.

Resources:

1. Song K, Chambers AR. Diabetic Foot Care. [Updated 2023 Jul 24]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK553110/
2. Ansari P, Akther S, Khan JT, *et al.* Hyperglycaemia-Linked Diabetic Foot Complications and Their Management Using Conventional and Alternative Therapies. *Applied Sciences.* 2022; 12(22):11777. https://doi.org/10.3390/app122211777
3. Akkus G, Sert M. Diabetic foot ulcers: A devastating complication of diabetes mellitus continues non-stop in spite of new medical treatment modalities. *World J Diabetes.* 2022;13(12):1106–1121. doi:10.4239/wjd.v13.i12.1106
4. World Patient Safety Day. https://www.patient-safety-day.org/. Accessed July 10, 2025.
5. American Diabetes Association Professional Practice Committee. Improving care and promoting health in populations: Standards of care in diabetes—2025. *Diabetes Care.* 2025;48(Suppl 1):S14–S26. doi:10.2337/dc25-S001

Preventing Foot Ulcers in Diabetes

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Foot ulceration is a serious complication of diabetes mellitus, contributing significantly to both morbidity and mortality, alongside considerable healthcare costs. Important risk factors include loss of protective sensation (LOPS), foot deformities, peripheral artery disease (PAD), and previous ulcers. A history of foot ulceration can also increase the risk of recurrence by 40%. The table below highlights the risk stratification system as per the International Working Group on the Diabetic Foot (IWGDF) for foot screening and examination frequency.

Table 1: The IWGDF risk stratification system and corresponding foot screening and examination frequency

Category	Ulcer risk	Characteristics	Frequency*
0	Very low	No LOPS and no PAD	Once a year
1	Low	LOPS or PAD	Once every 6–12 months
2	Moderate	LOPS + PAD, or LOPS + foot deformity, or PAD + foot deformity	Once every 3–6 months
3	High	LOPS or PAD, and one or more of the following: · History of a foot ulcer · A lower-extremity amputation (minor or major) · End-stage renal disease	Once every 1–3 months

*Screening frequency is based on expert opinion, since no evidence is available to support these intervals. When the screening interval is close to a regular diabetes check-up, consider screening the foot at that check-up.

The following are five core strategies to look out for in a person with diabetes without foot ulcers:

- Screening individuals with at-risk feet
- Performing regular foot inspections and examinations
- Providing structured education to individuals, families, and health care professionals
- Encouraging consistent use of appropriate footwear
- Treating the risk factors associated with ulceration

1. **Identifying individuals with at-risk feet:** Screen a person with diabetes at very low risk of foot ulceration (IWGDF risk 0) annually for signs or symptoms of LOPS and PAD, to identify if they have become at-risk for foot ulceration.

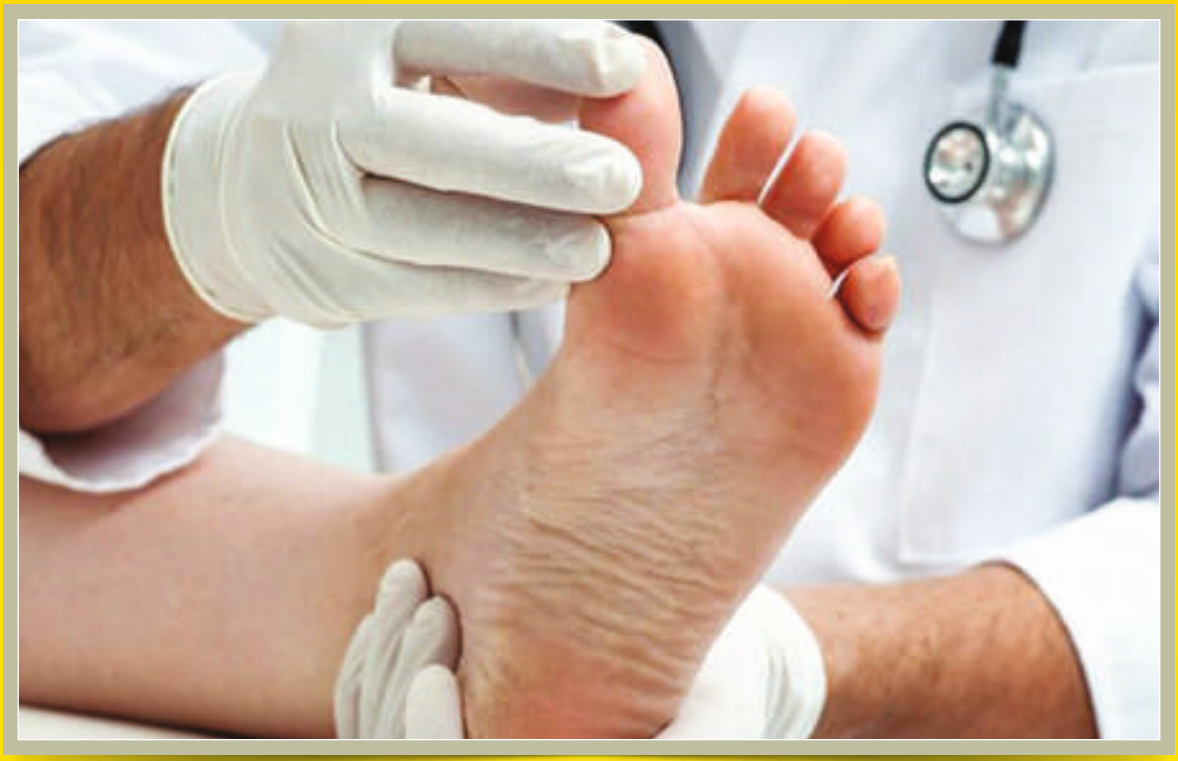
   This includes assessing the following:

   a. **Ulcer status:** To check if the foot is free of ulcers.

   b. **LOPS:** This includes assessing using any of the pressure or vibration perception (monofilament, tuning fork). In case of unavailability of these tools, test tactile sensation such as lightly touching the toe tips with the index finger for 1–2 seconds.

   c. **Vascular status:** Taking history of intermittent claudication and palpating the pedal pulses.

If a person has LOPS or PAD, they are at risk of ulceration (above table), and further examination is required.



2. **Performing regular foot inspections and examinations:** If annual foot screening identifies an individual with diabetes as 'at-risk', a detailed foot assessment is necessary to guide further management. This includes evaluating ulcer or amputation history, end-stage renal diagnosis, prior foot education, mobility, and social or financial barriers. Vascular status should be reassessed with Doppler studies and pressure indices if PAD is suspected. Examine skin for color changes, callus, infections, or pre-ulcer signs, and check for deformities or restricted joint mobility. Assess footwear quality, cognitive status, foot hygiene, physical limitations affecting self-care, and the individual's foot care knowledge to provide targeted preventive care.

