



General Organization for Teaching Hospitals and Institutes The National Institute for Diabetes and Endocrinology



Scientific E-Bulletin

December 2025 - February 2026



**President of GOTH
Prof Dr Muhammad
Mostafa Abdel Ghaffar**

**Dean of the National
Institute for Diabetes and
Endocrinology
Prof Dr Ihab Nabil
Hanna**

**Editor in Chief
Dr Randa Darwish**

**16 th Kasr Al- Aini Street ,
Cairo, Egypt**

TOPICS IN THIS ISSUE



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Diabetes Awareness Day
with the International
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14/11/2025

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**Monthly Message for
Patient Education
التثقيف الصحي السكري**

Welcome Note

Prof Ihab Nabil Hanna ,MD

**Professor of Vascular Surgery , Head of the Vascular Surgery Department and Diabetic Foot Unit ,
Dean of the National Institute of Diabetes and Endocrinology**



Core Mission and Objectives

The National Institute of Diabetes and Endocrinology (NIDE) in Egypt is a prominent research, academic, and clinical institution dedicated to advancing knowledge and providing specialized treatment for diabetes, endocrinology, and related metabolic disorders.

- **Specialized Patient Care:** Providing comprehensive, multidisciplinary care for diabetes and endocrine disorders, including highly specialized services like diabetic foot care and obesity treatment.
- **Advanced Medical Research:** Conducting research to improve the diagnosis and management of diabetes and its complications, often collaborating with universities to develop national clinical practice recommendations.
- **Public Awareness and Prevention:** Organizing community outreach programs and awareness days to educate the public on early detection, healthy diets, and regular treatment to prevent complications.
- **Academic Excellence:** Functioning as a teaching and training center for healthcare professionals to enhance clinical practice standards in Egypt.

Visionary Goals

- **Expanding Service Access:** Aiming to provide the best possible services to a large volume of citizens; through its various medical services.
- **Quality Standardization:** Striving to align its medical and educational services with international standards through regular scientific meetings, peer-reviewed research, and specialized clinics.
- **Prevention-Focused Care:** Moving toward a proactive healthcare model that emphasizes early screening and weight control systems to prevent the onset of diabetes.

This year we are honored to share our International Diabetes Day Celebration for the first time with the

International Diabetes Federation

“Wishing for Well-Being , Health and Happiness for all”

Dr.Randa Darwish , Fellow of the IDF



11/13/25, 11:43 AM

Well-being in diabetes: A research and practice-based symphony | World Diabetes Day events around the world



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508
events in
104
countries

WELL-BEING IN DIABETES: A RESEARCH AND PRACTICE-BASED SYMPHONY

Activity for healthcare professionals

Online activity

Start Date: November 16, 2025
End Date: November 16, 2025

Location: 16, Al Kasr Al Aini, Cairo Governorate, 4260010, Egypt

Online scientific webinar inviting all healthcare professionals involved in research, diagnosis and management of diabetes.

Well-Being in Diabetes : A Research and Practice Based Symphony

Online Webinar (November 16th , 2025)

MEET OUR EXPERTS



Prof. Tamer Hifnawy, MD, DrPH.

Secretary General of Supreme Council For
Clinical Research Ethics (SCRE), President
of The Egyptian National Committee of
Epidemiology, Professor of Public Health and
Community Medicine, Faculty of Medicine,
Hassan Saeed University

**Regulatory Aspects for
conducting clinical
research in Egypt**



Prof. Ihab Nabil Hanna, MD

Professor of Vascular Surgery, Head of the
Vascular Surgery Department and Diabetic Foot
Unit, Dean of the National Institute of Diabetes
and Endocrinology

**Well-Being in Diabetes :
A Research and Practice
Based Symphony**



world diabetes day
14 November



Prof. Atef Abdel Monem Bassyouni, MD

Consultant of Internal Medicine, Head of
Internal Medicine department, National
Institute of Diabetes and Endocrinology

Paresthesia of Feet



Prof. Ayatullah Farouk Hussein, MD

Prof. of Clinical Neurophysiology, Faculty of
Medicine, Kasr El Aini University, Fellow Of
American Society Of Clinical Neurophysiology, and
BCN coordinator of MENA region

**Updated Electrophysiological
Approach in Diabetic
Neuropathy**



Prof. Nermin Haider Aun, MD

Consultant of pediatrics, Head of Department of
Pediatrics, National Institute of Diabetes and
Endocrinology

Well-being in type 1 DM



Dr. Randa Darwish, MD, FRCPCH-UK, EBP

Consultant of pediatrics, Vice Dean of the
National Institute of Diabetes and
Endocrinology for Training and Research,
Fellow of the International Diabetes
Federation

**Type V Diabetes mellitus;
Evolving Perspectives**



Prof. Mohey El-Din El Sheikh, MD

Senior Lecturer of Immunology at Queen
Mary University of London, UK.
Senior Lecturer, Education Lead (Centre for
Experimental Medicine and Rheumatology),
IMBRI Work Experience Program, Faculty of
Medicine and Dentistry

**Extracellular traps
and the pathogenesis of
diabetes mellitus**

Intermittent Paresthesia differential diagnosis

Prof. Atef Abdel Moniem Bassyouni , MD

Consultant of Internal Medicine , Head of Internal Medicine Department (NIDE)



