

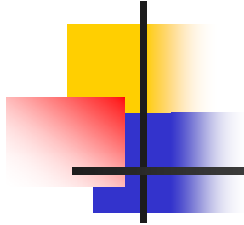


The Diabetic foot: An overview

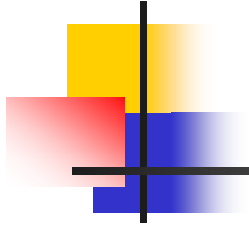
**Mamdouh Radwan El-Nahas
Professor of Internal Medicine
Diabetes and Endocrinology unit
Mansoura University**

**It will be a tragedy if we restrict the term
DF to advanced stages of the disease**





- The aims of any diabetic foot service should be preservation of the limb.
- If the amputation become the only option, this indicate failure of DF services.
- Many studies considered amputation rate to reflect the efficacy of foot care services in a country.

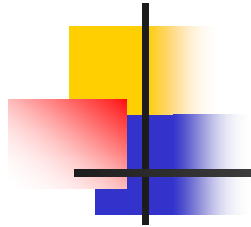


**What is meant by diabetic
foot?**



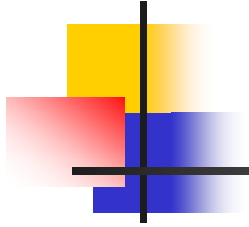
The WHO definition of the diabetic foot

- The foot of a diabetic patient that has the potential risk of pathologic consequences including infection, ulceration and or destruction of deep tissues associated with neurologic abnormalities, various degrees of peripheral vascular disease and/or metabolic complications of diabetes in the lower limb



- Any foot pathology that results directly from diabetes or its long-term complications (Boulton 2002).

Diabetes, 30 : 36, 2002.

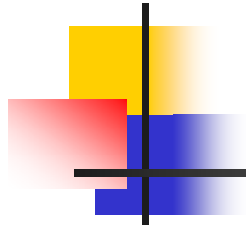


History of the diabetic foot

- 
- Ancient Egyptian prosthesis of the big toe

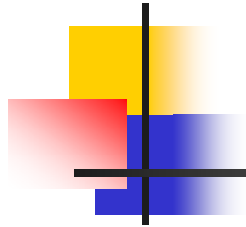
- Lancet 2000; 356: 2176–79





- **The suggestion that peripheral nerve dysfunction could lead to diabetic foot ulceration**

- **Pryce reported a case of perforating ulcers of both feet associated with diabetes and ataxic symptoms. Lancet 2:11–12,1887.**



- Only in the last 20 years progress in the understanding of the pathogenesis and management of the diabetic foot had been made.



Foot council have been formed by international diabetes associations

- **In 1987: the ADA formed foot council**
- **In 1998: the EASD formed the diabetic foot study group**



However

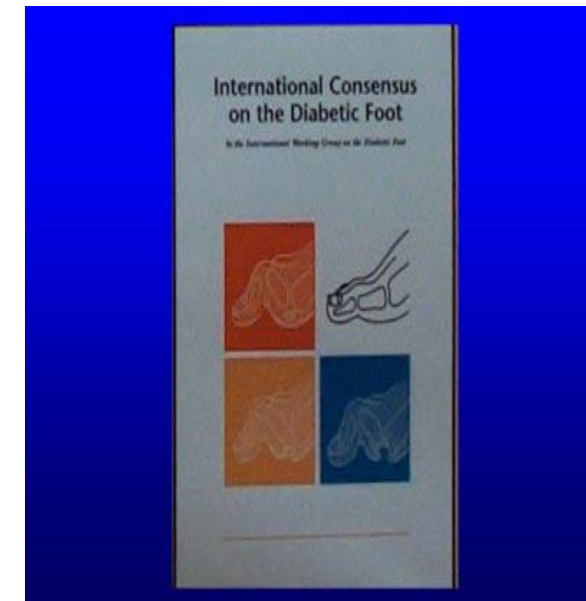
- There is still a gap between what is known about Diabetic foot and what is really done to the feet of the diabetic patients.