3. **Providing structured education to individuals, families, and healthcare providers:** Structured, repeated education is key in preventing foot ulcers in diabetes. It seeks to improve motivation and self-care abilities, promote preventive behaviors, and increase undertaking of foot care information. Individuals at IWGDF risk 1 or higher should be taught to inspect and wash feet daily, identify early warning signs, and seek timely medical help, with emphasis on applying emollients and wearing both shoes and socks, even indoors. Education should be personalized, culturally appropriate, and account for health literacy and social context. Here is a checklist for daily foot care for people with diabetes:

Checklist

Inspect both feet daily	Look for redness, blisters, cuts, swelling – especially between the toes and soles. Report any abnormalities to the doctor.
Seek help if needed	If unable to check feet due to poor eyesight or mobility issues, ask a family member or caregiver to assist.
Avoid walking barefoot	Don't walk without proper footwear—even at home. Avoid thin-soled slippers or just socks. Avoid walking incase of open sores.
Wear appropriate footwear	Avoid tight shoes or those with rough edges or irregular stitching.
Check the inside of shoes	Look and feel for any foreign objects before wearing shoes.
Use proper socks/stockings	Choose seamless socks or turn seams inside out. Avoid tight or knee-high options. Change daily.
Wash and dry feet daily	Use lukewarm water (≤37°C), and dry well, especially between the toes.
Avoid external heat on feet	Do not use hot water bottles, heaters, or heating pads.
Don't self-treat corns/calluses	Avoid plasters or chemical agents. Consult a healthcare professional.
Moisturize the feet	Apply emollients daily to keep skin soft. Avoid the area between toes.
Cut toenails properly	Trim straight across to prevent ingrown nails.
Other tips, stop smoking	Smoking worsens circulation and increases the risk of foot complications.
Monitor health parameters	Keep blood glucose, blood pressure (BP), and cholesterol in check as advised by diabetes care team.

Integrating these practices into everyday routine supports long-term foot health and promotes overall diabetes management.

To conclude, foot ulcer prevention hinges on early risk identification, regular foot assessments, and structured education. Targeted strategies for at-risk individuals can significantly reduce ulcer occurrence and recurrence.

Key points

- Identifying individuals at risk through annual foot screening helps detect early signs like LOPS and PAD, guiding timely preventive care.
- Regular foot examinations allow for comprehensive risk assessment, including skin changes, deformities, vascular status, and personal barriers to self-care.
- Structured education improves knowledge, self-care skills, and motivation to follow protective practices like daily foot checks and consistent footwear use.

Resources:

1. Schaper NC, van Netten JJ, Apelqvist J, *et al.* Practical guidelines on the prevention and management of diabetes-related foot disease (IWGDF 2023 update). *Diabetes Metab Res Rev.* 2024;40(3):e3657. doi:10.1002/dmrr.3657
2. Bus SA, Sacco ICN, Monteiro-Soares M, *et al.* Guidelines on the prevention of foot ulcers in persons with diabetes (IWGDF 2023 update). *Diabetes Metab Res Rev.* 2024;40(3):e3651. doi:10.1002/dmrr.3651 https://iwgdfguidelines.org/wp-content/uploads/2023/07/IWGDF-2023-02-Prevention-Guideline.pdf
3. Song K, Chambers AR. Diabetic foot care. [Updated 2023 Jul 24]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan–. Available from: https://www.ncbi.nlm.nih.gov/books/NBK553110/
4. Schaper NC, van Netten JJ, Apelqvist J, *et al.* Practical guidelines on the prevention and management of diabetes-related foot disease (IWGDF 2023 update). *Diabetes Metab Res Rev.* 2024;40(3):e3657. doi:10.1002/dmrr.3657
5. American Diabetes Association. *Foot care.* Published 2023. Accessed June 4, 2025. https://diabetes.org/health-wellness/diabetes-and-your-feet/foot-care-tips

Managing Foot Infections in Diabetes

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Diabetic foot infections (DFIs) are a critical concern in diabetes management, often leading to severe complications like amputations if not properly addressed. Effective management requires a systematic approach integrating accurate diagnosis, appropriate classification, targeted antimicrobial therapy, and timely surgical interventions.

Diagnosis and classification: DFIs are diagnosed clinically using the International Working Group on the Diabetic Foot (IWGDF) and Infectious Diseases Society of America (IDSA) classification scheme, which evaluates infection severity based on local and systemic signs. Key diagnostic criteria include:

- **Local inflammation:** Erythema (>0.5 cm around the wound), warmth, tenderness, purulent discharge, or induration.
- **Systemic signs:** Fever, leukocytosis, or systemic inflammatory response syndrome (SIRS).

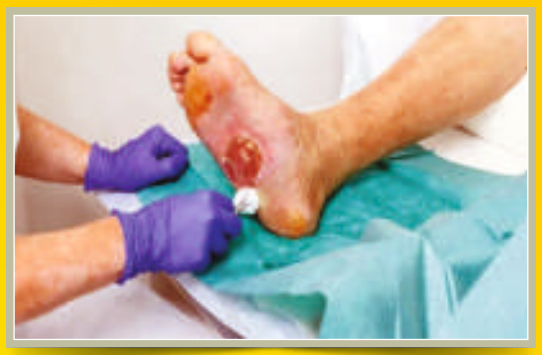
Table 1: IWGDF/IDSA infection severity classification

Severity	Criteria
Uninfected (Grade 1)	No signs of inflammation
Mild (Grade 2)	Local infection limited to skin/subcutaneous tissue; erythema ≤2 cm
Moderate (Grade 3)	Deeper tissue involvement (e.g., abscess, osteomyelitis) or erythema ≥2 cm
Severe (Grade 4)	Systemic signs (e.g., SIRS) or critical limb ischemia

Stepwise management

1. **Medical stabilization:** Address metabolic imbalances (e.g., hyperglycemia, dehydration). Hospitalize individuals with severe infections or comorbidities.
2. **Empirical antibiotic therapy**
   - **Uncomplicated infections:** Oral agents targeting gram-positive cocci (e.g., cephalexin, clindamycin) for 1–2 weeks.
   - **Moderate/severe infections:** Broad-spectrum intravenous (IV) regimens (e.g., piperacillin-tazobactam, vancomycin + ceftazidime) until culture results guide definitive therapy.

3. **Definitive antibiotic therapy:** Tailor treatment to culture results, typically continuing for 2–4 weeks for soft tissue infections and 6+ weeks for osteomyelitis.
4. **Surgical interventions:** Required for necrotizing infections, abscesses, or ischemic tissues. **Amputation:** Considered for uncontrolled infections or irreversible tissue damage.
5. **Adjunctive measures: Wound care:** Offloading, moist dressings, and regular debridement. **Vascular assessment:** Revascularization for individuals with peripheral artery disease.



Prevention and follow-up: Antibiotics are not recommended for uninfected ulcers. Multidisciplinary care involving endocrinologists, infectious disease specialists, and podiatrists improves outcomes. Regular foot screenings and patient education on self-care are critical to preventing recurrence. By adhering to structured guidelines, clinicians can mitigate the risks of limb loss and systemic complications in individuals with diabetes with foot infections.

