IWGDF

GUIDANCE AND IMPLEMENTATION DAY

Development of an evidence-based global consensus
The 2015 IWGDF Guidance documents
An Update

Karel Bakker MD, PhD, Immediate past-chair IWGDF - IDF CS

on behalf of
J. Apelqvist; B. A. Lipsky; J. J. van Netten; N. C. Schaper; K. Bakker

WCS, Utrecht, 24 november 2015

WCS Update IWGDF richtlijen

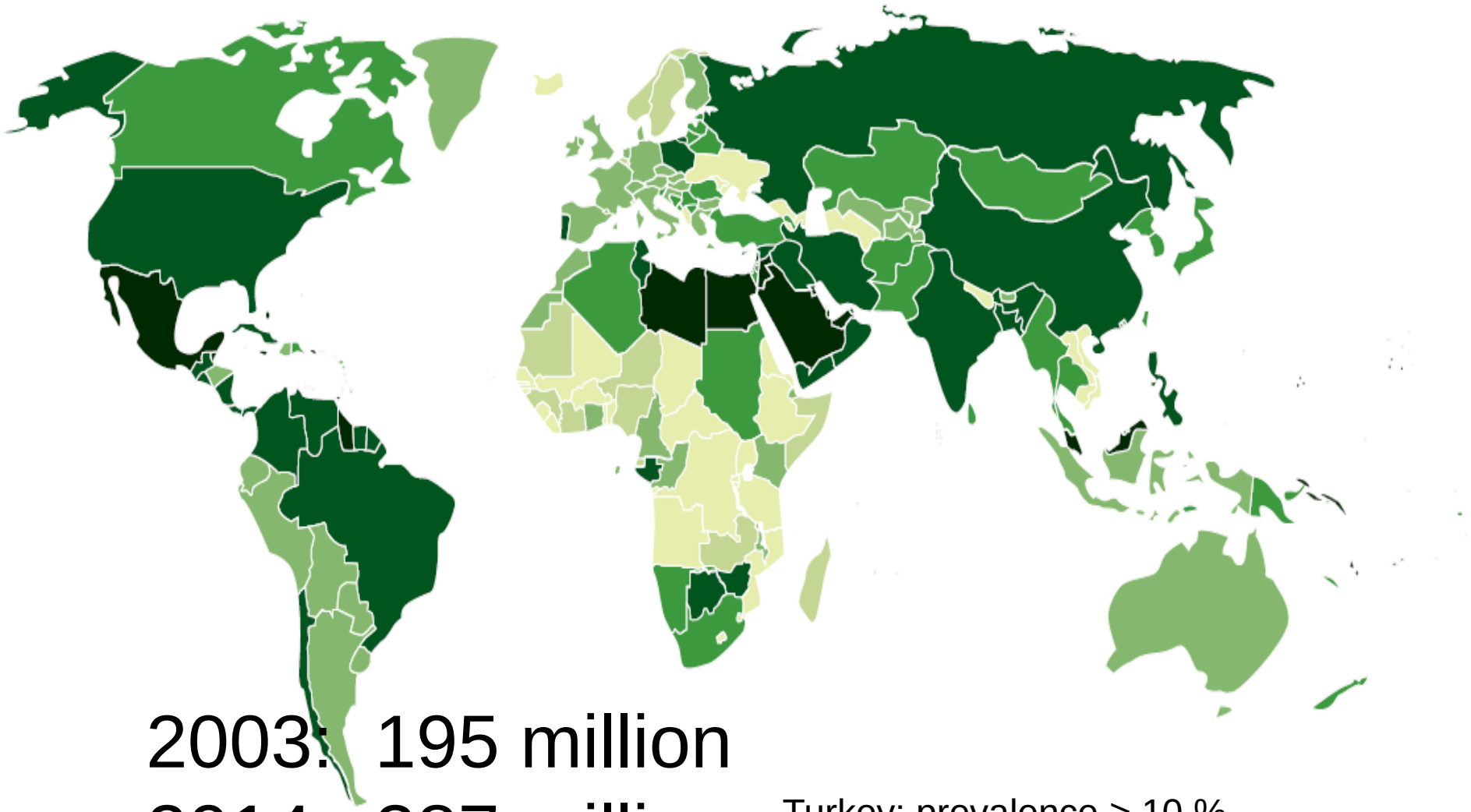
GUIDANCE AND IMPLEMENTATION DAY

Disclosure belangen spreker:

Geen belangenverstrengeling

Karel Bakker, Utrecht 24 11 2015

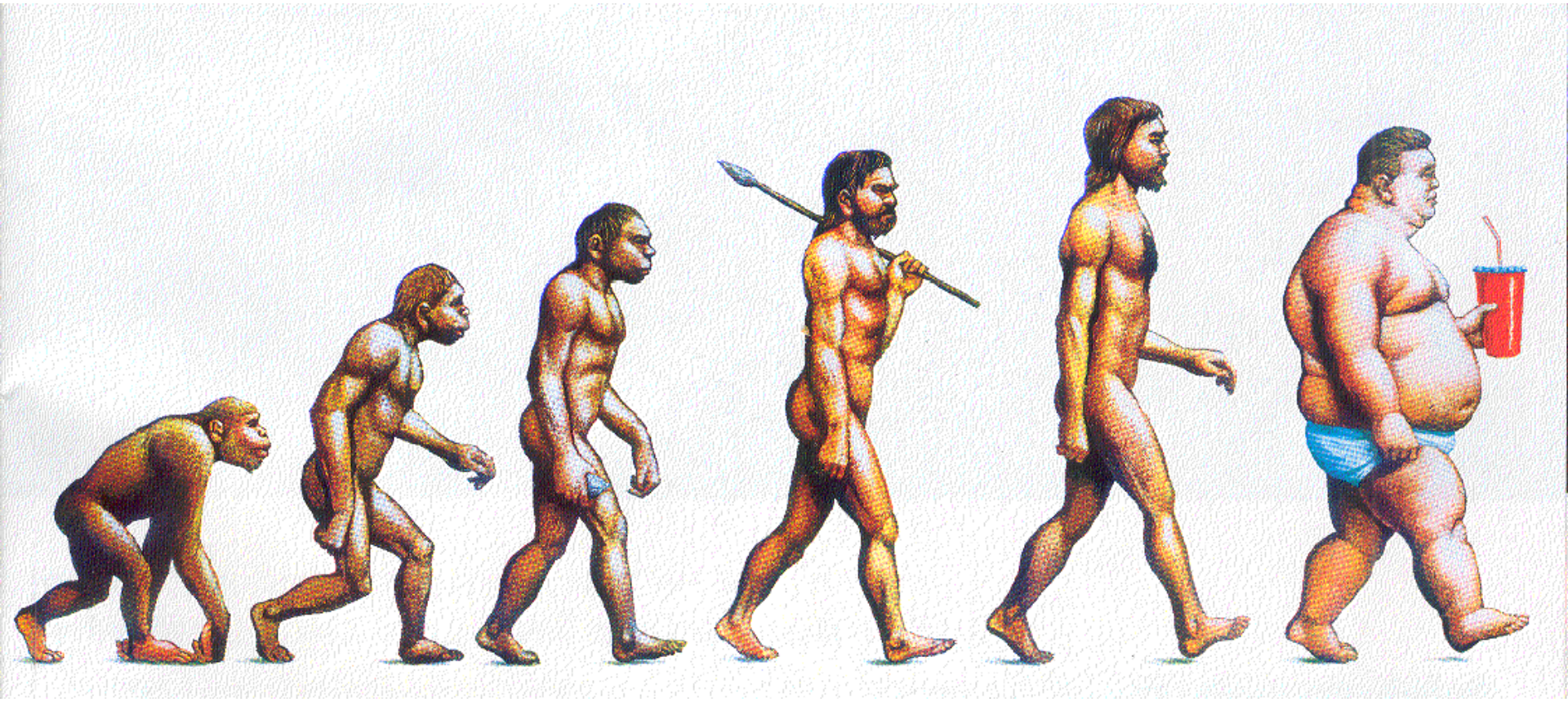
Prevalence of diabetes (20-79 y)