Peripheral Causes

- 1- Diabetic peripheral neuropathy (DPN) is the most common cause of peripheral neuropathy, affecting small fibers initially with symptoms of pain, dysesthesias, and numbness, typically following a distal-to-proximal pattern, starting in the feet
- 2- Nerve entrapment syndromes, such as carpal tunnel syndrome, present with characteristic distribution of paresthesia in affected nerves
- 3- Buerger disease is a nonatherosclerotic inflammatory vasculitis affecting small and medium-sized distal arteries, presenting with paresthesia, intermittent claudication, and pain
- 4- Popliteal artery entrapment syndrome (PAES) causes calf claudication, paresthesia, and swelling during exercise, particularly in young adults
- 5- External iliac artery endofibrosis (EIAE) primarily affects endurance athletes, causing lower-extremity weakness, thigh pain, and paresthesia that resolve after cessation of exercise

Central Nervous System Causes

- 1-Multiple sclerosis can cause paresthesias as part of its neurological manifestations, particularly during relapsing-remitting phases
- 2-Lyme disease can cause peripheral neuropathy with intermittent limb paresthesias and radicular pain

Metabolic and Systemic Causes

- 1-Vitamin B12 deficiency can cause peripheral neuropathy with paresthesias
- 2-Vasculopathic conditions, such as hypertension, can contribute to nerve dysfunction and cause paresthesias

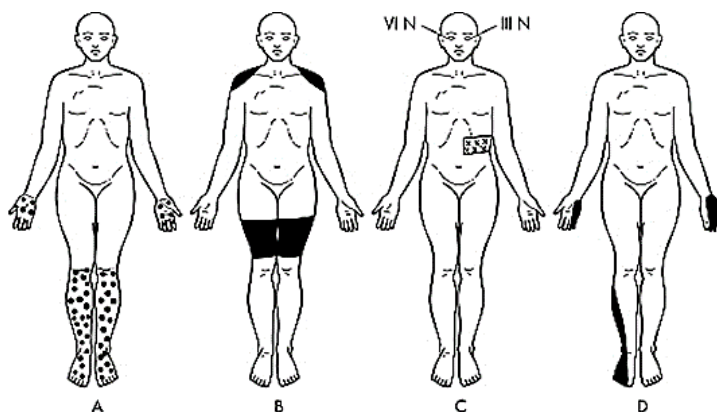
Diabetic Peripheral Neuropathy

Diabetic neuropathy (DN) is considered a "length-dependent" condition because it typically begins at the distal nerve endings of the body's longest neurons, those in the legs, and advances upward. Clinical presentations vary but are generally divided into two types:

- **Painful DN:** Characterized by "positive" symptoms like pain and hypersensitivity (hyperalgesia or allodynia) resulting from small fiber damage.
- **Insensate DN:** Characterized by "negative" symptoms like numbness and loss of sensation (dysesthesia), which typically indicates large fiber loss.

Schematic diagram showing types of diabetic neuropathy. (A) Distal symmetrical peripheral neuropathy, (B) proximal neuropathy, (C) cranial and truncal neuropathy, and (D) mononeuropathy multiplex.

Postgrad Med J. 2006
Feb;82(964):95–100. doi:
10.1136/pgmj.2005.036137



Clinical classifications of diabetic neuropathies

Symmetric

- Diabetic polyneuropathy
- Painful autonomic neuropathy
- Painful distal neuropathy with weight loss "diabetic cachexia"
- Insulin neuritis
- Polyneuropathy after ketoacidosis
- Polyneuropathy with glucose impairment
- Chronic inflammatory demyelinating polyneuropathy with diabetes mellitus

Asymmetric

- Radiculoplexoneuropathies :Lumbosacral, Thoracic ,Cervical

- Mononeuropathies
- Median neuropathy at wrist
- Ulnar neuropathy at the elbow
- Peroneal neuropathy at the fibular head
- Cranial neuropathy

Up to half of patients with signs of DN may not experience any symptoms. Diagnostic indicators of fiber loss include:

- **Small Fiber Loss:** Identified by a reduced ability to feel temperature or pinpricks.
- **Large Fiber Loss:** Indicated by missing ankle reflexes or a lack of vibration and protective sensation.

Many patients experience a mix of both small and large fiber damage, leading to a combination of positive and negative symptoms. While motor issues like muscle weakness, atrophy, and balance problems usually become obvious later in the disease, evidence suggests they may be present at a subtle, subclinical level much earlier. This dysfunction significantly impacts stability; individuals with DN are 20 times more likely to fall than those without diabetes. Frequent falls can lead to severe physical injuries and lasting psychological trauma

Prevention and Disease Modification

- **Glycemic Control:** Intensified glycemic control is the only effective treatment shown to prevent the onset and progression of neuropathy, particularly in type 1 diabetes, and likely beneficial in type 2.
- **Lifestyle Management:** Optimize blood pressure and serum lipid levels, encourage a healthy diet, limit alcohol intake, and advise against smoking to reduce risk factors.
- **Foot Care Education:** Provide counseling on proper foot care and safety measures to prevent foot ulcers and amputations, which are major risks with loss of protective sensation.
- **Symptomatic Pain Management (Pharmacological)**
- **Monitoring and Follow-Up :**Regular monitoring (every 4 weeks to 3 months initially) is essential to assess treatment efficacy, adjust medications, and ensure ongoing glycemic control and foot care compliance.