Key points

- DFIs are a major cause of complications and amputations in people with diabetes.
- Treatment follows a stepwise approach: Stabilize the patient, start empirical antibiotics based on severity, tailor therapy once culture results are available, and perform surgical debridement or amputation when needed.
- Adjunctive care includes wound management, pressure offloading, and vascular assessment.
- Prevention through regular foot screening, patient education, and multidisciplinary care is key to reducing recurrence and improving outcomes.

Resources:

1. Senneville É, Albalawi Z, van Asten SA, *et al.* Guidelines on the diagnosis and treatment of foot infection in persons with diabetes (IWGDF/IDSA 2023). *International Working Group on the Diabetic Foot*; 2023.
2. Lipsky BA, Senneville É, Abbas ZG, *et al.* Guidelines on the diagnosis and treatment of foot infection in persons with diabetes (IWGDF 2019 update). *Diabetes Metab Res Rev.* 2020;36 Suppl 1:e3280. doi:10.1002/dmrr.3280
3. Armstrong DG, Lipsky BA. Diabetic foot infections: Stepwise medical and surgical management. *Int Wound J.* 2004;1(2):123–132. doi:10.1111/j.1742-4801.2004.00035.x
4. Haghverdian JC, Noori N, Hsu AR. Clinical Pathway for the Management of Diabetic Foot Infections in the Emergency Department. *Foot Ankle Orthop.* 2023;8(1):24730114221148166. Published 2023 Jan 9. doi:10.1177/24730114221148166

Beyond the Basics: A Fresh Perspective on Preventing Diabetic Foot Complications

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Introduction

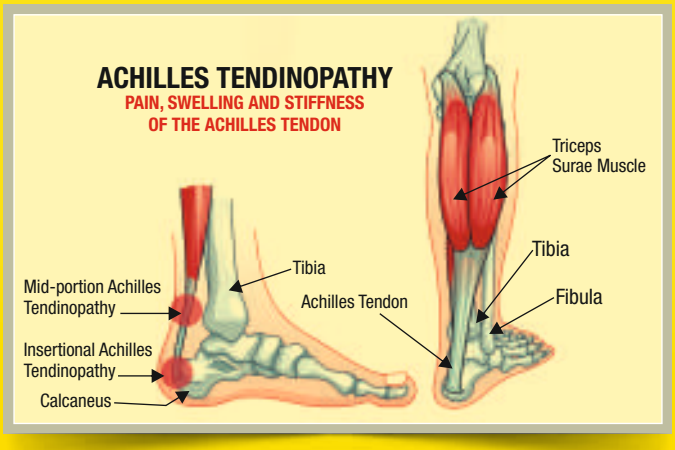
While glycemic control, footwear advice, and regular foot inspections remain the cornerstone of diabetic foot care, the rising tide of amputations despite awareness campaigns suggests one thing: We're missing something. Diabetologists are often the first point of contact—and their insight and vigilance can make the crucial difference. This article aims to provide a fresh, evidence-informed perspective on under-recognized aspects of diabetic foot prevention.

1. Microclimate matters: The forgotten role of foot humidity and temperature

Excessive moisture and warmth in the diabetic foot create an ideal environment for microbial overgrowth. But do we routinely assess sock material or in-shoe humidity? Thermal imaging studies have shown that persistent elevation in plantar temperature is an early indicator of inflammation—even before ulceration begins. Recommend moisture-wicking socks (e.g., synthetic blends over cotton) and breathable footwear with perforated soles. A simple handheld infrared thermometer can pre-empt ulcers when used daily on plantar surfaces.

2. Silent signals: Subclinical tendinopathy and biomechanical stress

Emerging data show that Achilles and plantar fascia tendinopathy may precede foot ulceration by months, contributing to altered gait and pressure redistribution. These changes often go unnoticed during basic foot exams. Encourage screening for early tendo-Achilles stiffness or limited ankle dorsiflexion using the Silfverskiöld test. Physiotherapy and targeted stretching may be preventive interventions—especially in patients with early neuropathy.



3. Vascular steal syndromes and hidden ischemia

Peripheral arterial disease (PAD) in diabetes isn't always distal or symmetrical. Steal syndromes—where blood is diverted from lower limbs due to arteriovenous (AV) fistulas or proximal vascular disease—may mimic neuropathy or "normal aging." Ankle-brachial index (ABI) may be falsely elevated due to calcified vessels. Use toe pressure or skin perfusion pressure where available. Revascularization decisions may need a more nuanced vascular opinion—even before visible tissue compromise.

4. Eyes on the nails: Onychopathies as precursors to foot infections

Nail health is a neglected window into diabetic foot risk. Onychomycosis, pincer nails, and subungual keratosis are not just cosmetic—they're gateways for secondary infection and often missed in rushed exams. Junior doctors should routinely remove nail polish during inspection, look for signs of impingement, and refer early for podiatric care. Treat fungal infections aggressively—not just for esthetics, but for limb salvage.

5. Neurocognitive decline and foot neglect

Cognitive dysfunction in diabetes can subtly affect self-care behaviors, including foot hygiene. Diabetic foot ulcers are more common in patients with early executive dysfunction, memory impairment, or depression. Consider a simple Mini-Cog or Patient Health Questionnaire-2 (PHQ-2) screening during routine follow-up. Engaging family members in foot surveillance could be life-saving for such individuals.

6. Subtle sensory clues: Beyond monofilament

The 10 g monofilament has long been the go-to tool—but it only assesses pressure perception. What about vibration (128 Hz tuning fork), thermal thresholds, or pin-prick sensation? Sensory decline is often patchy and modality-specific in early diabetic neuropathy. Encourage multi-modality testing. Better yet, teach patients to perform home-based sensory checks—akin to home blood pressure (BP) monitoring.

7. Artificial intelligence (AI)-powered surveillance: Not just the future

Several smartphone apps and platforms can now detect asymmetries, callus formation, or skin color changes using AI. Encourage patients to take regular foot selfies—yes, even if it sounds silly—and send them for triage. Junior doctors can also initiate community-based programs where such images are reviewed weekly by a trained nurse or AI system, flagging early pathology.

Conclusion

In diabetic foot prevention, the devil is in the details—often the details we skip. As diabetologists, adopting a holistic, proactive, and tech-savvy approach can save not just limbs but lives. The next time you see a patient with diabetes, remember: Prevention isn't just about sugar and shoes—it's about seeing what others miss.