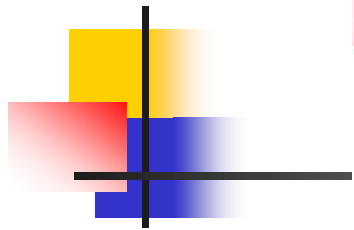


IWGDF

- In 1996 a group of experts in the field of the diabetic foot expressed the need for an international set of definitions and guidelines on prevention and management of the diabetic foot (International working group on the diabetic foot)

- **Launching of the International Consensus document and Practical Guidelines on the Management and Prevention of the Diabetic Foot was done in 1999.**
- **3 supplements in 2003 on infection, classification and wound healing.**





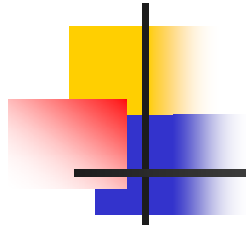
Diabetes
and
Foot Care

**PUT FEET FIRST
PREVENT
AMPUTATIONS**

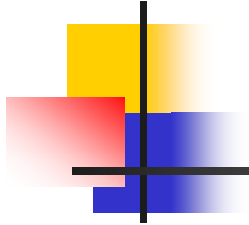


An initiative of the International Diabetes Federation and the World Health Organization

www.worlddiabetesday.org



- **IWGDF search for representative alllover the world to convey their messages in different countries**



We are honored that one of our team: Professor Hanan Gawish become Egypt Representative of the IWGDF.

سارع للاهتمام بقدمك
حمية
من البتر
مرض السكر
والعناية بالقدم

الطباة العامة من كلية طب البصرة

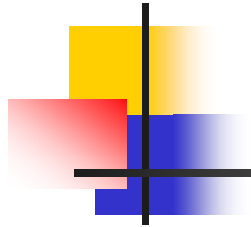
اليوم
العالمى
للسكر
2005 ٢٠٠٥
14 NOV ١٤ نوفمبر



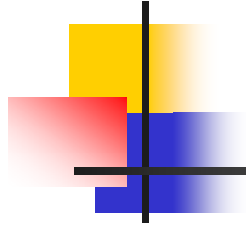
www.worlddiabetesday.org

مبادرة من الإتحاد الدولى للسكر ومنظمة الصحة العالمية

- The Arabic translation of the International Consensus on the Management of the Diabetic Foot is now available



The natural history of the diabetic foot

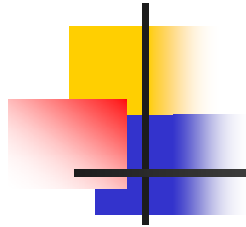


It is unwise to consider that major diabetic foot problems occur all of the sudden.



The natural history of the diabetic foot (Edmonds 2006)

- Stage 1: A normal foot
- Stage 2: A high risk foot
- Stage 3: An ulcerated foot
- Stage 4: An infected foot
- Stage 5: A necrotic foot.

