# FROM CALLUS TO CATASTROPHE: IDENTIFYING EARLY WARNING SIGNS OF DIABETIC FOOT COMPLICATIONS

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**No pain does NOT mean No problem!**

Diabetic foot complications are a leading cause of disability and amputations[1]. Patients with diabetes often develop peripheral neuropathy, peripheral arterial disease, and reduced immunity, increasing the risk of injury and infection. Loss of protective sensation prevents early detection of trauma, leading to callus formation and progression to ulcers if untreated.

## PRE ULCERATIVE LESIONS

Pre ulcerative lesions[2] are the stage prior to developing a diabetic foot ulcer. Pre ulcerative lesions includes calluses, blisters, corns, redness of the skin. Patients with peripheral neuropathy or impaired blood flow will progress to ulcers easier than patients who can feel their foot due to loss of sensation in their feet. Studies estimate that 85% of all lower limb extremity amputations in diabetic patient are preceded by foot ulcers.

## DAILY PREVENTION

- Check feet daily
- Never go bare foot
- Wash and check between toes
- Dry properly
- Trim nails carefully

## RISK STRATIFICATION

Diabetic foot stratification is commonly based on IWGDF guidelines, classifies patients to prevent complications.

1. Class 0 (Low): No Loss of protective sensation (LOPS), no peripheral artery disease(PAD) , no deformity. Annual screening is required.
2. Class 1 (Moderate): LOPS present, but no PAD or deformity. Semi-annual screening is required.
3. Class 2 (High): LOPS + PAD or LOPS + deformity. Quarterly screening is required.
4. Class 3 (Very High): History of ulceration, amputation, or end-stage renal failure. Frequent check-ups.

## SYMPTOMS

Early Warning Signs
* Persistent Calluses
* Redness & Swelling
* Unusual Odor or Discharge
* Numbness or Tingling
* Slow-Healing Wounds
* Skin Color Changes

**Small wounds, big consequences!**

## CLINICAL MANAGEMENT

- Offloading: Reduction of pressure on wound bed by using appropriate off-loading footwear, casts, or orthotics.
- Cleaning & Debridement: The wound must be cleaned and dead/infected tissue must be debrided in order to avoid any microbial growth.
- Control of Infection: The early use of IV or oral antibiotics for either cellulitis or osteomyelitis.

Even after healing, DFUs have a 65% of recurrence rate within 5 years.

## TREATMENT

Early treatment saves limbs
* Care for your wounds and cutting dead skin away[3]
* Use of antibiotics to treat bacterial infections
* Use of neuropathic pain agents such as pregabalin and venlafaxine to help with pain control due to nerve damage
* Use cilostazol to improve circulation
* Use metformin to control blood sugar levels
* If your foot or toes are very badly damaged, you may need surgery to prevent loss of limb.

## REFERENCES

1. The Current Burden of Diabetic Foot Disease (2021)
2. Diabetic Foot Ulcers: A Review (2023)
3. Diagnosis and Management of Foot Diabetic Complications