2003: 195 million
2014 : 387 million
2035 : 592 million

Turkey: prevalence > 10 %

*comparative prevalence



387 million:

80%
in
Low-and middle-income countries

IDF Atlas 2014

Metabolic Syndrome
Type 2 Diabetes

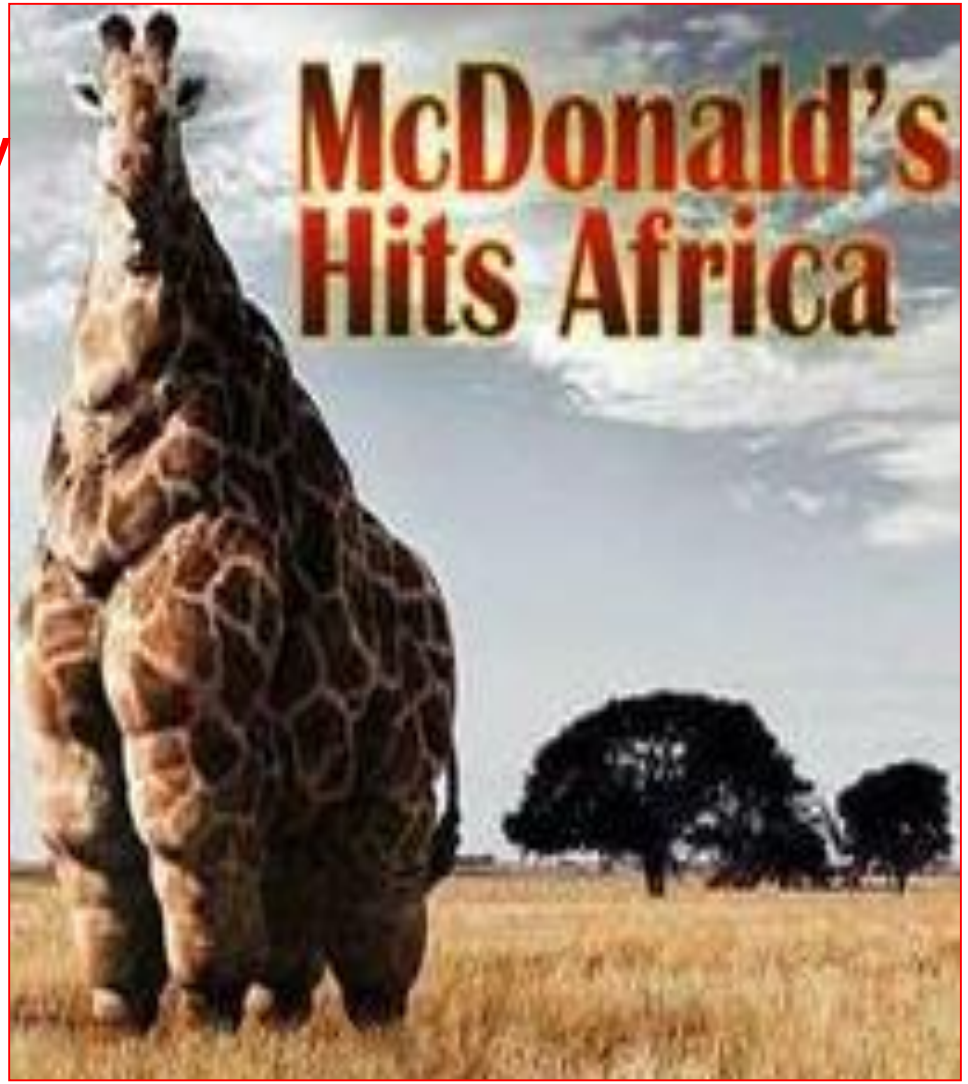
China....

Patients want to be listened to if we are going to achieve

"Motivational and Therapeutic Lifestyle Changes"

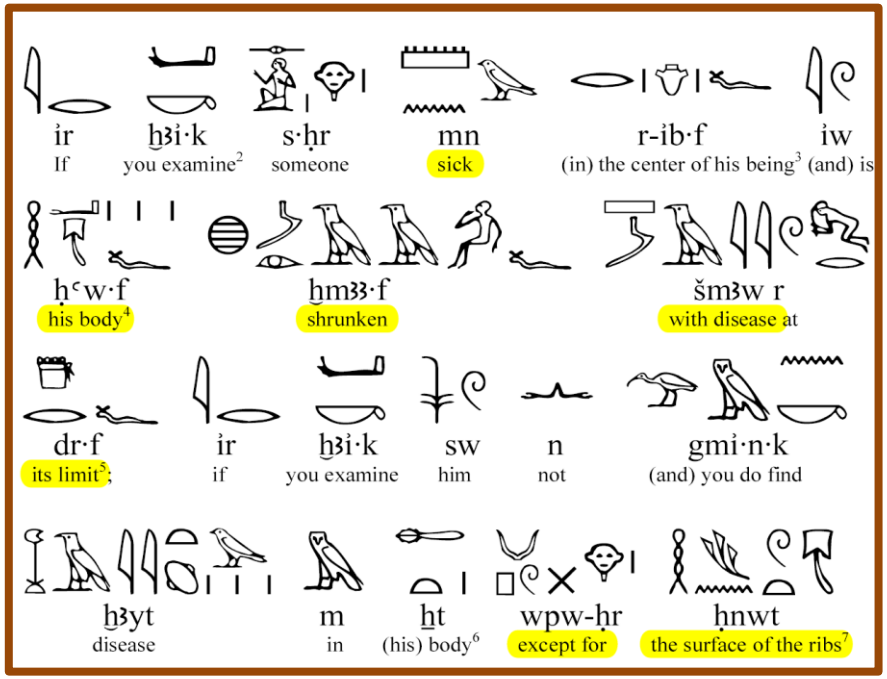
Reducing 5-7% Body Weight greatly reduces DM risk in every Race/Ethnicity

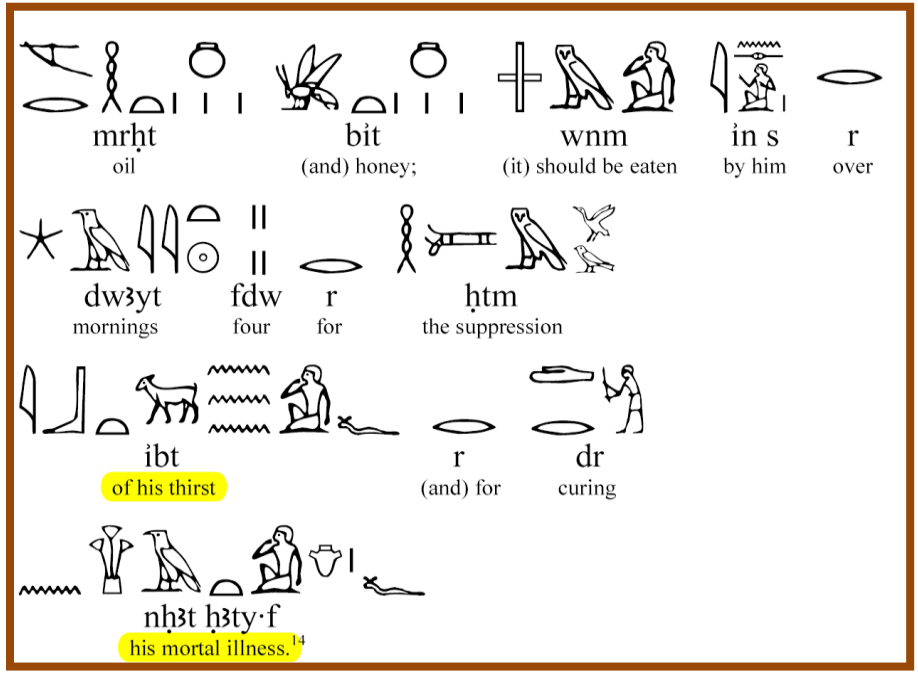
Lessons learned through time:
"Diet and Exercise Are Essential"




vu sur
Humour.com

Ebers Papyrus the 1st reference for Diabetes 1550 BC





If you examine someone mortally ill (and) his body is shrunken with disease *in extremis*; if you examine him (and) you do not find disease in his body except for the surface of the ribs, the members of which protrude like pills; you should then recite (a spell against) this disease in your house; you should (also) then prepare for him ingredients for treating it: blood stone of Elephantine, ground; red grain; carob; cook in oil (and) honey; it should be eaten by him over four mornings for the suppression of his thirst and for curing his mortal illness.