In 2024, the American Society of Pain and Neuroscience (ASPN) published guidelines on the treatment of painful diabetic neuropathy. They include, but are not limited to, the following :

- All patients with diabetes should undergo careful assessment for the existence of painful diabetic neuropathy; patients with neuropathy should also be evaluated for its functional and quality-of-life impacts
- Pain-control and functional-improvement goals should be discussed with patients
- Patients should be evaluated for co-morbidities such as depression, anxiety, seizure disorder, peripheral edema, and renal failure, with clinicians employing this data when selecting the appropriate therapeutic agents
- Serotonin and norepinephrine reuptake inhibitors (SNRIs), gabapentinoids, and tricyclic antidepressants (TCAs) should be offered to patients
- As an agent is delivered, its dose should be slowly titrated to the point of treatment efficacy or maximum dose; after being trialed “for an appropriate time at the appropriate dose,” the agent can be considered ineffective
- Patients may derive moderate benefit from a topical capsaicin 8% patch used in combination with FDA-approved oral medications
- It is recommended that the use of spinal cord stimulation be considered in cases of lower-extremity painful diabetic neuropathy when other, non-invasive, FDA-approved therapies have failed

References :

- 1- American Diabetes Association. 11. Microvascular Complications and Foot Care: Standards of Medical Care in Diabetes-2021. *Diabetes Care*. 2021 Jan;44(Suppl 1):S151-S167. doi: 10.2337/dc21-S011. Erratum in: *Diabetes Care*. 2021 Sep;44(9):2186-2187. doi: 10.2337/dc21-ad09b. PMID: 33298422.
- 2- Leonhard SE, Mandarakas MR, Gondim FAA, Bateman K, Ferreira MLB, Cornblath DR, et al . Diagnosis and management of Guillain-Barré syndrome in ten steps. *Nat Rev Neurol*. 2019 Nov;15(11):671-683. doi: 10.1038/s41582-019-0250-9. Epub 2019 Sep 20. PMID: 31541214; PMCID: PMC6821638.
- 3- Expert Panels on Vascular Imaging;; Francois CJ, Skulborstad EP, Kalva SP, Majdalany BS, Collins JD, Eldrup-Jorgensen J, Ferencik M, et al. ACR Appropriateness Criteria® Nonatherosclerotic Peripheral Arterial Disease. *J Am Coll Radiol*. 2019 May;16(5S):S174-S183. doi: 10.1016/j.jacr.2019.02.026. PMID: 31054743.
- 4- Praxis Medical Insights Intermittent Paresthesia , Est. 2024 Clinical Guidelines Distilled, Article ID: a30a102a-7f21-404a-a341-3c057b88f83d , Updated: 9/2/2025
- 5- Bansal V, Kalita J, Misra UK. Diabetic neuropathy. *Postgrad Med J*. 2006 Feb;82(964):95-100. doi: 10.1136/pgmj.2005.036137. PMID: 16461471; PMCID: PMC2596705.
- 6- Sayed D, Deer TR, Hagedorn JM, Sayed A, D'Souza RS, Lam CM, Khatri N, Hussaini Z, et al. A Systematic Guideline by the ASPN Workgroup on the Evidence, Education, and Treatment Algorithm for Painful Diabetic Neuropathy: SWEET. *J Pain Res*. 2024 Apr 13;17:1461-1501. doi: 10.2147/JPR.S451006. PMID: 38633823; PMCID: PMC11022879.

Diabetic Polyneuropathy Neurophysiology approach updates

Prof. Ayat Allah Farouk , MD,FACNS

Professor clinical neurophysiology ,Cairo University



Electrodiagnostic studies are sensitive, specific, validated measures of the presence of polyneuropathy.

Electrodiagnostic evaluations commonly include both NCS and needle electromyography (EMG). It is essential for diagnosis and excluding mimics.

The number of patients with diabetes globally is expected to reach 783 million by 2045.

The diabetes population could reach 1.31 billion by 2050.

Role of Electrophysiology is to Confirm presence of neuropathy, Characterize type: axonal vs demyelinating , Determine severity and distribution, Rule out alternative neuropathies especially CIDP chronic inflammatory demyelinating poly neuropathy that have its specific treatment and expected recovery .

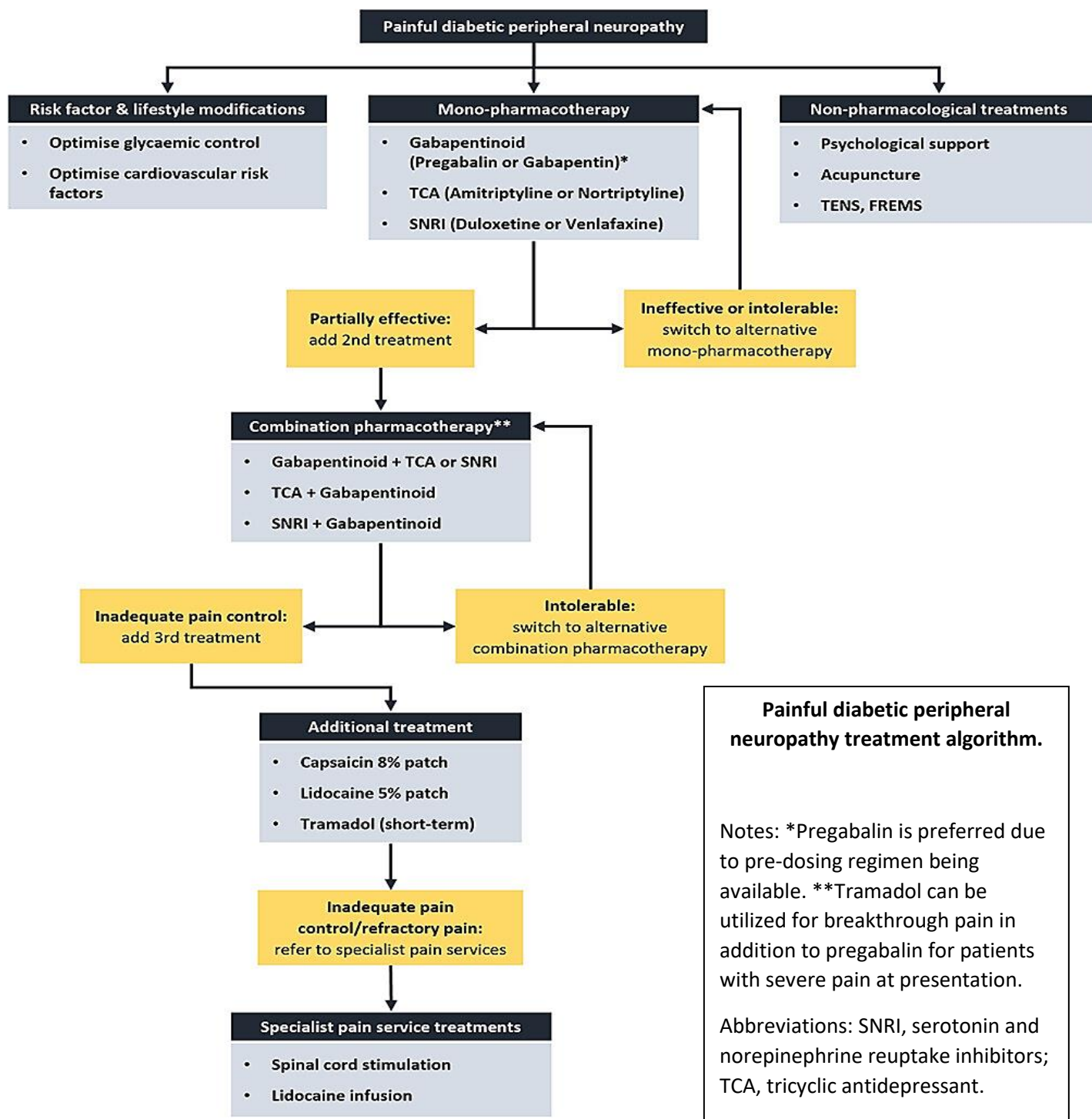
Diabetic polyneuropathy is characterized by nerve fiber loss and demyelination affecting the sensory, motor and autonomic fibers presenting with Polyneuropathy, Mononeuritis Amyotrophy, Hypoglycemic neuropathy, Autonomic neuropathy

