American Diabetes Association

Standards of Medical Care in Diabetes 2017

Dr Mateu Seguí
Dr Xavier Mundet
Dr Albert Goday (modera)

Diab Care. January 2017 Volume 40, Supplement 1

Standards of Medical Care-ADA 2017- Sumari

Diabetes Care

THE JOURNAL OF CLINICAL AND APPLIED RESEARCH AND EDUCATION

January 2017 Volume 40, Supplement 1

Standards of Medical Care in Diabetes—2017

S1 Introduction
S3 Professional Practice Committee
S4 *Standards of Medical Care in Diabetes—2017: Summary of Revisions*
S6 1. Promoting Health and Reducing Disparities in Populations
Diabetes and Population Health
Tailoring Treatment to Reduce Disparities
S11 2. Classification and Diagnosis of Diabetes
Classification
Diagnostic Tests for Diabetes
Categories of Increased Risk for Diabetes (Prediabetes)
Type 1 Diabetes
Type 2 Diabetes
Gestational Diabetes Mellitus
Monogenic Diabetes Syndromes
Cystic Fibrosis–Related Diabetes
Posttransplantation Diabetes Mellitus
S23 3. Comprehensive Medical Evaluation and Assessment of Comorbidities
Patient-Centered Collaborative Care
Comprehensive Medical Evaluation
Assessment of Comorbidities
S33 4. Lifestyle Management
Diabetes Self-management Education and Support
Nutrition Therapy
Physical Activity
Smoking Cessation: Tobacco and e-Cigarettes
Psychosocial Issues
S44 5. Prevention or Delay of Type 2 Diabetes
Lifestyle Interventions
Pharmacologic Interventions
Prevention of Cardiovascular Disease
Diabetes Self-management Education and Support
S48 6. Glycemic Targets
Assessment of Glycemic Control
A1C Testing
A1C Goals
Hypoglycemia
Intercurrent Illness
S57 7. Obesity Management for the Treatment of Type2 Diabetes
Assessment
Diet, Physical Activity, and Behavioral Therapy
Pharmacotherapy
Metabolic Surgery
S64 8. Pharmacologic Approaches to Glycemic Treatment
Pharmacologic Therapy for Type 1 Diabetes
Pharmacologic Therapy for Type 2 Diabetes
S75 9. Cardiovascular Disease and Risk Management
Hypertension/Blood Pressure Control
Lipid Management
Antiplatelet Agents
Coronary Heart Disease
S88 10. Microvascular Complications and Foot Care
Diabetic Kidney Disease
Diabetic Retinopathy
Neuropathy
Foot Care
S99 11. Older Adults
Neurocognitive Function
Hypoglycemia
Treatment Goals
Pharmacologic Therapy
Treatment in Skilled Nursing Facilities and Nursing Homes
End-of-Life Care
S105 12. Children and Adolescents
Type 1 Diabetes
Type 2 Diabetes
Transition From Pediatric to Adult Care
S114 13. Management of Diabetes in Pregnancy
Diabetes in Pregnancy
Preconception Counseling
Glycemic Targets in Pregnancy
Management of Gestational Diabetes Mellitus
Management of Preexisting Type 1 Diabetes and Type 2 Diabetes in Pregnancy
Postpartum Care
Pregnancy and Drug Considerations
S120 14. Diabetes Care in the Hospital
Hospital Care Delivery Standards
Glycemic Targets in Hospitalized Patients
Bedside Blood Glucose Monitoring
Antihyperglycemic Agents in Hospitalized Patients
Hypoglycemia
Medical Nutrition Therapy in the Hospital
Self-management in the Hospital
Standards for Special Situations
Transition From the Acute Care Setting
Preventing Admissions and Readmissions
S128 15. Diabetes Advocacy
Advocacy Position Statements
S130 Professional Practice Committee Disclosures
S132 Index