Ebers Papyrus the 1st reference for Diabetes 1550 BC

Foot facts

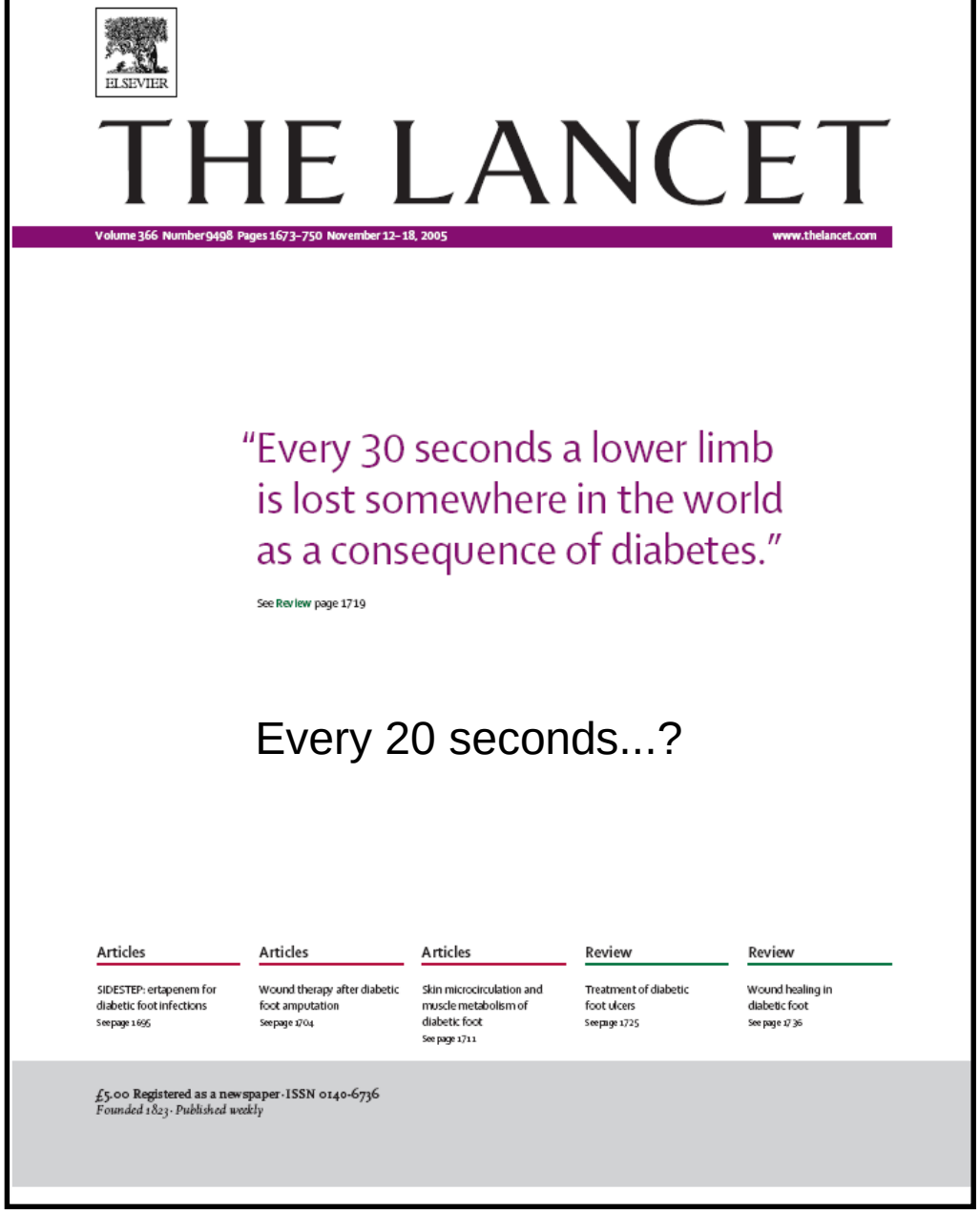
- People with diabetes are 25 times more likely to lose a leg than people without the condition

- Throughout the world, up to **70% of all leg** amputations happen to people with diabetes

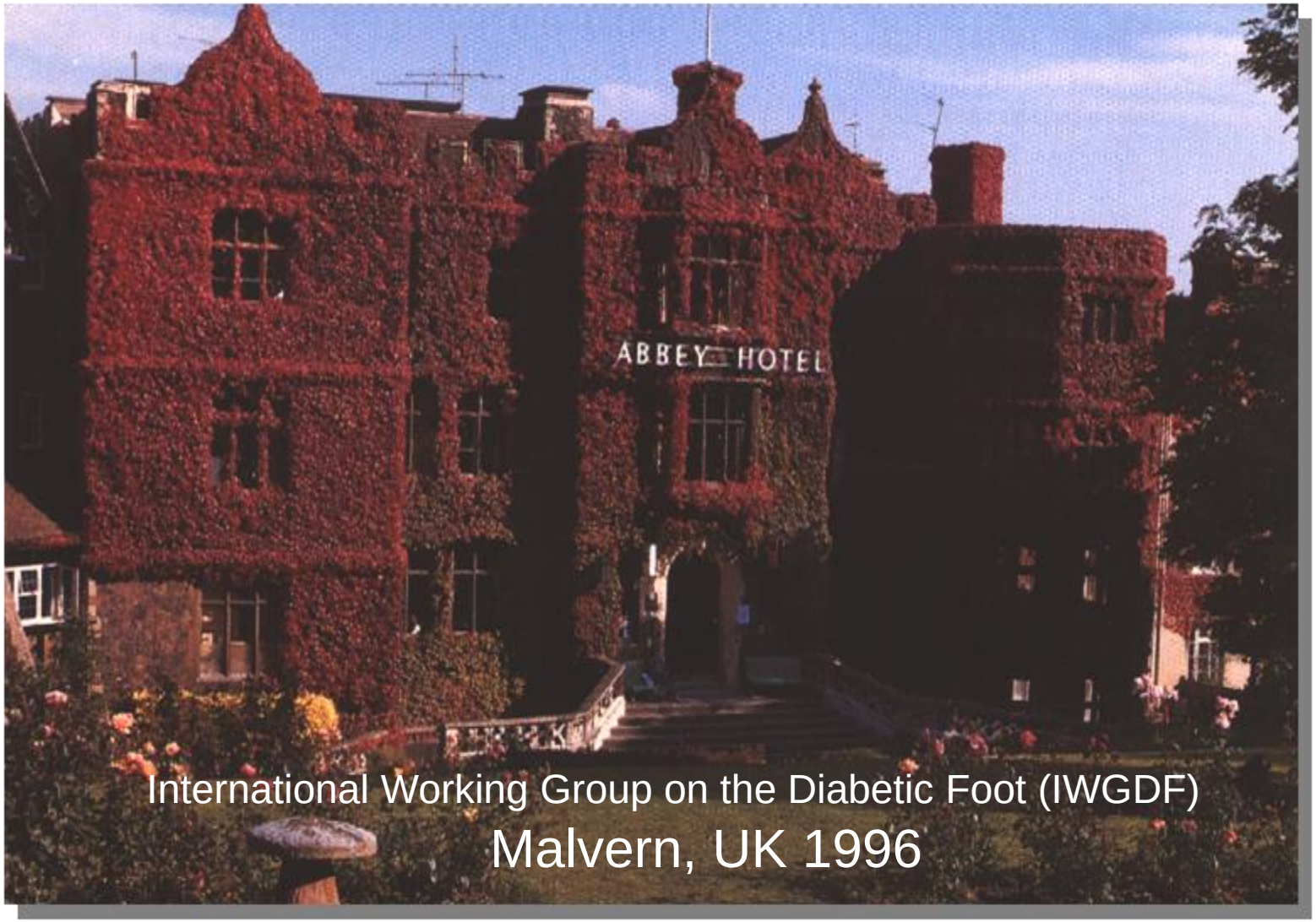
Foot facts

- In developed countries one in every six people with diabetes will have an ulcer during their lifetime