Typical Electrophysiologic Pattern in DPN is Primary axonal sensory > motor polyneuropathy, Symmetric, distal abnormalities, Reduced amplitudes more prominent than velocity slowing with Minimal demyelinating features

Red Flags Suggesting Atypical Neuropathy are Marked conduction slowing or block (demyelinating features), Asymmetric findings, Proximal weakness, Rapid progression

These point toward CIDP or other neuropathies → further evaluation needed . So, the goal of the electrophysiologic study is to confirm the presence of a polyneuropathy;

assess its pattern and severity; determine whether motor, sensory, or a combination of fibers are involved; most importantly, assess whether the underlying pathology is primarily axonal loss or demyelination.

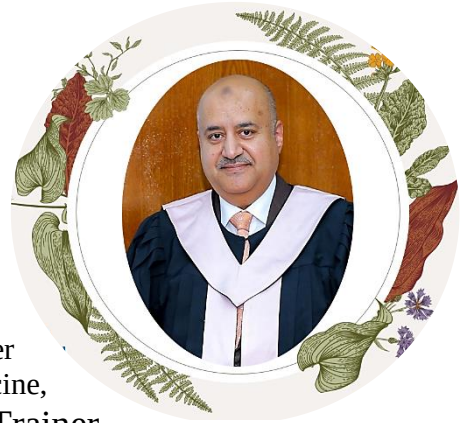


Reference : Preston, F. G., Riley, D. R., Azmi, S., & Alam, U. (2023). Painful Diabetic Peripheral Neuropathy: Practical Guidance and Challenges for Clinical Management. *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy*, 16, 1595–1612. <https://doi.org/10.2147/DMSO.S370050>

Regulatory Aspects for Conducting Clinical Research in Egypt

Prof. Tamer Hifnawy, MD. DrPH.

Secretary General of Supreme Council for Clinical Research Ethics (SCCRE); Secretary General of Promotion Committee, Supreme Council of Universities; Secretary General of the Scientific Committee for Promotion, Supreme Council of Higher Education; Professor of Public Health and Community Medicine, Faculty of Medicine Beni-Suef University ; Certified Trainer for International Research Ethics ,University of Maryland, Baltimore, USA



الرؤية : الريادة في مجال أخلاقيات البحوث الطبية الإكلينيكية على المستوى الوطني والإقليمي والدولي، بما يضمن حماية حقوق المبحوثين ودعم الباحثين



الرسالة: تعزيز أعلى المعايير الأخلاقية في البحوث السريرية في مصر، وحماية حقوق وكرامة ورفاه المشاركين في البحوث، مع ثقافة النزاهة والشفافية والمساءلة من خلال الرقابة والمراجعة والتوجيه تعزيز والدعم للباحثين والمبحوثين، ووضع المعايير والضوابط لضمان تحقيق الأهداف المرجوة وذلك بالتعاون والتواصل الفعال مع أصحاب المصلحة المعنيين