Resources:

1. Lavery LA, Higgins KR, Lanctot DR, Constantinides GP, Armstrong DG, Wunderlich RP. Home monitoring of foot skin temperatures to prevent ulceration. *Diabetes Care.* 2004;27:2642–47.
2. Allet L, Armand S, de Bie RA, Golay A, Monnin D, Aminian K, *et al.* Gait alterations of diabetic patients while walking on different surfaces. *Gait Posture.* 2009;29:488–93.
3. Aboyans V, Ho E, Denenberg JO, Ho LA, Natarajan L, Criqui MH. The association between elevated ankle systolic pressures and peripheral occlusive arterial disease in diabetic and nondiabetic subjects. *J Vasc Surg.* 2008;48:1197–203.
4. Gupta AK, Daigle D, Foley KA. The prevalence of onychomycosis in diabetic patients: A systematic review and meta-analysis. *J Eur Acad Dermatol Venereol.* 2020;34:1069–79.
5. Cukierman-Yaffe T, Gerstein HC, Williamson JD, Lazar RM, Lovato L, Miller ME, *et al.* Relationship between baseline cognitive function and glycemia-lowering in older adults with type 2 diabetes and cardiovascular disease: The ACCORD-MIND trial. *Diabetes Care.* 2009;32:221–26.
6. Partanen J, Niskanen L, Lehtinen J, Mervaala E, Siitonen O, Uusitupa M. Natural history of peripheral neuropathy in patients with non-insulin-dependent diabetes mellitus. *N Engl J Med.* 1995;333:89–94.
7. Goyal M, Reeves ND, Rajbhandari S, Spragg J, Yap MH. Smart monitoring and predictive algorithms for diabetic foot ulcer prevention. *IEEE Trans Biomed Eng.* 2020;67:2539–51.

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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 Dapagliflozin10 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.

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From Crisis to Control: The Team Work
A Doctor's Experience on the MyCare Diabetes Support Program

Dr. Alankar Tiwari

MD (Medicine), DM (Endocrinology)
Consultant Endocrinologist
(Adult and Pediatric) and Director,
Dr. Alankar's Clinic for Diabetes and
Endocrine Care, Varanasi

A 26-year-old female with type 1 diabetes mellitus (T1DM) was managed by Dr. Alankar Tiwari.

Here's what Dr. Alankar Tiwari has to say:

A 26-year-old female with T1DM regularly consulted me for glucose management. One day, she called MyCare Diabetes Educator (MDE) Ms. Rajshree Singh, reporting "HI" glucometer readings. Stressed about an exam, she had skipped meals and insulin. MDE Rajshree informed me, and I advised a correction dose of insulin.

Two hours later, her readings were still "HI". MDE Rajshree advised hospital admission and kept me updated. When vomiting began, I recommended starting intravenous (IV) fluids. Later, her glucose remained high at 351 mg/dL; I advised another correction dose, a urine ketone test, and treatment adjustment for low sodium. Throughout, MDE Rajshree maintained constant communication.

By the next morning, her glucose had fallen to 213 mg/dL, and vomiting had subsided. MDE Rajshree advised her to gradually start with fluids like dal paani and vegetable soup. As her tolerance improved, she modified the dietary plan to include semi-solids like khichdi, curd, dal, and vegetable soup to enhance nutrient intake, and also adjusted it to her preferences. She remained under hospital observation for two days.

On follow-up, she reported stable glucose levels (~137 mg/dL), was adhering to insulin recommendations, performing self-monitoring of blood glucose (SMBG) regularly, and following a healthy diet and exercise. Grateful for the support, she thanked both me and MDE Rajshree.

It is indeed a true service that diabetes educators provide. MDE Rajshree has made things much easier and convenient for people with diabetes and obesity, especially those with T1DM. She guides them to understand insulin management, SMBG, and healthy dietary patterns, and always keeps me in the loop regarding insulin dose titration. My sincere thanks to Ms. Rajshree Singh.

Ms. Rajshree Singh

NDEP and T1DE Certified Diabetes Educator

Here's what MDE Rajshree has to say:

This experience taught me a valuable lesson: As counsellors, we must never lose hope or panic. Instead, we should remain polite, humble, and good listeners, carefully noting every complaint. By following the doctor's guidelines, we can win the trust of people with diabetes and save their lives.

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*PWD: People with Diabetes

Contact for more information
Nikita Thawarkar | 7304930643 | nikita.thawarkar@usv.in

In T2DM uncontrolled on monotherapies

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UDAPA-S

Dapagliflozin 10 mg + Sitagliptin 100 mg Tablets

For Better Outcomes

Ref.: L Ravikumar et al.Cardiology and Cardiovascular Medicine. 2023; 7: 141-144. |

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. While, 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 UDAPA™-S, evaluate and treat promptly. Before initiating UDAPA™-S, consider risk factors for ketoacidosis. Patients on UDAPA™-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 perianal 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 reaction 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:
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Expert Insights: Interview with Dr. Vedavati Purandare

Dr. Vedavati Purandare
MBBS, MD (Medicine), PhD
Clinical Head,
Consultant Physician and Diabetologist,
Chellaram Diabetes Institute, Pune

Dr. Vedavati Purandare is a Consultant Physician and Diabetologist at Chellaram Diabetes Institute, Pune, with over 15 years of clinical experience. She is actively involved in research and has published extensively in both national and international medical journals. Passionate about education, she serves as faculty for the MUHS Fellowship in Diabetology and contributes to various diabetes training programs, making a significant impact on future generations of healthcare professionals. She is also deeply committed to community outreach, conducting awareness sessions on diabetes and lifestyle diseases for the general public.

Celebrating World Patient Safety Day: Prioritizing Foot Care in Every Patient

1. 17th September is celebrated as World Patient Safety Day. What does patient safety mean to you, and why is it considered a cornerstone of quality healthcare?

Ans. According to me, the 'doctor-patient relation' is one of the most supreme relations, as TRUST is the backbone of that relation. Patients submit their bodies with full confidence to a doctor. In the treatment plan, the first priority should be patient safety, and then efficacy. Not only in day-to-day practice but in clinical research, patient safety is a priority; the benefit-to-risk ratio of each step in the treatment plan needs to be considered. Patient safety involves preventing errors, reducing risks, and ensuring that the care provided is effective, timely, and respectful of individual needs. Patient safety is the ethical responsibility of the medical team, and it is considered a cornerstone of quality healthcare because, without safety, even the most advanced treatments can lead to harm, which might prove life-threatening.

To me, patient safety is about trust. Every person who seeks medical help deserves to feel safe, respected, and confident that they are in good hands. Safe care saves lives, builds trust in the health system, and promotes better health outcomes overall.

2. With the growing burden of diabetes, what are some common safety risks in diabetes care, and how can they be prevented?

Ans. With the rising burden of diabetes, ensuring patient safety in diabetes care is critical. Some common safety risks include:

a. Medication errors - Examples: Wrong insulin type, incorrect dosage, or confusing units (e.g., using "mL" instead of "units"). Clear labeling and double-checking the insulin name and doses before administration will help prevent these errors. Patient education on how to self-administer insulin safely is also important.

b. Hypoglycemia (low blood glucose): Can lead to confusion, unconsciousness, seizures, or even death if untreated. Patient education on recognition, diagnosis, and management of hypoglycemia is very crucial. Regular monitoring of blood glucose levels, individualized treatment plans, especially for elderly or high-risk patients, can help reduce the risk of hypoglycemia.