- In developing countries, foot problems related to diabetes are thought to be even more common


ELSEVIER
THE LANCET
Volume 366 Number 9498 Pages 1673–750 November 12–18, 2005
www.thelancet.com
"Every 30 seconds a lower limb is lost somewhere in the world as a consequence of diabetes."
See Review page 1719
Every 20 seconds...?
Articles
SIDESTEP: ertapenem for diabetic foot infections
See page 1695
Articles
Wound therapy after diabetic foot amputation
See page 1704
Articles
Skin microcirculation and muscle metabolism of diabetic foot
See page 1711
Review
Treatment of diabetic foot ulcers
See page 1725
Review
Wound healing in diabetic foot
See page 1736
£5.00 Registered as a newspaper · ISSN 0140-6736
Founded 1823 · Published weekly

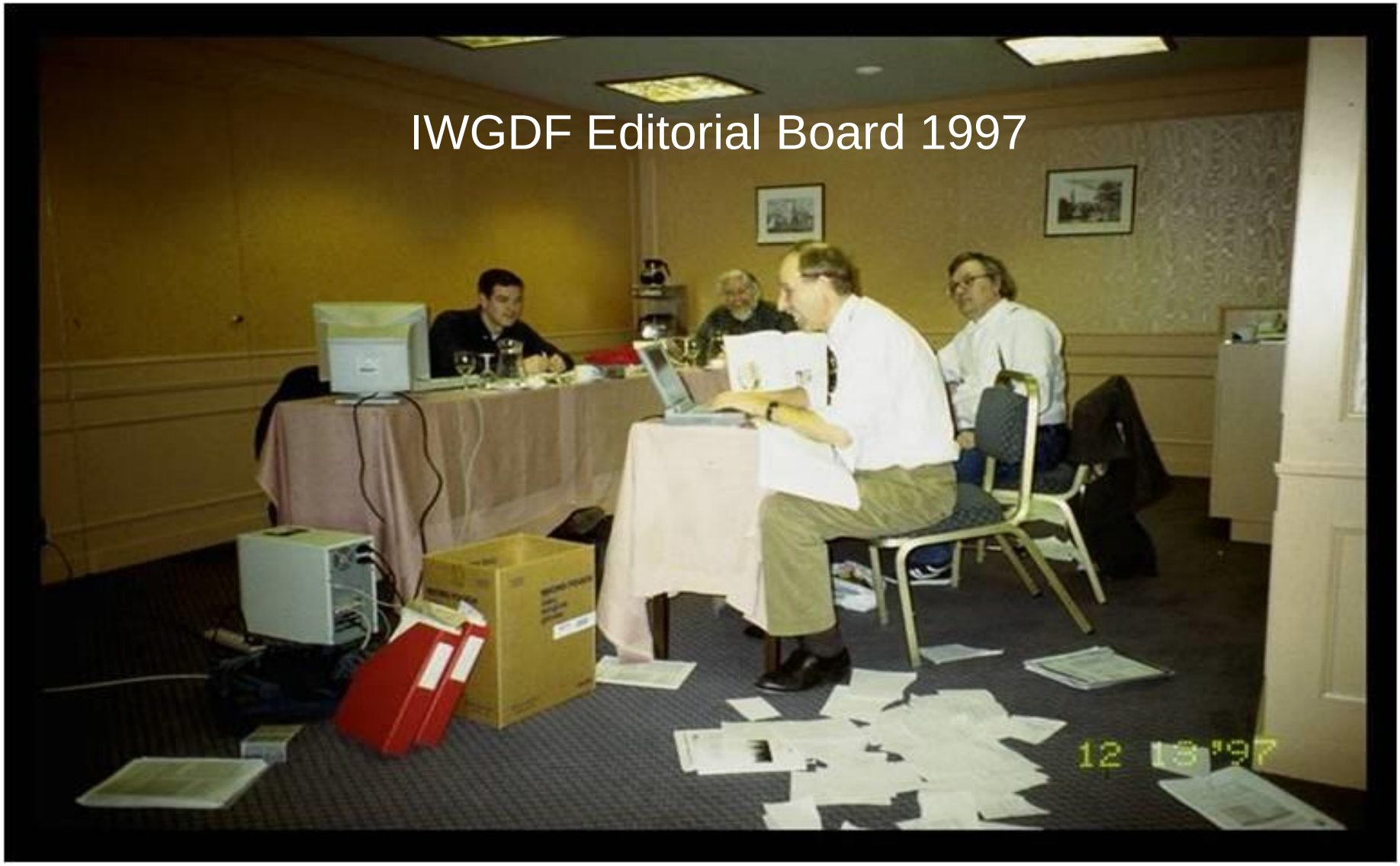
History



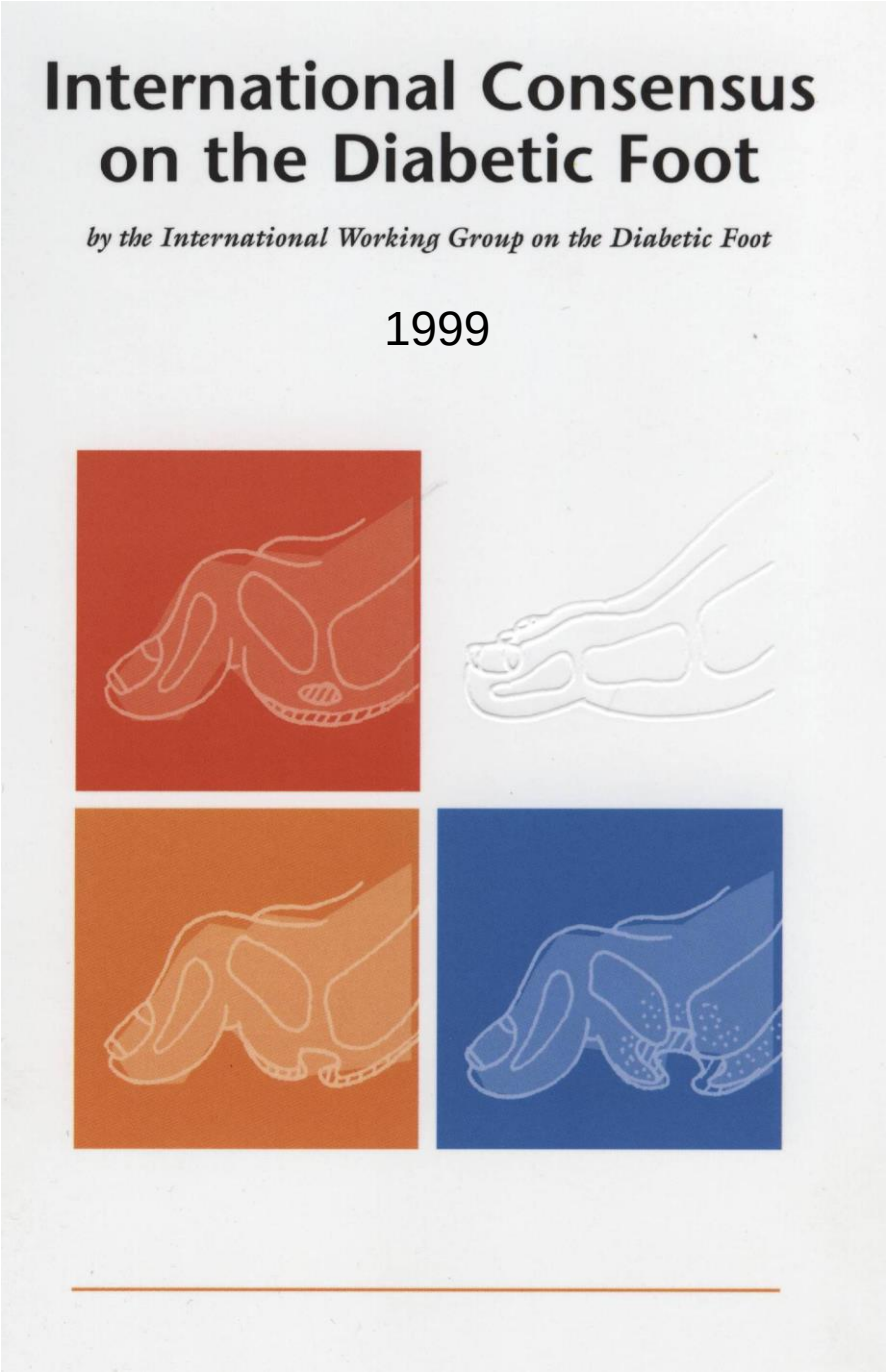
International Working Group on the Diabetic Foot (IWGDF)