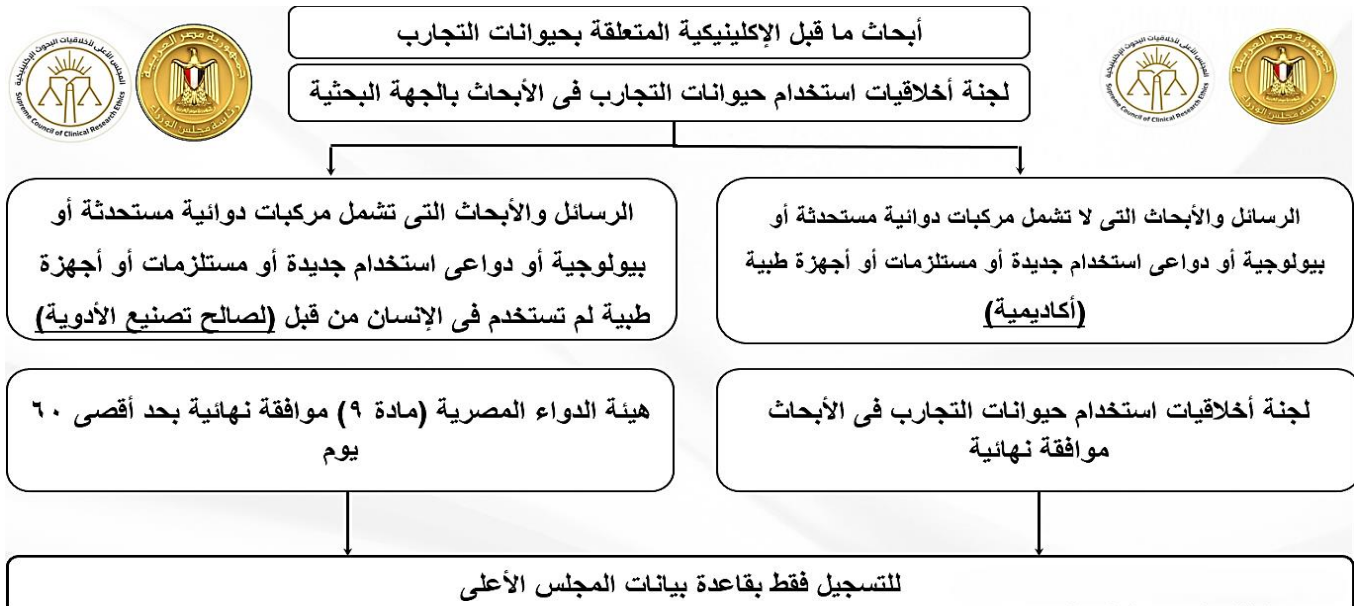
المجلس الأعلى لمراجعة أخلاقيات البحوث الطبية الإكلينيكية
نئون تنظيم البحوث الطبية الإكلينيكية رقم ٢١٤ لسنة ٢٠٢٠
ولانته التنفيذية رقم ٩٢٧ لسنة ٢٠٢٢

القيم :

- تعزيز النزاهة والشفافية في جميع جوانب البحوث الطبية الإكلينيكية.
- ضمان العدالة في توزيع المنافع وتجنب المخاطر في البحوث الطبية الإكلينيكية.
- احترام كرامة الفرد وحرية واستقلاليته في اتخاذ القرارات.
- تعظيم المنافع المتوقعة من البحوث الطبية وتجنب أي ضرر للمشاركين في البحوث الطبية، بالإضافة إلى حماية حقوقهم وتحقيق الرفاه.
- ضمان الشفافية و النزاهة والصدق في جميع مراحل إجراء البحوث الطبية الإكلينيكية.
- ضمان إجراء البحوث الطبية بأعلى المعايير العلمية والأخلاقية.
- حوكمة البحوث من خلال وضع آليات واضحة للمساءلة والتحكم في تضارب المصالح ومساءلة جميع المعنيين، من خلال تحديد المسؤوليات وتوفير آليات للمساءلة.
- ضمان حماية سرية معلومات وبيانات المبحوثين في البحوث الطبية الإكلينيكية.
- ضمان حماية المبحوثين وتأمينهم ضد الأخطار.
- ضمان عدم استغلال المبحوثين وخاصة من هم في حاجة لحماية إضافية.

حالات التقدم للمجلس الأعلى لمراجعة أخلاقيات البحوث الطبية الإكلينيكية طبقاً

لقانون تنظيم البحوث الطبية الإكلينيكية رقم ٢١٤ لعام ٢٠٢٠



يلزم استطلاع رأى الجهات المعنية فى حال البحوث:

- التي تجري مع جهات أجنبية
- الدراسات العالمية المشتركة
- الدراسات التي تحتوي علي سفر عينات بشرية خارج جمهورية مصر العربية
- تحليلات جينية
- أبحاث خلايا جذعية
- جمع و/ أو تخزين عينات حيوية
- جمع معلومات بالشرابة مع جهات أجنبية
- قيام باحثين و/ أو جهات بحثية أجنبية بدراسات (بكافة أنواعها) تخص القطاع الصحي أو ترصد أمراض معينة
- الأبحاث القومية أو الإقليمية والمسوح الصحية
- الأبحاث التداخلية غير الممولة في حالة التغيير والحصول علي تمويل بعد الموافقة يتم إخطار المجلس الأعلى وإتباع إجراءات البحوث الممولة طبقاً للائحة المجلس

**To view the registration guides –
please scan the following QR code:**



Extracellular traps and the pathogenesis of diabetes mellitus

Prof Mohey El-Din El Sheikh , MD

Senior lecturer of Immunology at Queen Mary University of London- UK

Senior Lecturer, Education Lead (Centre for Experimental Medicine and Rheumatology), (WHRI Work Experience Program, Faculty of Medicine and Dentistry)



Extracellular traps (ETs), particularly neutrophil extracellular traps (NETs), are increasingly implicated in the pathogenesis of diabetes.