3. How can healthcare teams ensure safe transitions of care for people with diabetes—such as from hospital to home—to avoid complications or readmissions?

Ans. Healthcare teams can ensure safe transitions of care for people with diabetes by implementing a coordinated discharge plan that includes clear communication between hospital staff, primary care providers, and the patients. This involves providing comprehensive education to patients and caregivers on medication management, highlighting any changes made during hospitalization, providing clear instructions on blood glucose monitoring, diet, and follow-up care, as well as ensuring timely outpatient appointments and access to necessary supplies. Provide written instructions and demonstrate insulin use if needed.

Utilizing care coordinators or case managers to facilitate these processes and offering written instructions tailored to the patient's literacy level can help prevent complications and reduce the risk of readmissions. The medical team can share contact numbers, mobile numbers, or email addresses to answer the patient's emergency queries.

Use of technology: Leveraging tools like glucose-monitoring apps, telemedicine, or home health visits can be of benefit. In summary, safe transitions of care for people with diabetes depend on clear communication, careful planning, education, and early follow-up. A coordinated approach helps patients stay on track, avoid complications, and remain safely at home.

4. How can patients and their families be encouraged to play a more active role in ensuring their own safety during treatment?

Ans. To encourage patients and families to play an active role in ensuring their own safety, healthcare teams can focus on educating them about the condition and treatment plan, involving them in decision-making, and teaching self-management skills like monitoring blood glucose levels and adjusting insulin doses depending on the meal plan.

Open communication with providers, offering a strong support system, and ensuring medication safety are also key. Empowering patients and caregivers with the confidence and tools to manage their health promotes better outcomes and reduces the risk of complications.

5. How can hospitals and clinics ensure that patient safety standards are consistently followed, especially during high-pressure situations like emergencies or shift changes?

Ans. To ensure patient safety during high-pressure situations like emergencies or shift changes, hospitals and clinics can implement clear protocols (standard operating procedures [SOPs]), use structured handoff/patient over processes, and conduct regular simulation drills.

Adequate staffing, team-based communication tools, and continuous monitoring help maintain standards. Additionally, fostering a culture of safety where staff feel empowered to report concerns ensures consistent adherence to safety protocols, even under stress.

Glossary of Terms: Diabetic Foot Complications

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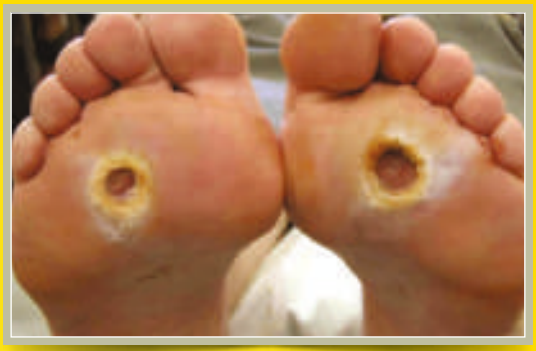
The International Working Group on the Diabetic Foot (IWGDF) 2023 update highlights the need for a standardized glossary to improve communication, diagnosis, research, and treatment of diabetic foot complications globally.



1. **Diabetes-related foot disease:** Disease of the foot in a person with current or past diabetes mellitus, involving one or more of the following: Peripheral neuropathy, peripheral artery disease (PAD), foot infection, ulcers, charcot foot, gangrene, or amputation.
2. **Peripheral neuropathy:** Dysfunction of the peripheral nerves, resulting in loss of protective sensation (LOPS) and increased risk of foot injury.
3. **Peripheral artery disease:** Atherosclerotic blockage in arteries from the distal aorta to the foot, leading to reduced blood flow and poor wound healing.
4. **Loss of protective sensation:** Inability to feel light touch or pressure, such as with a 10 g monofilament, typically due to neuropathy.
5. **Foot ulcer:** A break in the skin of the foot involving at least the epidermis and part of the dermis.
6. **Neuropathic foot ulcer:** A foot ulcer that occurs due to peripheral neuropathy, without significant arterial disease.
7. **Ischemic foot ulcer:** A foot ulcer that occurs due to PAD and poor blood supply, without neuropathy.
8. **Neuro-ischemic foot ulcer:** A foot ulcer resulting from both peripheral neuropathy and PAD.
9. **Foot infection:** Invasion and multiplication of microorganisms in foot tissue, causing inflammation and tissue destruction.
10. **Gangrene:** Death of foot tissue due to insufficient blood supply or infection, resulting in dry (black) or wet (infected) gangrene.
11. **Charcot neuro-osteoarthropathy (Charcot foot):** Foot inflammation due to neuropathy, causing joint and bone deformities; may present as a red, warm, swollen foot.
12. **Amputation:** Surgical removal of part or all of the foot or lower limb. Categorized as major (above the ankle) or minor (below the ankle).
13. **Foot in remission:** A state where the skin is intact and free of infection after a previous foot ulcer has healed.
14. **Callus:** Thickened skin caused by excessive pressure or mechanical loading, often a precursor to ulceration.

Resources:

1. Van Netten JJ, Bus SA, Apelqvist J, *et al.* Definitions and criteria for diabetes-related foot disease (IWGDF 2023 update). *Diabetes Metab Res Rev.* 2024;40(3):e3654. doi:10.1002/dmrr.3654
2. American Diabetes Association Professional Practice Committee. 12. Retinopathy, Neuropathy, and Foot Care: Standards of Care in Diabetes—2025. *Diabetes Care.* 2025;48(Suppl 1):S252–S265. doi:10.2337/dc25-S012

Sensory Foot Examination in Diabetes

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The International Working Group on the Diabetic Foot (IWGDF) guidelines advocate for assessment of peripheral neuropathy using the 10 g (5.07 Semmes-Weinstein) monofilament (detects loss of protective sensation) and a tuning fork (128 Hz, detects loss of vibratory sensation).

10 g (5.07) Semmes-Weinstein monofilament test procedure

- First, apply the monofilament on the patient's hands (or elbow or forehead) to demonstrate what the sensation feels like.
- Test three different sites on both feet, selecting from those shown in Figure 1.
- Ensure the patient cannot see whether or where the examiner applies the filament.
- Apply the monofilament perpendicular to the skin surface (Figure 2A) with sufficient force to cause the filament to bend or buckle (Figure 2B).
- The total duration of the approach, skin contact, and removal of the filament should be approximately 2 seconds.
- Do not apply the filament directly on an ulcer, callus, scar, or necrotic tissue.