Malvern, UK 1996

IWGDF Steering Committee 1997


IWGDF Editorial Board 1997

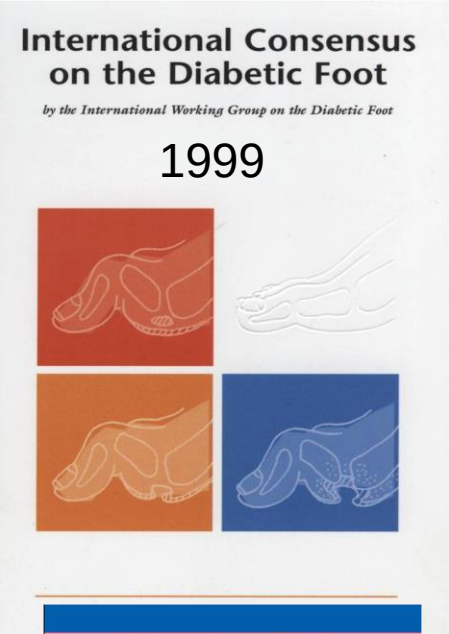
100.000

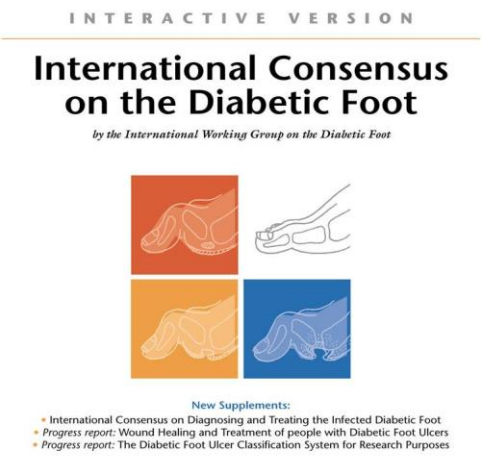


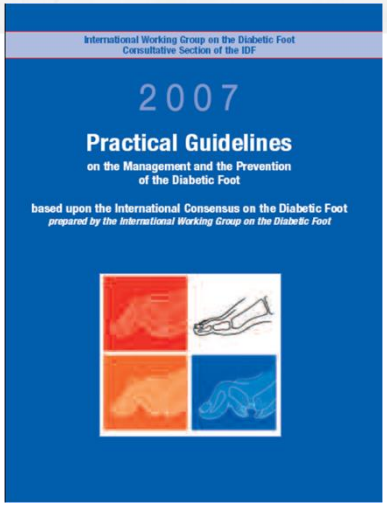
Copies

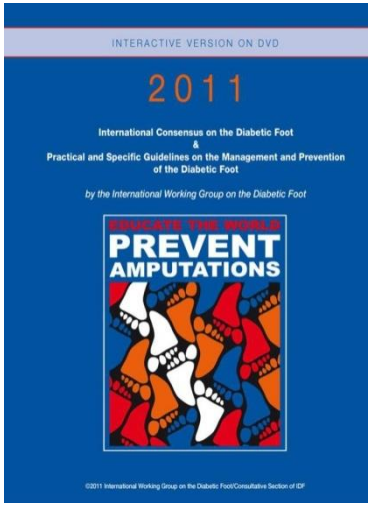
26 Translations

IWGDF Guidelines 1999-2011









df 7th international symposium on the diabetic foot

Come and join this large international scientific meeting on lower extremity problems in diabetes. Meet your colleagues from all over the world and let renowned experts bring you up to date with the latest developments and innovations.

Save the date!
May 20 – 23, 2015

World Forum - The Hague - The Netherlands

www.diabeticfoot.nl

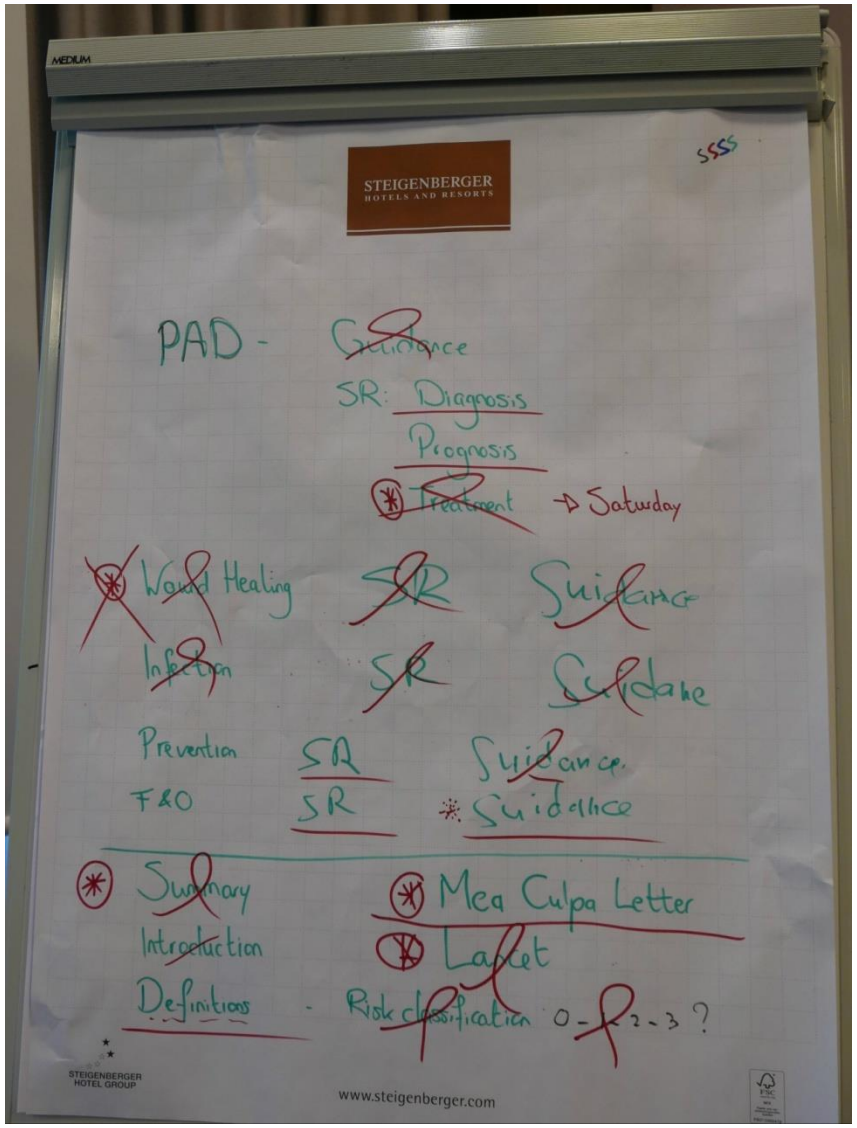
Stakeholders meeting Amsterdam 1-2 November 2013