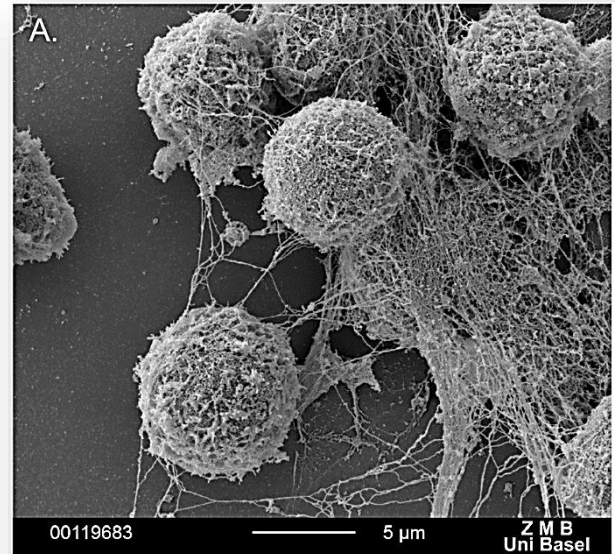
In type 2 diabetes, chronic hyperglycaemia and low-grade inflammation drive excessive NET formation, which in turn promotes endothelial injury, impaired wound healing, pancreatic β -cell stress, and a pro-thrombotic state.

In type 1 diabetes, NET-associated enzymes and modified autoantigens may contribute to autoimmune β -cell destruction.

Therapeutically, several strategies are being explored: PAD4 inhibitors to block NET formation, DNase-based approaches to degrade established NETs, agents that reduce upstream triggers (e.g., metformin, SGLT2 inhibitors, antioxidants), and targeted anti-inflammatory or immunomodulatory treatments that dampen NET-driven tissue damage.

Together, these approaches position NET-modulation as a promising adjunct strategy in diabetes management.

Extracellular traps (ETs) are web-like structures of DNA, histones, and antimicrobial proteins released by immune cells, primarily neutrophils (NETs), to trap and kill pathogens like bacteria and viruses, forming a crucial innate immune defense. While protective, excessive ET formation can cause harmful inflammation, tissue damage, thrombosis, and autoimmune diseases, making them relevant in conditions like severe COVID-19, cancer, and chronic inflammatory disorders, requiring a balance for effective host defense.



Scanning electron microscopy image of polymorphonuclear neutrophils undergoing NETosis. Giaglis, Stavros & Hahn, Sinuhe & Hasler, Paul. (2016). "The NET Outcome": Are Neutrophil Extracellular Traps of Any Relevance to the Pathophysiology of Autoimmune Disorders in Childhood?. *Frontiers in Pediatrics*. 4. 10.3389/fped.2016.00097.

Type V Diabetes mellitus; Evolving Perspectives

Dr Randa Darwish

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MD ,FRCPCH-UK ,EFBP, Fellow of the IDF



Diabetes has been long-classified conventionally into several clinical categories * :

1. Type 1 diabetes (due to autoimmune β -cell destruction, usually leading to absolute insulin deficiency, including latent autoimmune diabetes in adults) (around 10% of people with diabetes),
2. Type 2 diabetes (due to a nonautoimmune progressive loss of adequate β -cell insulin secretion, frequently on the background of insulin resistance) (85-90%)
3. Specific types of diabetes due to other causes, e.g., monogenic diabetes syndromes, diseases of the exocrine pancreas, and drug- or chemical-induced diabetes
4. Gestational diabetes mellitus (diabetes diagnosed in the second or third trimester of pregnancy that was not clearly overt diabetes prior to gestation or other types of diabetes occurring throughout pregnancy, such as type 1 diabetes).

***American Diabetes Association Professional Practice Committee; 2. Diagnosis and Classification of Diabetes: Standards of Care in Diabetes—2025. Diabetes Care 1 January 2025; 48 (Supplement_1): S27–S49. <https://doi.org/10.2337/dc25-S002>**

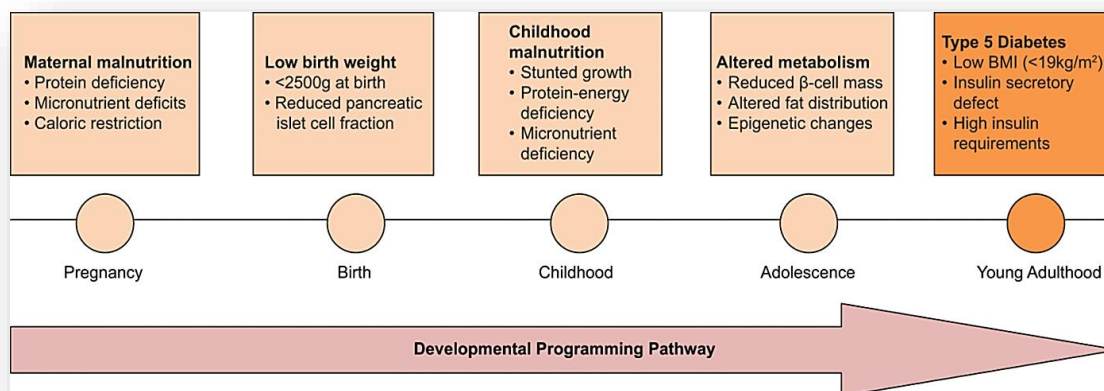
At the recent International Diabetes Federation (IDF) World Diabetes Congress 2025 in Bangkok, Thailand, IDF announced the launch of a working group to develop formal diagnostic criteria and therapeutic guidelines for a type of diabetes linked to malnutrition that was formally classified as “type 5 diabetes” **

****International Diabetes Federation. The IDF diabetes atlas. 2025. (11th ed). Available from: <https://idf.org/news/new-type-5-diabetes-working-group>**

"Type 5 diabetes" is a newly highlighted classification by the International Diabetes Federation (IDF) for malnutrition-related diabetes mellitus. It is distinct from type 1 and type 2 diabetes and is caused by prolonged nutritional deficiency.