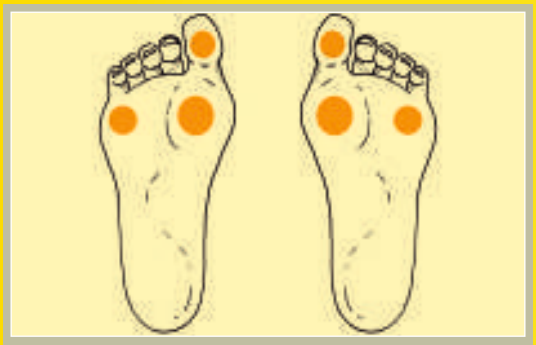

Figure 1: Sites that should be tested for loss of protective sensation with the 10 g Semmes-Weinstein monofilament

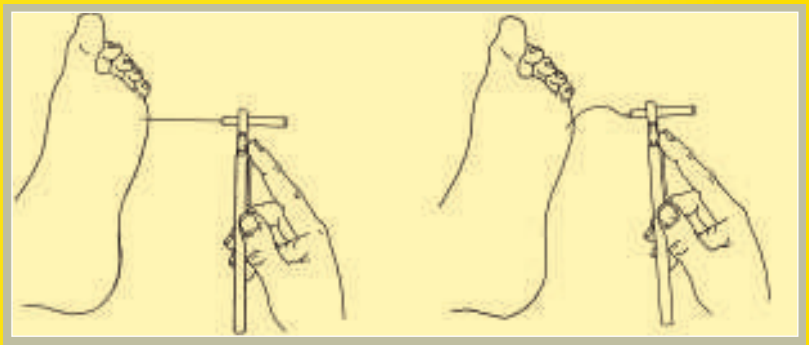

Figure 2A and B: Proper method of using the 10 g Semmes-Weinstein monofilament

- Do not allow the filament to slide across the skin or make repetitive contact at the test site.
- Press the filament to the skin and ask the patient whether they feel the pressure applied ('yes'/'no') and next where they feel the pressure (e.g., 'ball of left foot'/'right heel).

- Repeat this application twice at the same site, but alternate this with at least one 'mock' application in which no filament is applied (a total of three questions per site).
- Protective sensation is present at each site if the patient correctly answers on two out of three applications; absent with two out of three incorrect answers.

128 Hz tuning fork test procedure

- Begin by applying the vibrating tuning fork to the patient's wrist, elbow, or clavicle to demonstrate the sensation.
- Ensure the patient cannot see where or when the tuning fork is applied.
- Apply the vibrating tuning fork perpendicularly with constant pressure to a bony part on the dorsal side of the distal phalanx of the first toe (or another toe if the hallux is absent) (Figure 3).
- Repeat the application twice, alternating with at least one "mock" application where the tuning fork is not vibrating.
- The test is positive if the patient correctly answers at least two out of three applications; it's negative if two out of three answers are incorrect.
- If the patient cannot sense vibrations on the toe, repeat the test more proximally (e.g., malleolus, tibial tuberosity).

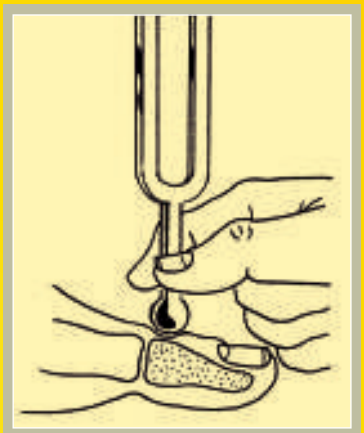

Figure 3: Using a 128 Hz tuning fork

The sensory foot examination is a simple, non-invasive, yet profoundly impactful component of routine diabetes care. It's consistent and accurate application facilitates the early identification of diabetic peripheral neuropathy and enables effective risk stratification.

Resource:

Schaper NC, van Netten JJ, Apelqvist J, *et al*; on behalf of the IWGDF Editorial Board. *Practical Guidelines on the Prevention and Management of Diabetes-Related Foot Disease: IWGDF 2023 Update*. International Working Group on the Diabetic Foot. 2023. Accessed June 23, 2025. https://iwgdfguidelines.org/wp-content/uploads/2023/07/IWGDF-2023-01-Practical-Guidelines.pdf

Treatment of Diabetic Foot Complications

Dr. Ayaz Jamil Ansari

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Diabetic foot ulcers (DFUs) are a common and serious complication of diabetes, frequently leading to hospitalization, amputation, and diminished quality of life. The treatment of DFUs requires a structured, multidisciplinary approach involving wound care, pressure offloading, metabolic stabilization, and the use of adjunctive therapies when appropriate.

1. **Clinical assessment and diagnosis:** Early identification and structured assessment of diabetic foot complications are essential for effective management. Evaluation includes history taking, visual inspection, assessment of footwear, neurological testing for peripheral neuropathy, and vascular assessment. Infection should be identified and classified based on severity: Uninfected, mild, moderate, or severe, as defined by clinical signs such as erythema, swelling, purulent discharge, and systemic symptoms.

   Vascular assessment is also critical. Non-invasive testing such as the ankle-brachial index, toe pressure, or transcutaneous oxygen pressure should be used to determine peripheral arterial disease.

2. **Local wound care:** For ulcers to heal, proper wound care is essential. In order to eliminate necrotic tissue, callus, and biofilm that impede healing, debridement is required. A moist wound environment should be maintained by dressings, and the type of material used should be determined by the appearance and exudate of the wound. Antibiotics are required for the treatment of infections, and for moderate to severe infections, culture-guided therapy is desired. Ongoing wound monitoring is essential. Clinicians should document the ulcer's size, depth, and characteristics regularly to assess healing and adapt the treatment plan as necessary.

3. **Pressure offloading:** One of the most important aspects of DFU treatment is offloading, which reduces mechanical pressure on the wound site and allows tissue recovery. According to the 2023 International Working Group on the Diabetic Foot (IWGDF) Offloading Guidelines, non-removable knee-high devices such as total contact casts or irremovable cast walkers are the most effective interventions for plantar forefoot or midfoot ulcers.

   If these are contraindicated or not tolerated, removable cast walkers may be used, but with close monitoring for adherence. Footwear and offloading should be selected based on ulcer location, severity, and the patient's ability to use the device. Conventional or standard footwear is not appropriate during active ulcer treatment.

4. **Glycemic and risk factor management:** Poorly controlled blood glucose impairs leukocyte function, collagen synthesis, and tissue repair. Improved glycemic control correlates with better healing outcomes and lower infection risk. Beyond glycemia, the presence of peripheral arterial disease in individuals with diabetes and DFU signals a very high cardiovascular risk. Management must include efforts to reduce this risk by stopping smoking, controlling hypertension and dyslipidemia, and using anti-platelet therapy where indicated. Furthermore, sodium-glucose cotransporter-2 (SGLT-2) inhibitors or glucagon-like peptide-1 (GLP-1) receptor agonists should be considered for their cardiovascular protective effects in appropriate individuals. These strategies not only reduce macrovascular complications but may also indirectly enhance ulcer healing by improving overall perfusion and metabolic stability.