GUIDANCE AND IMPLEMENTATION DAY

Editorial Board 2015

GUIDANCE AND IMPLEMENTATION DAY

Struggling


MEDIUM
STEIGENBERGER
HOTELS AND RESORTS
PAD - Guidance
SR: Diagnosis
Prognosis
Treatment → Saturday
Wound Healing SR Guidance
Infection SR Guidance
Prevention SR Guidance
F&O SR Guidance
Summary
Introduction
Definitions - Risk classification 0-1-2-3 ?
Mea Culpa Letter
Leaflet
STEIGENBERGER HOTEL GROUP
www.steigenberger.com

IWGDF Guidance 2015 development

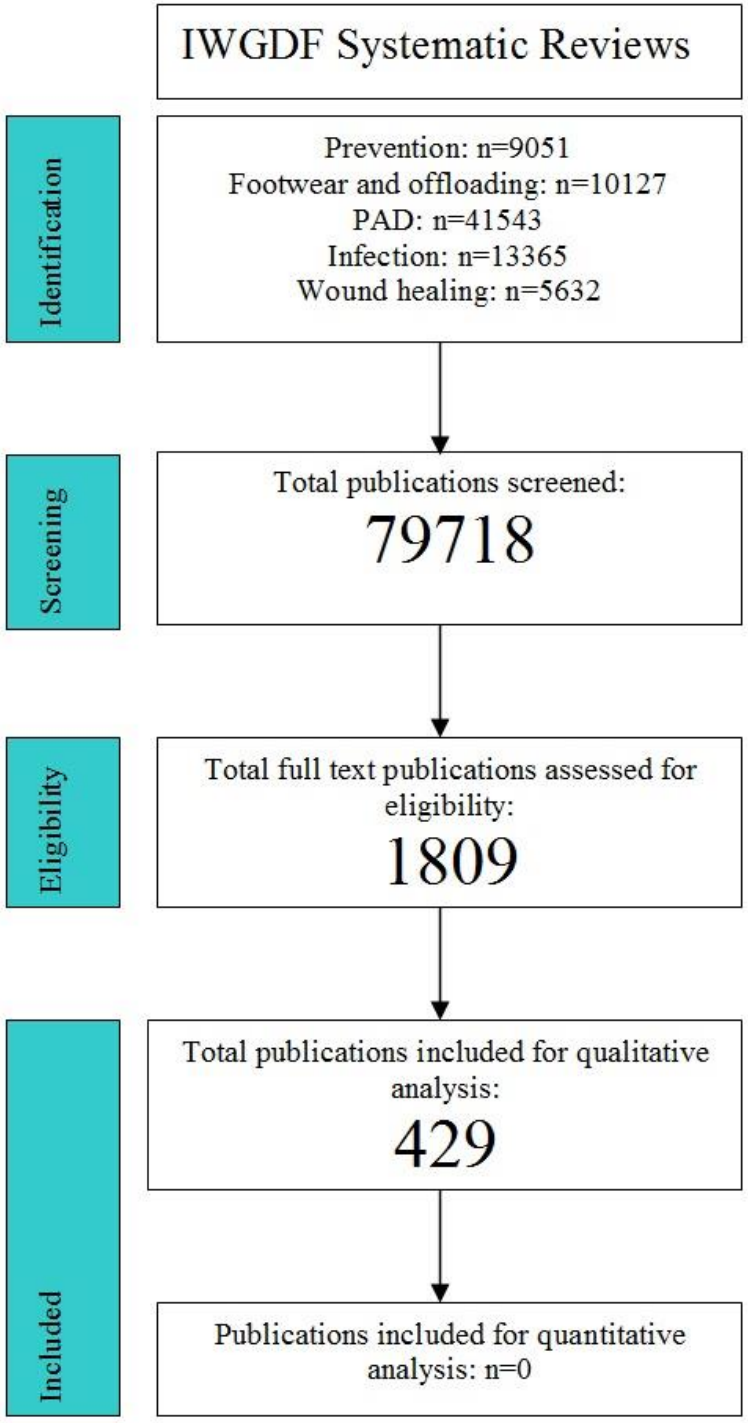
- 5 IWGDF working groups
- 49 specialists in the field
- corresponding members
- from US, South America, Asia, Australia and Europe
- 15 meetings in 18 months

- Methods
  - From Practical Guidelines to Guidance
  - 2007 and 2011:
    - based on systematic reviews and expert opinion
  - 2015:
    - all systematic reviews updated
    - new addition: recommendations formulated based on the GRADE system

- Seven systematic reviews
  - Clear search strategy
  - Titles, abstracts and full text articles screened by two independent reviewers
  - Inclusion based on pre-defined criteria
    - People with diabetes
    - No case reports or expert opinion
  - Included articles
    - Assessed by two independent reviewers
    - Authors were not involved in discussion of their own articles
    - Assessed for level of evidence, quality, risk of bias, and outcomes

- Seven systematic reviews
- Assessment of quality of the evidence

- Grading of Recommendations Assessment and Development and Evaluation (GRADE)
  - Strength of Recommendation
  - Quality of Evidence


IWGDF Systematic Reviews
Identification
Prevention: n=9051
Footwear and offloading: n=10127
PAD: n=41543
Infection: n=13365
Wound healing: n=5632
Screening
Total publications screened:
79718
Eligibility
Total full text publications assessed for eligibility:
1809
Included
Total publications included for qualitative analysis:
429
Publications included for quantitative analysis: n=0

Content of the Guidance 2015

- **Development** of an evidence-based global guidance
- **Prevention** of foot ulcers in at-risk patients with diabetes
- **Footwear and offloading** to prevent and heal foot ulcers in diabetes
- Diagnosis, prognosis and management of **peripheral artery disease (PAD)** in patients with foot ulcers in diabetes
- Diagnosis and management of **foot infections** in persons with diabetes
- Interventions to **enhance healing** of chronic ulcers of the foot in diabetes
- **Sumarry guidance for daily practice**

- GRADE
  - Strength of recommendation (strong – weak)
    - Quality of evidence
    - Balance between benefits and harms
    - Patient values and preferences
    - Resource utilization
  - Quality of Evidence (high – moderate – low)
    - Risk of bias of included studies *(i.e.: results from systematic reviews)*
    - Effect size
    - Expert opinion

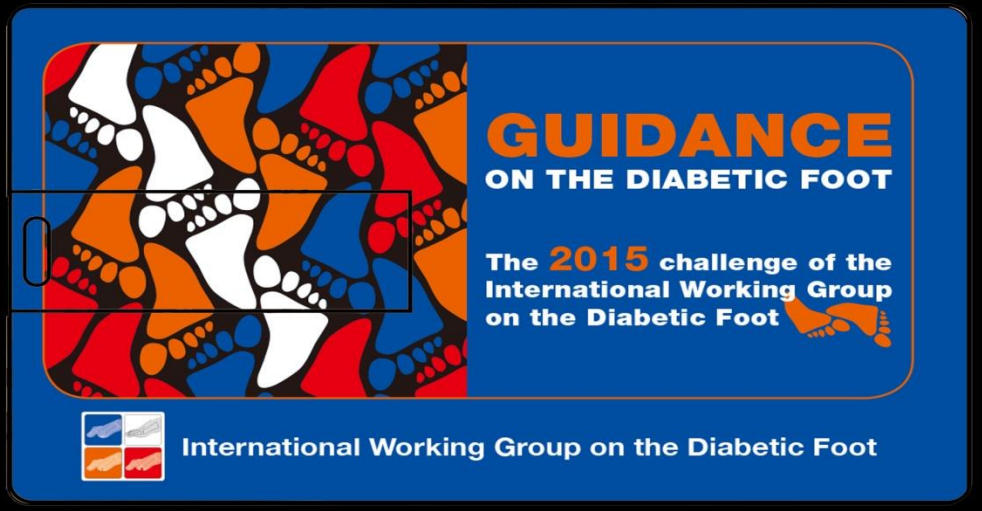

May 20 – 23, 2015
World Forum - The Hague - The Netherlands
df
7th international symposium on the diabetic foot
The former "Noordwijkerhout" symposium
www.diabeticfoot.nl