Type 5 diabetes is estimated to affect between 20 to 25 million people worldwide, primarily in low- and middle-income countries. Prolonged undernutrition, especially a deficiency in protein and micronutrients during childhood and adolescence, is implicated in impaired pancreatic ability to produce sufficient insulin.



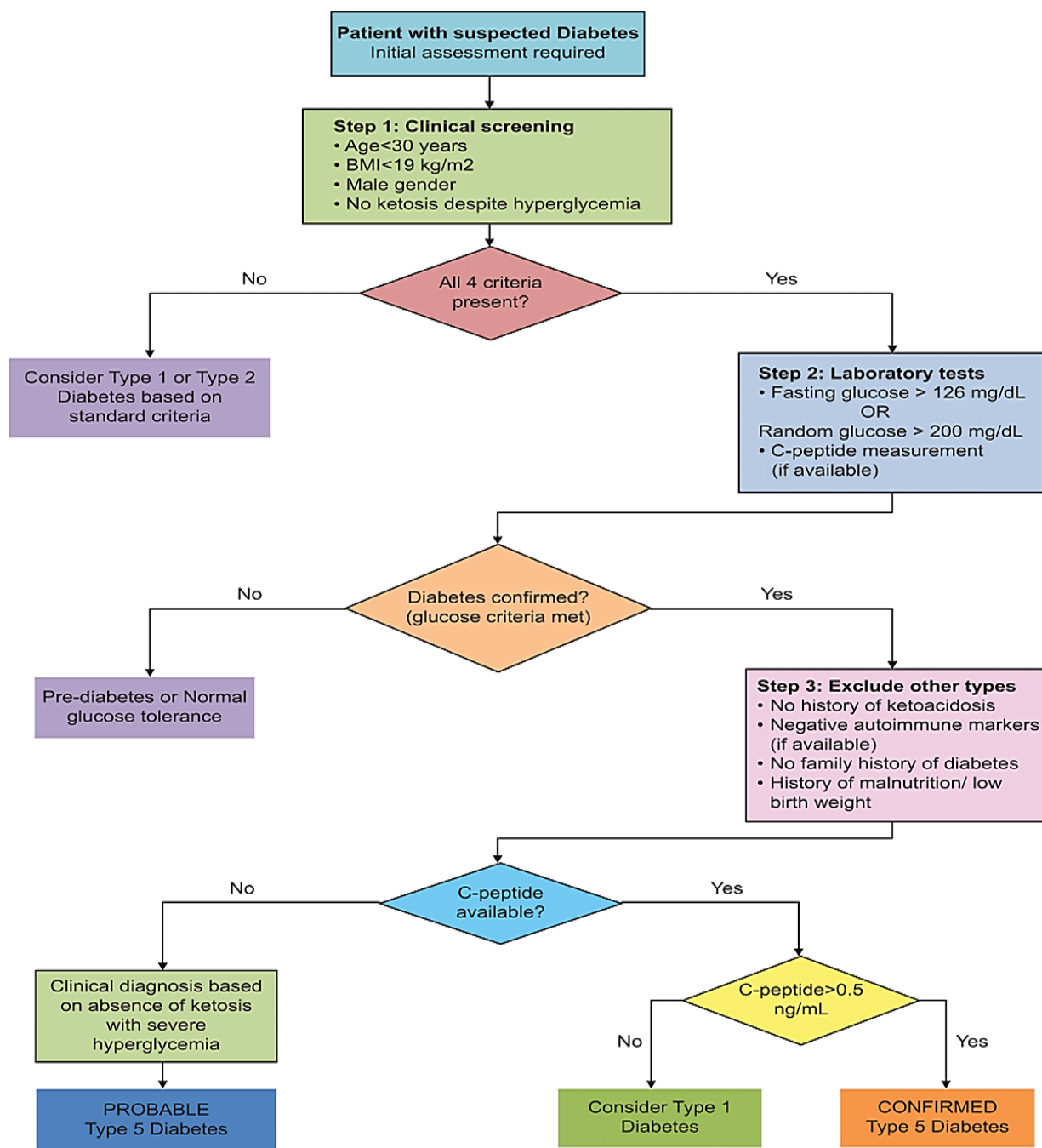
Garg R. Type 5 diabetes: Recognizing a distinct form of malnutrition-related diabetes in the global health landscape. Glob J Health Sci Res. doi: 10.25259/GJHSR_45_2025

Clinical presentation

- Absence of ketonuria or ketosis despite uncontrolled blood glucose levels (fasting plasma glucose >200 mg/dL)
- High insulin requirements (>60 IU/day or 2.0 units/kg/day)
- Increased risk of diabetes complications though without developing ketosis despite high blood glucose.

Management

- Nutritional rehabilitation: This is the cornerstone of treatment, aiming to improve overall health and partially restore pancreatic function.
- Medication: Medication, including insulin in some cases, may be necessary to manage blood sugar levels.
- Public health policies: Addressing the root causes through policies that focus on nutrition during pregnancy and early childhood is critical for prevention.



Diagnostic algorithm for type 5 diabetes in low-resource settings. Simplified clinical decision pathway for identifying type 5 diabetes in resource-limited settings, emphasizing readily available clinical criteria and basic laboratory tests when C-peptide testing is unavailable.