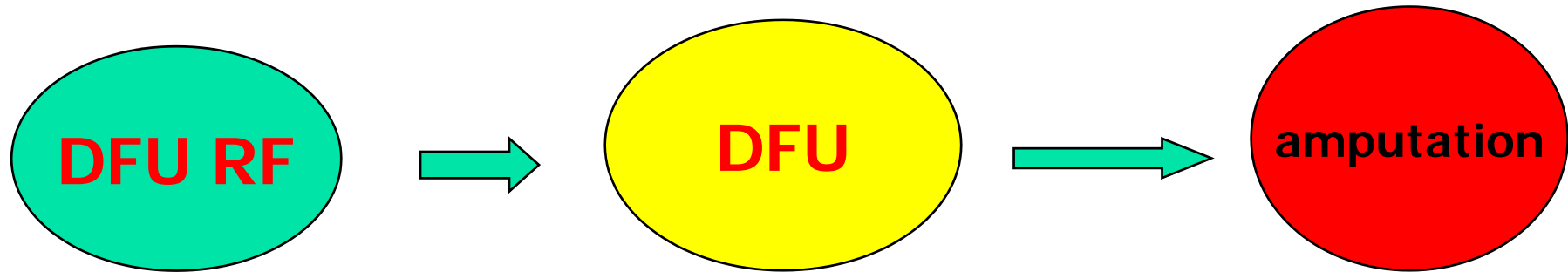


- Stage 1: A normal foot
- Stage 2: A high risk foot
- **Stage 3: An ulcerated foot**
- Stage 4: An infected foot
- Stage 5: A necrotic foot.

Types of DFU



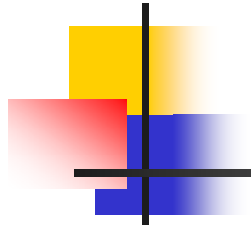
DFU is a pivotal event in diabetic foot syndrome



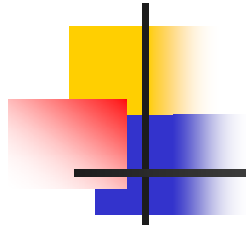


Detection of high risk foot should be first priority in any DF service

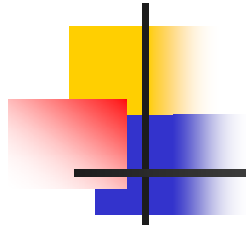
- Stage 1: A normal foot
- **Stage 2: A high risk foot**
- Stage 3: An ulcerated foot
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What are the risk factors for DFU



- **Peripheral neuropathy**
- **Biomechanical dysfunction (Deformities, High plantar pressures, Limited joint mobility)**
- **Peripheral vascular disease**
- **Previous Ulcer**
- **Trauma (e.g. inappropriate foot wear)**



- **Long duration of diabetes and Elevated HbA1c.**
- **Diabetic nephropathy and retinopathy**
- **Obesity**
- **Diabetic patients with foot ulcerations appear to be more non-compliant. A syndrome of “willful self-neglect” has been described in patients with diabetes and foot ulcers.**
- **Male gender?**

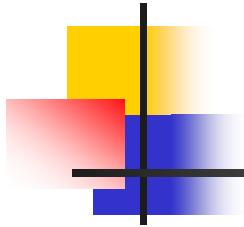


A critical triad!

The critical triad of:

- 1) Neuropathy
- 2) Trauma
- 3) Foot deformity

is present in the majority of ulcerated patients.

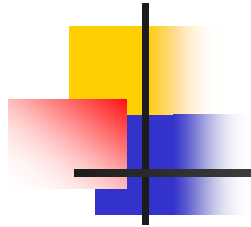


- Paul Brand (1914–2003) was asked on US Department of Health conference to make a recommendation on reducing amputation in diabetes
- Most listeners expected an answer promoting advanced technology.
- They were surprised to hear that his key recommendation was a national campaign to encourage physicians to remove patients shoes and socks and to examine the feet



The high risk foot

- The high risk foot is the foot that has developed one or more of the following risk factors for ulceration:
 - Neuropathy
 - Ischaemia
 - Deformity
 - Swelling
 - Callus.