5. **Adjunctive therapies:** For individuals whose ulcers do not improve despite good standard care, adjunctive therapies may be considered. One such approach is oxygen therapy. Hyperbaric oxygen therapy delivers 100% oxygen under pressure and may be beneficial in specific cases, such as ischemic, non-healing wounds. Adjunctive treatments should only be considered after addressing the fundamental components of care, such as debridement, offloading, infection control, and vascular management.

6. **Prevention and monitoring:** Once healing is achieved, recurrence is common, with studies reporting up to 40% re-ulceration within one year. To prevent recurrence, individuals should be educated on daily foot inspection, hygiene, and the use of appropriate protective footwear.

   Regular follow-up with foot care specialists is also recommended to monitor skin integrity and detect early signs of breakdown. Structured care systems, including multidisciplinary foot clinics, have demonstrated reduced rates of major amputations and improved healing outcomes.

   Diabetic foot issues necessitate a multidisciplinary, systematic approach to treatment. Effective management depends on timely diagnosis, appropriate wound care including offloading, control of systemic risk factors, and the use of adjunctive therapies.

Key points

- Early diagnosis and comprehensive clinical assessment are critical to managing DFU.
- Effective wound healing requires regular debridement, infection control, and appropriate moist dressings.
- Pressure offloading using non-removable devices is essential for ulcer recovery in plantar regions.
- Controlling glycemia, hypertension, and cardiovascular risk factors significantly improves DFU outcomes.
- Adjunctive therapies like oxygen therapy may aid healing in DFUs.

Resources:

1. Schaper NC, *et al., IWGDF Practical Guidelines 2023: Practical Guidelines on the Prevention and Management of Diabetic Foot Disease.* International Working Group on the Diabetic Foot (IWGDF); 2023. Accessed June 11, 2025. https://iwgdfguidelines.org/wp-content/uploads/2023/07/IWGDF-2023-01-Practical-Guidelines.pdf
2. Everett E, Mathioudakis N. Update on management of diabetic foot ulcers. Ann N Y Acad Sci. 2018;1411(1):153–165. doi:10.1111/nyas.13569
3. Bus SA, Armstrong DG, *et al., IWGDF Guidelines on Offloading Foot Ulcers in Persons with Diabetes.* International Working Group on the Diabetic Foot (IWGDF); 2023. Accessed June 11, 2025. https://iwgdfguidelines.org/wp-content/uploads/2023/07/IWGDF-2023-06-Offloading-Guideline.pdf

Diabetes Educator's Toolkit:
Skill of the Month: Goal Setting

Dr. Umesh Jain

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Consultant Physician, Diabetologist and Assistant Professor, Nair Hospital, Mumbai

Goal setting is a key skill for diabetes educators (DE), enabling them to guide individuals toward achievable and meaningful lifestyle changes. By setting realistic, personalized goals, educators empower individuals to take active steps in managing their condition and improving long-term health outcomes.

Five simple steps for setting goals independently

1. Recognize the issue - Identifying the problem from the individual's perspective is essential. Use open-ended questions to help the individual gain clarity:
   - What is the easiest aspect of managing diabetes?
   - What is the most difficult or challenging part of diabetes care?
   - What are the main concerns, fears, or worries related to diabetes?
   - What factors make this situation particularly difficult?

2. Understand emotions - The DE should assess how the problem impacts the individual's behavior and overall diabetes management. Encouraging the person to describe their thoughts may feel less intrusive than asking directly about feelings. Suggested prompts to facilitate discussion:
   - What are the current thoughts and feelings regarding the situation?
   - How might it feel if the situation remains unchanged?

3. Design goals - The next step involves supporting the individual in identifying what they wish to accomplish. It is essential to assess the level of commitment and the priority assigned to the goal. Useful prompts to guide the discussion:
    - What actions are possible?
    - What actions are genuinely desired?
    - On a scale of 1 to 10, how important is this change?
4. Create an action plan - It is important to support individuals in identifying actionable steps to initiate progress toward their goals. Guiding questions to facilitate this process may include:
    - What strategies or approaches might be effective?
    - What has been successful or unsuccessful in the past?
    - What requirements or preparations are needed to begin?
    - What is one concrete step that can be taken within the current week?
5. Review progress - Reflective questions to support this approach include:
    - What insights were gained from the experience?
    - What barriers were encountered during the process?
    - What actions would remain the same or change in future attempts?

Resources:

1. Bailey RR. Goal Setting and Action Planning for Health Behavior Change. *Am J Lifestyle Med.* 2017;13(6):615–618. Published 2017 Sep 13. doi:10.1177/1559827617729634
2. Balconi M, Angioletti L, Acconito C. Self-Awareness of Goals Task (SAGT) and Planning Skills: The Neuroscience of Decision Making. *Brain Sci.* 2023;13(8):1163. doi:10.3390/brainsci13081163

Frequently Asked Questions on Diabetes and Foot Care

Dr. Ranjith Ravella

MBBS, MD (Gen. Medicine)

Consultant Physician and Internal Medicine Specialist, KHIMS Hospitals, Khammam, Telangana

1. I am a 40-year-old and was recently diagnosed with type 2 diabetes mellitus. I have recently taken up running as an exercise. What guidelines should I follow regarding daily care?

Ans. Physical activity is important for type 2 diabetes management. However, diabetes can affect foot nerves and blood flow, making minor injuries serious if not managed. With key precautions, you can run safely.

Daily foot care routine:

- Inspect daily: Before and after runs, thoroughly check your feet (top, bottom, between toes) for redness, blisters, cuts, swelling, or any unusual changes. Even a tiny pebble can cause issues.
- Wash and dry: Wash feet daily and dry thoroughly, especially between toes, to prevent fungal infections.
- Moisturize: Apply lotion (avoiding between toes) to prevent dry, cracked skin.
- Never barefoot: Always wear protective footwear, even indoors, to prevent injuries.

The right gear:

- Shoes: Get professionally fitted running shoes with ample toe room, good support, cushioning, and breathable, seamless interiors.
- Socks: Choose moisture-wicking, seamless, padded socks. Wear clean, dry socks for every run.

When to see a professional:

- Contact your doctor or podiatrist immediately for any unhealing sores, infection signs (redness, pus, fever), persistent numbness, or new pain.

Consistent blood glucose control is vital for long-term foot health. Combining running with diligent foot care ensures a healthy, active lifestyle.

2. I am a 54-year-old woman. I was diagnosed with type 2 diabetes 6 months ago. Can I still get a pedicure, and what are the main things I need to know?

Ans. If you have diabetes and are considering a pedicure, several important precautions should be taken.