NOVOTEL
world forum

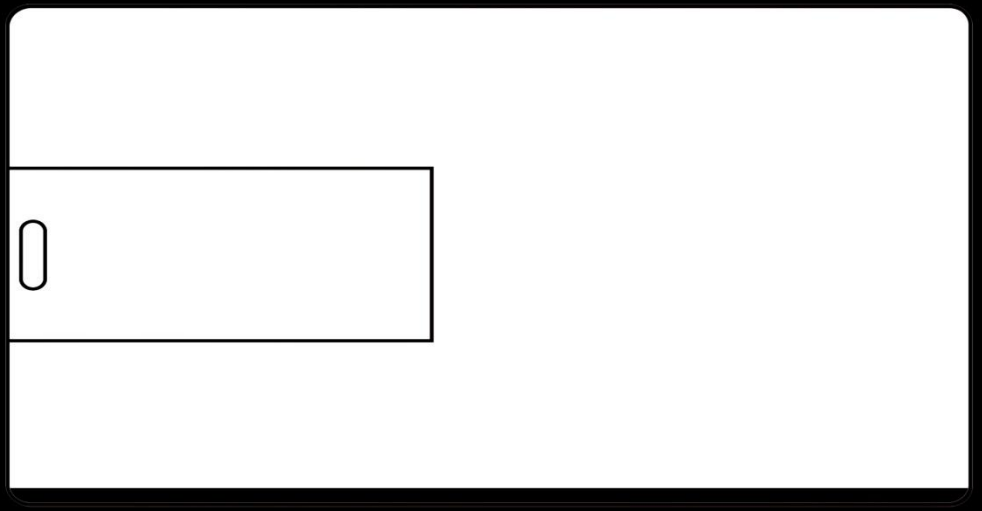
Guidance-Implementation Day
19 May 2015, The Hague, The Netherlands

Guidance 2015

Front



Back




American Diabetes Association.
75TH ANNIVERSARY
DELL

Guidance - Menu

Prevention and Management of Foot Problems in Diabetes Guidance Documents and Recommendations

- Summary for Daily Practice
- Guidance Documents
- Definitions and Criteria

GUIDANCE
ON THE DIABETIC FOOT

The 2015 challenge of the International Working Group on the Diabetic Foot

An interactive program on the **International Consensus on the Diabetic Foot 2015**
Including **Summary for Daily Practice**
a **Series of Guidance Documents** and **Definitions and Criteria**

Guidance – Detailed Menu

Prevention and Management of Foot Problems in Diabetes Guidance Documents and Recommendations

- Development of Guidance Documents
- Summary for Daily Practice
- Guidance Prevention
- Guidance Footwear and Offloading
- Guidance Peripheral Artery Disease
- Guidance Infection
- Guidance Wound Healing

GUIDANCE
ON THE DIABETIC FOOT

The 2015 challenge of the International Working Group on the Diabetic Foot

This information is linked with the International Consensus on the Diabetic Foot 2015 on the website **www.iwgdf.org**. This is an interactive programme. You can choose how to access and read this information: front to back, topic by topic, on screen and on paper.

Prevention

13 recommendations

- Screening
- Treatment of pre-ulcers
- Prevention via footwear, education, surgery, home monitoring, integrated care

6 key controversies

- Evidence for screening, cost-effectiveness
- Adherence

Footwear and offloading

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13 recommendations

- Casting, footwear, surgery

8 key controversies

- Measuring offloading, cost-effectiveness
- Adherence

Peripheral artery disease

16 recommendations

- Diagnosis, prognosis, revascularisation, surgery, cardiovascular risk management

3 key controversies

- Endovascular vs bypass, angiosomes, when not to revascularize

Infection

26 recommendations

- Diagnosis, osteomyelitis, assessment, microbiology, surgery, antimicrobial treament

7 key controversies

- Duration of antibiotic treatment, medical vs. surgical

Infection

IWGDF Guidance on the diagnosis and management of foot infections in persons with diabetes

Prepared by the IWGDF Working Group on Foot Infections

Figure 1: *Technique of percutaneous bone biopsy of the foot*

Divide specimen for:
- Microbiology
- Histopathology

Note: *May be done at bedside, in a radiology suite or in the operating theatre. If needed, can use fluoroscopic or computed tomographic guidance. If bone core obtained, send to microbiology for aseptic division with one piece for culture and the other sent to histopathology.*
(Photographs courtesy of Dr E. Beltrand, Orthopedic Surgery Department, Dron Hospital, Tourcoing France)

Ideally, the bone specimen should be processed for both culture and histopathology. Infected bone usually has inflammatory cells (granulocytes early and mononuclear cells later), while the histomorphology of uninfected bone is normal in diabetic patients, including those with neuropathy or peripheral arterial disease (112,113). Work by one group has suggested that histopathology examination may help to define three types of DFO: (1) acute, defined by necrosis and infiltration of polymorphonuclear granulocytes in cortical and medullary sites, usually associated with congestion or thrombosis of small vessels; (2) chronic, characterized by destroyed bone and infiltration of lymphocytes, histiocytes or plasma cells; and, (3) acute exacerbation of chronic osteomyelitis, with a background of chronic osteomyelitis with infiltration of polymorphonuclear granulocytes (114). However, we need further evaluation of these findings from other groups. The concordance among several pathologists in diagnosing DFO in bone samples was found to be low in one study, but this may have been related to a lack of


IWGDF Working Group
Woundhealing

Wound healing

Our opinion, based on 7 systematic reviews and GRADE-ing the evidence:

- Good quality care by trained and dedicated professionals is more important than wound healing products

Wound healing

Key unresolved issues

- Low evidence
- What is the outcome measure of choice?
- Very few data on effectiveness and cost-effectiveness

Other aspects

- For wound products to target the market, they need to be safe, not effective; this creates an “overdose” of products, rather than superior products

Conclusion

- We do not know what wound healing products work, despite other messages

Wound healing

9 recommendations

- Clean ulcers regularly with clean water or saline, debride them when possible in order to remove debris from the wound surface and dress them with a sterile, inert dressing in order to control excessive exudate and maintain a warm, moist environment in order to promote healing. (Strong; Low)

- In general remove slough, necrotic tissue and surrounding callus with sharp debridement in preference to other methods, taking relative contra-indications such as severe ischemia into account. (Strong; Low)

- Select dressings principally on the basis of exudate control, comfort and cost. (Strong; Low)

- Do not use antimicrobial dressings with the goal of improving wound healing or preventing secondary infection. (Strong; Moderate)

- Consider the use of systemic hyperbaric oxygen therapy, even though further blinded and randomised trials are required to confirm its cost-effectiveness, as well as to identify the population most likely to benefit from its use. (Weak; Moderate)

Wound healing

- Topical negative pressure wound therapy may be considered in post-operative wounds even though the effectiveness and cost-effectiveness of the approach remains to be established. (Weak; Moderate)

- Do not select agents reported to improve wound healing by altering the biology of the wound, including growth factors, bioengineered skin products and gases, in preference to accepted standards of good quality care. (Strong; Low)

- Do not select agents reported to have an impact on wound healing through alteration of the physical environment, including through the use of electricity, magnetism, ultrasound and shockwaves, in preference to accepted standards of good quality care. (Strong; Low)

- Do not select systemic treatments reported to improve wound healing, including drugs and herbal therapies, in preference to accepted standards of good quality care. (Strong; Low)

Summary Guidance

A summary with the most important aspects of diabetic foot care, based on the five guidance documents

- 5 cornerstones of prevention
- Description of standardized assessment
- 5 principles of treatment
- 3 levels of multidisciplinary care

To be used as a “quick guide to the diabetic foot”

Summary Guidance

Prevention and management of foot problems in diabetes: a Summary Guidance for daily practice 2015, based on the IWGDF Guidance documents

Figure 2: *Areas at risk for foot ulceration*

2. Regular inspection and examination

All people with diabetes should have their feet examined at least once a year to identify those at risk for foot ulceration. Patients found to have a risk factor should be examined more often, based on their IWGDF risk category (Table 1).