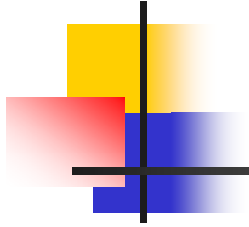


**There is no what is called
trivial lesion**

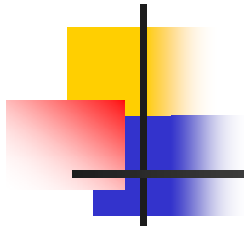


The callus

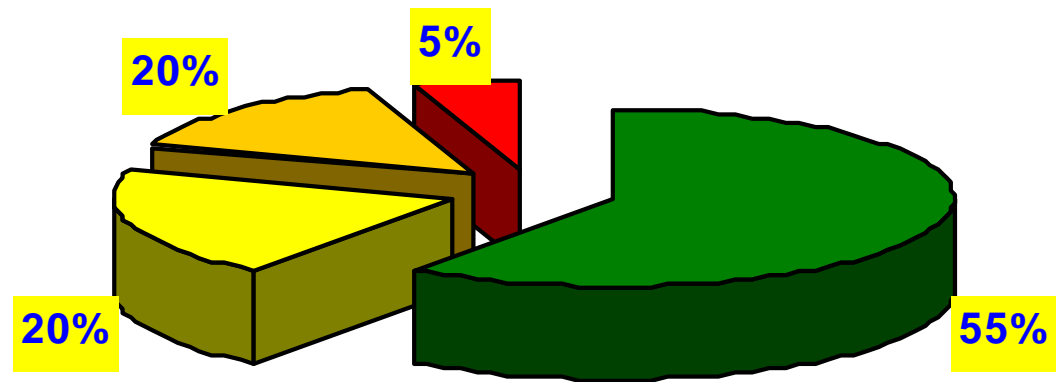
- 5 percent of the United States population have corns or calluses.
- In diabetic patients dry skin in which even slight pressure and friction is sufficient to cause excessive callus formation.
- 82 % of diabetic foot ulceration were preceded by a focal pressure keratosis (Sage et al 2001).