- Consult your doctor to discuss your individual risk factors. They may advise against it if you have severe neuropathy, poor circulation, or existing foot wounds.
- Choose a reputable salon known for its cleanliness, ensuring they sterilize instruments (ideally with an autoclave) and use fresh foot bath liners. Crucially, inform your nail technician that you have diabetes so they can exercise extra caution.
- Inspect your feet both before and after the pedicure for any cuts, sores, blisters, or signs of infection. If you notice any after a pedicure, contact your doctor or podiatrist immediately.
- Avoid certain practices: Do not allow cutting of cuticles, steer clear of razors or callus removers, boiling hot water due to potential neuropathy, and under no circumstances opt for "fish pedicures".

3. As someone with diabetes, how can I tell the difference between normal foot discomfort and a more serious problem related to my diabetes? I often get aches, but how do I know when it's a warning sign?

Ans. If you have diabetes, any of these foot symptoms requires immediate attention from your doctor or podiatrist:

- **New or persistent pain:** Any pain that's new, intense, doesn't go away with rest, wakes you at night, or is localized to one spot.
- **Changes in sensation:** Numbness or complete loss of feeling (a major red flag, as you might not feel injuries). Burning, tingling, "pins and needles," or sharp, shooting pains.
- **Visible changes or symptoms:**
  - Redness, swelling, or warmth in any part of the foot
  - Any open sore, blister, cut, crack, or wound, no matter how small or whether it's painful
  - Drainage or pus from a sore
  - Fever or chills accompanying foot symptoms
  - Changes in foot shape (e.g., new lumps, flattening of arch)
  - Nail changes (ingrown, thickened, discolored)
  - Skin discoloration (blue or black patches)

Superfood: Kalonji

Kalonji *(Nigella sativa)* is also called Samal Fennel, Nigella, Mogrel, and Black Cumin. An evergreen herb with striking blue flowers and deep black seeds, it is widely used across India, Pakistan, Bangladesh, and the Middle East. The table below gives an overview of the health benefits associated with Kalonji.

Health benefits	Function
Enhancement of memory	Supports cognitive health by improving memory, concentration, and intellectual ability.
Diabetes	Helps manage blood glucose levels (2 g/day demonstrated positive results in one study).
Cardiac health	Supports cardiovascular well-being by managing cholesterol levels, reducing arterial blockages, and lowering the risk of heart attacks.
Relieves pain	Eases joint pain, headaches, neck discomfort, and backache.
Obesity	Assists in reducing excess body fat and promotes weight loss.
Gastrointestinal (GI) system	Supports relief from constipation and the treatment of indigestion and gas/bloating.
Immune system	Strengthens immunity, helps manage cough and cold, and helps combat bacterial and viral infections.
Skin problems	Supports the treatment of acne, pimples, scars, and blemishes.
Hair problems	Helps address dryness, hair fall, and dandruff.

Nutritional value: 10 g gives 40 kcal, 5 g carbs, 0 g protein, and 1.6 g fat.

How to consume: Sprinkle it over salads, yogurt, or roasted vegetables, or add it to dough, and tempering for curries and dals. Its mild, nutty flavor blends well with a variety of dishes, making it a simple way to enhance both taste and health.

Resources:

1. Khan N. Kalonji—A remedy for all maladies except death. *J Anal Pharm Res.* 2019;8:29–31. doi:10.15406/japlr.2019.08.00307.
2. Hamdan A, Haji Idrus R, Mokhtar MH. Effects of Nigella Sativa on Type-2 Diabetes Mellitus: A Systematic Review. *Int J Environ Res Public Health.* 2019;16(24):4911. doi:10.3390/ijerph16244911.

Role Play

Scenario: Ms. XYZ is a 35-year-old corporate employee working in a client-facing role and has been living with type 2 diabetes for the past 2 years. Due to her job, she often wears formal shoes throughout the day and frequently experiences shoe bites and foot discomfort. She is concerned that her diabetes might delay the healing of these wounds and wants to know how to take better care of her feet. She has come to visit a diabetes educator (DE) for guidance.

Ms. XYZ: Hi, I've had type 2 diabetes for the last two years. I work in a corporate setup where I have to wear formal shoes every day. By evening, my feet feel swollen and cramped, and I often get shoe bites or blisters. I'm scared as these wounds don't heal properly because of diabetes.

DE: You're right to be concerned. In people with diabetes, even a small injury like a shoe bite can lead to infection and an ulcer if not cared for properly. It's good you've come to talk about this.

Ms. XYZ: I try to wear clean shoes and socks, but I'm not sure what kind of footwear is ideal. Formal shoes seem unavoidable in my job.

DE: Understood. But you don't have to compromise your health. Let's talk about the right footwear first. For office wear, look for extra-depth shoes or diabetes formal shoes—these have a wider toe box so your toes have space and don't rub against the shoe. Choose shoes with soft inner linings, no inner seams, and padded insoles.

Ms. XYZ: What about heels? I usually wear about 1–2 inch heels for meetings.

DE: Try to avoid heels higher than 1 inch, especially narrow ones. They put pressure on the forefoot, which increases your risk of ulcers. Instead, go for block heels or low wedges with good arch support.

Ms. XYZ: What about sandals or chappals when I'm at home or stepping out casually?

DE: Great question! Avoid open-toe sandals, flip-flops, or chappals with hard straps or toe separators, as they can cause friction. Instead, go for soft, closed-toe sandals with adjustable straps—preferably velcro. They should have a soft, cushioned sole and a non-slip grip. Certified vendors providing diabetes-friendly footwear are also available.

Ms. XYZ: I never thought so much about footwear until now. How do I take care of my feet otherwise?

DE: A little extra care can prevent long-term complications. Here are a few important tips:

1. Always wear clean, soft, thick cotton socks—avoid synthetic or tight socks.
2. Wash and inspect your feet daily—look for cuts, cracks, or redness.
3. Trim your nails straight across, not too deep from the sides.
4. Shop for shoes in the evening, when your feet are naturally a bit swollen—that way, you'll get the right size.
5. Avoid crossing your legs for long hours while sitting—it reduces blood flow.

Ms. XYZ: These tips are so helpful! I wish I had known them earlier. I'll definitely look for better footwear now.

DE: All the best!

NOTES

In T2DM Across Continuum, **Choose STRONG**

Glycomet®-GP

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

Glycomet®-GP 0.5 FORTE
Metformin Hydrochloride 1000 mg SR + Glimepiride 0.5 mg

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

Glycomet®-GP 1 FORTE
Metformin Hydrochloride 1000 mg SR + Glimepiride 1 mg

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

Glycomet®-GP 2 FORTE
Metformin Hydrochloride 1000 mg SR + Glimepiride 2 mg

Glycomet®-GP 2/850
Metformin Hydrochloride 850 mg SR + Glimepiride 2 mg

Glycomet®-GP 3/850
Metformin Hydrochloride 850 mg SR + Glimepiride 3 mg

Glycomet®-GP 3 FORTE
Metformin Hydrochloride 1000 mg SR + Glimepiride 3 mg

Glycomet®-GP 4 FORTE
Metformin Hydrochloride 1000 mg SR + Glimepiride 4 mg

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.

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

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

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