The absence of symptoms in a person with diabetes does not exclude foot disorders; they may have asymptomatic neuropathy, peripheral artery disease, pre-ulcerative signs or even an ulcer. The clinician should examine the feet with the patient both lying down and standing up, and should also inspect their shoes and socks. Inspection and examination should minimally consist of:

History and foot examination:

- History: Previous ulcer/amputation, end stage renal disease, previous foot education, social isolation, poor access to healthcare, bare-foot walking
- Vascular status: History of claudication, rest pain, palpation of pedal pulses
- Skin: Callus, colour, temperature, oedema
- Bone/joint: Deformities (e.g., claw toes, hammer toes) or bony prominences, limited joint mobility
- Footwear/socks (worn when at home and when outside): Assessment of both their inside and outside

Definitions and Criteria

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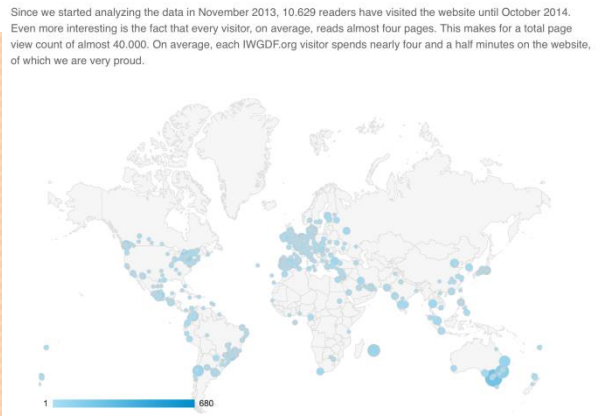
Definitions and criteria

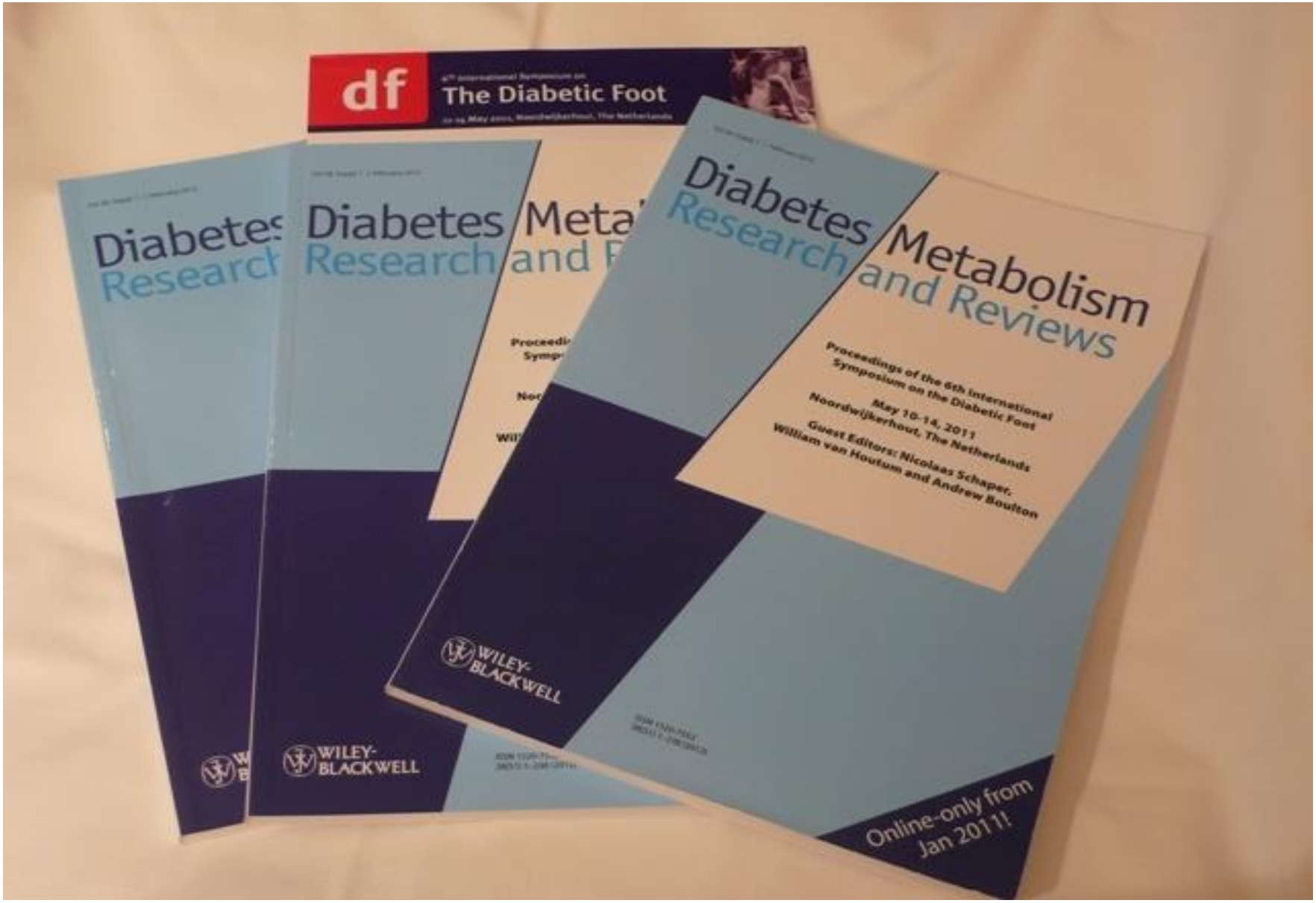
Vascular	Rest pain:	Severe and persistent pain localized to the foot due to peripheral artery disease, that can, at least partially, be relieved by putting the foot in a dependent position.
	Angioplasty:	The technique to re-establish the patency of an artery by percutaneous transluminal or subintimal procedures.
Ulcer	Superficial ulcer:	Full thickness lesion of the skin not penetrating any structure deeper than the dermis.
	Deep ulcer:	Full thickness lesion of the skin penetrating below the dermis to subcutaneous structures, such as fascia, muscle, tendon or bone.
Infection	Infection:	A pathological state caused by invasion and multiplication of microorganisms in tissues accompanied by tissue destruction or a host inflammatory response.
	Superficial infection:	An infection of the skin not extending to any structure below the dermis.
	Deep infection:	An infection that extends deeper than the dermis, that may include evidence of abscess, septic arthritis, osteomyelitis, septic tenosynovitis or necrotizing fasciitis.
	Cellulitis:	An infection of the skin manifested by one or more of the following signs and symptoms: induration, erythema, warmth, pain or tenderness.
	Osteitis:	Infection of the bone cortex without involvement of bone marrow.
	Osteomyelitis:	Infection of the bone, with involvement of the bone marrow.
Amputation	Amputation:	Resection of a segment of a limb through a bone.
	Disarticulation:	Resection of a limb through a joint.
	Major amputation/ disarticulation:	Any resection proximal of the ankle.

Launch of the Guidance 2015 to Dr Kristien van Acker

World Forum, The Hague 23 May 2015

IWGDF website
www.iwgdf.org

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The Diabetic Foot
Diabetes Research
Diabetes Research and
Diabetes Research
Metabolism and Reviews
Proceedings of the 6th International Symposium on the Diabetic Foot
May 10-14, 2011
Noordwijkerhout, The Netherlands
Guest Editors: Nicolaas Schaper, William van Houtum and Andrew Boulton
WILEY-BLACKWELL
Online-only from Jan 2011!

Thank you
very much