Garg R. Type 5 diabetes: Recognizing a distinct form of malnutrition-related diabetes in the global health landscape. Glob J Health Sci Res. doi: 10.25259/GJHSR_45_2025

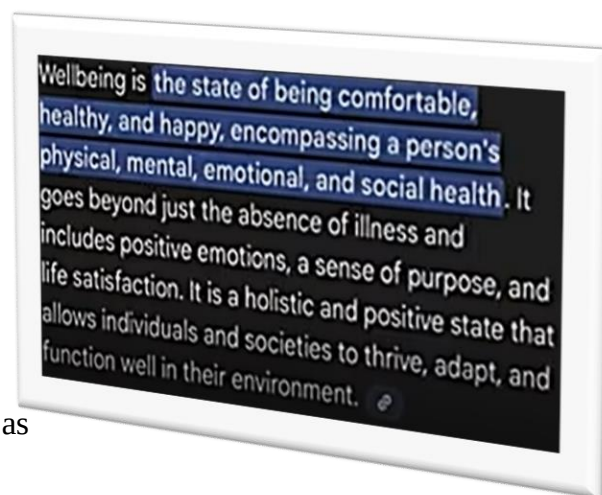
Well-being in type 1 DM

Dr Nermeen Aoun MD

Consultant of pediatrics , Head of Department of Pediatrics , National Institute of Diabetes and Endocrinology



*W*ellbeing in Type 1 Diabetes (T1D) involves balancing physical management (insulin, carb counting, glucose monitoring) with crucial mental and emotional health, as the constant demands often lead to stress, anxiety, burnout, depression, and <</diabetes distress, impacting quality of life; addressing these emotional challenges through support, resilience, therapy, and self-care (sleep, exercise, relationships) is vital for holistic health, just as important as blood sugar control.



Physical & Emotional Interconnection

Blood Sugar & Mood: Fluctuations (highs/low) directly affect mood, causing irritability, anger, or anxiety.

Constant Demands: The relentlessness of testing, carb counting, and insulin can be overwhelming, leading to "diabetes burnout".

Common Mental Health Challenges

Diabetes Distress: Feeling overwhelmed by diabetes management.

Depression & Anxiety: Higher rates in T1D individuals.

Burnout: Emotional exhaustion from managing the condition.

Eating Disorders: Increased risk due to food focus.

Type 1 Diabetes (T1D) burnout signs :

include emotional exhaustion, feeling overwhelmed, angry, or helpless, and detachment from self-care, leading to skipping insulin, ignoring blood sugar checks, unhealthy eating, and avoiding healthcare, basically feeling like diabetes controls you rather than the other way around, creating a cycle of stress and poor management. It's a mental and physical exhaustion from constant management, resulting in withdrawal and disinterest.

Strategies for Better Wellbeing

- **Build Resilience:** Develop skills to cope with setbacks and maintain control.
- **Seek Support:** Share the load with family, friends, support groups, or mental health professionals.
- **Practice Self-Care:** Prioritize sleep, recreation, exercise, and strong relationships.
- **Improve Management:** Good glucose control (Time in Range) can improve mood; psychological flexibility helps manage the unexpected.
- **Seek Professional Help:** Address distress with therapists specializing in chronic conditions (e.g., using trauma-informed care).
- **Set Small Goals:** Celebrate small wins to build confidence.

Key Takeaway

Good wellbeing isn't just about physical control; it's about fostering emotional health and resilience to manage the significant mental load of Type 1 Diabetes.

Our Guide-lines

What is New

Modern Classification of Diabetes: A Precision Medicine Approach

Dr Ahmed El Sabawy , MD

Assistant lecturer Diabetes and endocrinology

National institute of Diabetes and endocrinology



Background

The traditional classification of diabetes mellitus into type 1 and type 2 is increasingly recognized as oversimplified. Advances in epidemiology, genetics, and metabolic phenotyping support a pathophysiology-based classification that better predicts complications and guides individualized therapy.

Cluster-Based Classification of Adult-Onset Diabetes

This data-driven model, first proposed by Ahlqvist et al., classifies diabetes into five reproducible clusters based on clinical and biochemical variables.

Variables used:

Age at diagnosis, Body mass index (BMI), HbA1c, HOMA- β (β -cell function), HOMA-IR (insulin resistance), GAD autoantibodies, Severe Autoimmune Diabetes (SAID), GAD antibody positive, Marked insulin deficiency, often lean, younger patients. Clinical characteristics; High risk of diabetic ketoacidosis, Rapid progression to insulin dependence and Management.

Classification :

1. **Early and sustained insulin therapy, (Includes classic type 1 diabetes and LADA)**
2. **Severe Insulin-Deficient Diabetes (SIDD) :** GAD antibody negative ,
Profound insulin deficiency ,Very high HbA1c at diagnosis

Clinical characteristics: Highest risk of diabetic retinopathy

Management: Early insulin $\pm$ GLP-1 receptor agonists

3. **Severe Insulin-Resistant Diabetes (SIRD) :** Marked insulin resistance ,
Preserved β -cell function

Clinical characteristics: High risk of Diabetic kidney disease, NAFLD,
Cardiovascular disease.

Management: Metformin, Thiazolidinediones, GLP-1 receptor agonists, SGLT2 inhibitors

4. **Mild Obesity-Related Diabetes (MOD) :** Obesity-driven, Moderate
metabolic disturbance.

Clinical characteristics: Lower complication risk

Management: Lifestyle modification, Stepwise pharmacotherapy

5. **Mild Age-Related Diabetes (MARD) :** Older age at diagnosis ,
Mild hyperglycemia

Clinical characteristics: Lowest risk of complications

Management: Conservative glycemic targets, Avoid overtreatment

Clinical Implications:

- Patients classified as “type 2 diabetes” are metabolically heterogeneous
- Identical HbA1c levels do not imply identical risk
- This model improves prediction of: Microvascular complications
- Need for insulin therapy
- Renal and cardiovascular outcomes

Conclusion

Diabetes should be viewed as a spectrum of distinct disease entities, not a binary diagnosis.

A precision-based classification enables earlier risk stratification, rational drug selection, and better long-term outcomes.

Key References:

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