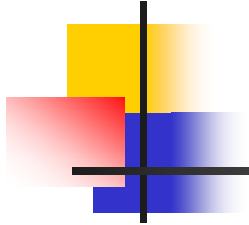


Are DFU risk factors a common problem that deserve screening

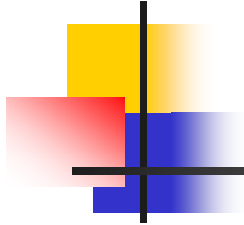


- No abnormality
- Increased risk
- High Risk
- DFU, CLI, Gangrene





**Are these figures fixed
allover the world?**

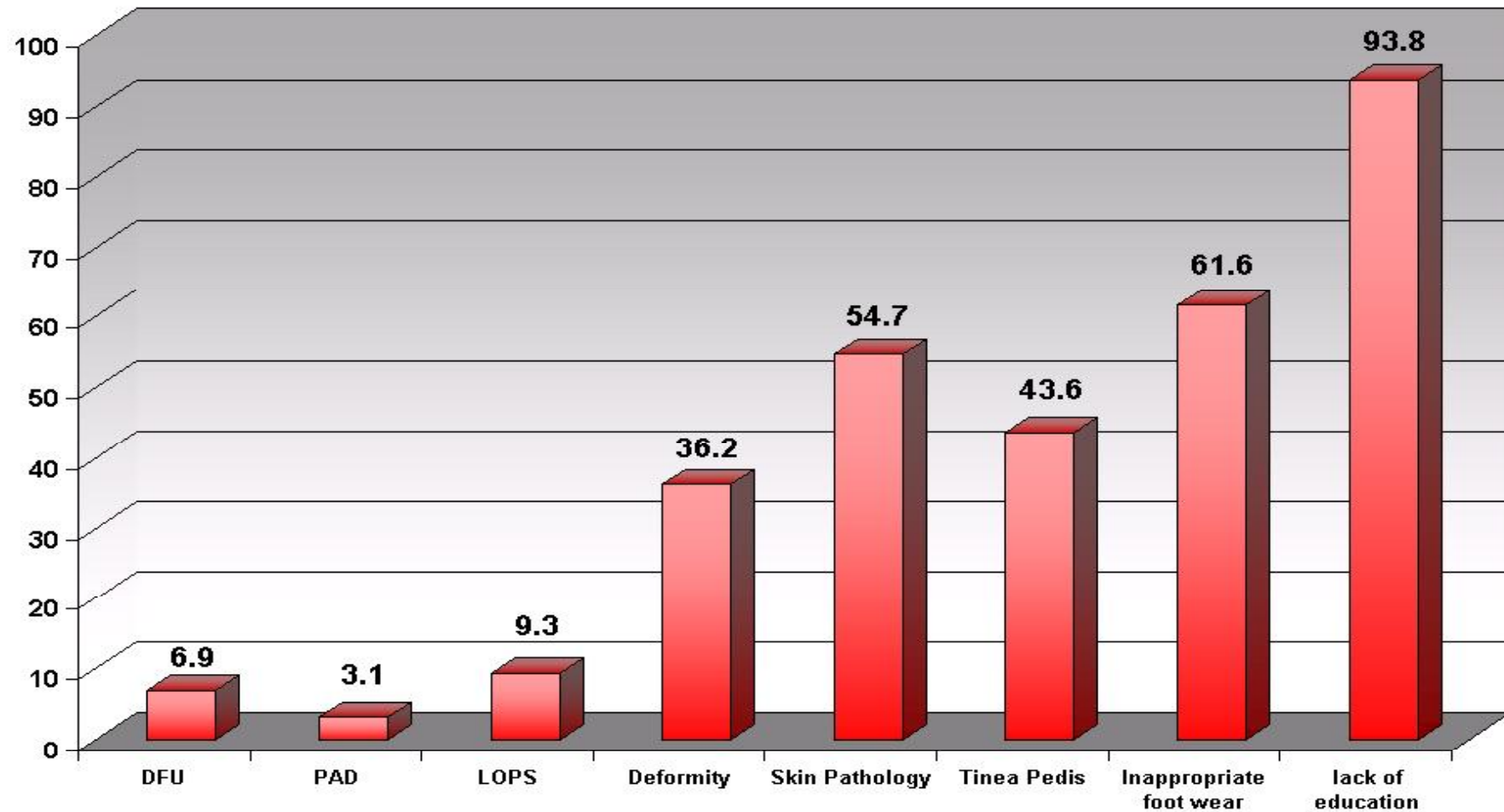


- **Although the pathways to ulceration and amputation do not differ.**
- **There is racial differences in the prevalence of DFU & their risk factors and amputation.**

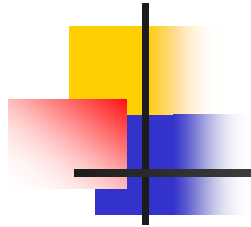


Racial differences

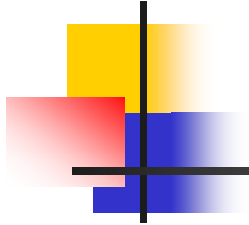
- Diabetic foot syndrome was less common in Asia with contradictory results in Africa.



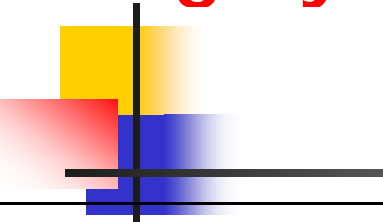
El-Nahas M, Gawish H, Tarshoby M and State O: The prevalence of foot ulcer risk factors in Egyptian diabetic patients. Diabetologia. 49: (Suppl 1): 682, 2006



**How can we classify our patients
into different risk groups**



**The IWGDF had proposed a
classification system.**



category	Risk profile	Check up frequency
0	No sensory neuropathy	Once a year
1	Sensory neuropathy(DN)	Once every 6 month
2	DN and PAD and/or foot deformities	Once every 3 month
3	Previous ulcer	Once every 1-3 month



Conclusion

The diabetic foot service should be available for all diabetic patients.



Conclusion

- There is a lot of signs that precede major events.
- The earlier you will detect and manage your patient the better will be the prognosis.