1. Classificació (secció 2, s11)
2. Diabetis gestacional (sec 2, s11)
3. Diabetis monogèniques (sec 2, s11)
4. Prevenció de la DM2 (sec 5, s44)
5. Els objectius glucèmics (sec 6, s48)
6. T. farmacològic de la DM (sec 8, s64)
7. Cirurgia bariàtrica (sec 7, s57)
8. T. Hipertensió de la DM (sec 9, s75)
9. T. Dislipèmia de la DM (sec 9, s75)
10. Us d'antiagregants (sec 9, s75)
11. Malaltia renal diabètica (sec 10, s88)
12. Retinopatia diabètica (sec 10, s88)
13. Neuropatia diabètica (sec 10, s88)

jueves, 22 de diciembre de 2016

Los Standards of Medical Care in Diabetes—2017. Por el equipo de la redGPDS *

Los Standards of Medical Care in Diabetes—2017. Por el equipo de la redGPDS *

Por segundo año consecutivo y en un tiempo record el equipo de la redGDPS ha traducido y condensado los Standards of Medical Care (SMC) de la American Diabetes Association (ADA) para con ello llegar al máximo número de médicos que atienden a los pacientes con diabetes (DM). Es una constante que los SMC se difundan los últimos días del año que acaba, pero de un tiempo a esta parte se ha acortado este tiempo llegando a nuestras manos este año el día 15 de diciembre.

Los SMC de la ADA hacen una actualización de las evidencias que se van produciendo cada año con las que aportar unas recomendaciones en la DM. Por ello la estructura anual del documento es parecida y los cambios normalmente son mínimos, salvo cuando existe algún estudio o consenso que rompe con lo anteriormente publicado, haciendo variar los niveles de evidencia. En estos casos los cambios suelen estar en algún capítulo pero no afectan al conjunto de las recomendaciones.

Los SMC tienen las ventajas de una Guía de Práctica Clínica (GPC) de estar basada en la evidencia científica. Por ello, clasifica la fuerza de sus recomendaciones según el nivel de las evidencias científicas, estableciendo cuatro grados de mayor a menor fuerza: A, B, C y E; siendo el A, basado en ensayos clínicos, y el E, basado en consenso de expertos, y todo ello anualmente.

La estructura del documento es según capítulos en el documento extenso (15 en el 2017). Existe también un documento breve con los cambios producidos desde el anterior publicado (SMC in Diabetes 2017: Summary of Revisions, s4-s5). La bibliografía ha ido variando según las versiones, desde estar toda al final de la obra a encontrarse al final de cada sección, mucho más manejable.

Como el año pasado la redGDPS ha mantenido esta iniciativa con la que hacer más útil, asequible y rápida la consulta de este documento en lengua española. Para ello los mismos cinco integrantes de la red del año pasado se han propuesto en un tiempo récord (6 días) traducir, resumir y plasmar en un pequeño documento que se publica los principales cambios producidos en el mismo (básicamente niveles de evidencia) y dirigido (en muestro caso) al manejo del paciente con diabetes tipo 2 (DM2) Este documento se publica en el blog (por su inmediatez) y en la revista Diabetes Práctica (formato papel) más tarde,

Hay que decir que el equipo traductor y redactor de este documento se ha basado en el escrito aportado el año anterior (como es una constante en los SMC) haciendo los cambios precisos incluidos en el documento original. Se ha añadido una sección previa referida a la "Promoción de la salud, reducción de las disparidades en las poblaciones" (Sección 1, s6) dirigida a mejorar los resultados según la disparidad poblacional en personas con DM atendiendo a los recursos comunitarios y al autocontrol.

"look at the page in your preferred language "
visualiza la página en el idioma que prefieras

Seleccioneu l'idioma | Tecnología de Google Traductor

Síguenos en Facebook

Redgedaps Diabetes | Crea tu insignia
Nombre: Redgedaps Diabetes

Buscar este blog

Buscar

G+1 11

Recibe novedades por correo electrónico

Email address... Submit

Twitter

Tweets by @redGDPS

redGDPS-diabetes
@redGDPS
Reservad plaza en el "Taller el control de la #glucemia más allá de los fármacos" los próximos 2 y 9 de febrero en Palma de

1.-Classificació de la diabetes

(Canvis:

1.- Consens sobre els estadis de la DM1

2.- Pes al néixer ≥ 9 lb (4 kg) no riscs de DM

3.- Cribratge de DM a la pràctica dental

Classificació de la diabetis

1. Type 1 diabetes (due to autoimmune β-cell destruction, usually leading to absolute insulin deficiency)
2. Type 2 diabetes (due to a progressive loss of β-cell insulin secretion frequently on the background of insulin resistance)
3. Gestational diabetes mellitus (GDM) (diabetes diagnosed in the second or third trimester of pregnancy that was not clearly overt diabetes prior to gestation)
4. Specific types of diabetes due to other causes, e.g., monogenic diabetes syndromes (such as neonatal diabetes and maturity-onset diabetes of the young [MODY]), diseases of the exocrine pancreas (such as cystic fibrosis), and drug- or chemical-induced diabetes (such as with glucocorticoid use, in the treatment of HIV/AIDS, or after organ transplantation)

American Diabetes Association. Standards of Medical Care in Diabetes—2017
Diabetes Care Volume 40, Supplement 1, January 2017

Criteris diagnóstics

Table 2.2—Criteria for the diagnosis of diabetes

FPG ≥126 mg/dL (7.0 mmol/L). Fasting is defined as no caloric intake for at least 8 h.*
OR
2-h PG ≥200 mg/dL (11.1 mmol/L) during an OGTT. The test should be performed as described by the WHO, using a glucose load containing the equivalent of 75 g anhydrous glucose dissolved in water.*
OR
A1C ≥6.5% (48 mmol/mol). The test should be performed in a laboratory using a method that is NGSP certified and standardized to the DCCT assay.*
OR
In a patient with classic symptoms of hyperglycemia or hyperglycemic crisis, a random plasma glucose ≥200 mg/dL (11.1 mmol/L).

*In the absence of unequivocal hyperglycemia, results should be confirmed by repeat testing.

Estadis de la DM1

Table 2.1—Staging of type 1 diabetes (4,5)

	Stage 1	Stage 2	Stage 3
Stage	• Autoimmunity • Normoglycemia • Presymptomatic	• Autoimmunity • Dysglycemia • Presymptomatic	• New-onset hyperglycemia • Symptomatic
Diagnostic criteria	• Multiple autoantibodies • No IGT or IFG	• Multiple autoantibodies • Dysglycemia: IFG and/or IGT • FPG 100–125 mg/dL (5.6–6.9 mmol/L) • 2-h PG 140–199 mg/dL (7.8–11.0 mmol/L) • A1C 5.7–6.4% (39–47 mmol/mol) or ≥10% increase in A1C	• Clinical symptoms • Diabetes by standard criteria

- Tres nivells segons autoinmunitat, nivell de glucèmia i simptomes
- El cribratge mitjançan anticossos només en membres familiars de primer grau (B)

2.-Diabetis gestacional

(Canvis:
1.- al postpart reavaluació de 6-12 a 4-12 setmanes

Diabetis gestacional (sense canvis)

- Hyperglycaemia and Adverse Pregnancy Outcome (HAPO) study va mostrar una relació continua entre la glucémia materna i els defectes adversos fetals .

- El punt de tall glucèmic se va relacionar amb una odds ratio de almenys 1,75 defectes adversos fetals

- Important influència de la raça i del sobrepès en el diagnòstic

Criteris diabetis gestacional

- Proba per la DM no diagnosticada en la primera visita prenatal amb els factors de risc, emprant els criterios standards (B)

- Proba per la DG a les 24-28 setmanes en dones no previament diagnosticades de DM (A)

- En dones amb DG, proba a les 4-12 setmanes pospart emprant el TTOG (E)

Table 2.6—Screening for and diagnosis of GDM

One-step strategy

Perform a 75-g OGTT, with plasma glucose measurement when patient is fasting and at 1 and 2 h, at 24–28 weeks of gestation in women not previously diagnosed with overt diabetes.

The OGTT should be performed in the morning after an overnight fast of at least 8 h.

The diagnosis of GDM is made when any of the following plasma glucose values are met or exceeded:

- Fasting: 92 mg/dL (5.1 mmol/L)
- 1 h: 180 mg/dL (10.0 mmol/L)
- 2 h: 153 mg/dL (8.5 mmol/L)

Two-step strategy

Step 1: Perform a 50-g GLT (nonfasting), with plasma glucose measurement at 1 h, at 24–28 weeks of gestation in women not previously diagnosed with overt diabetes.

If the plasma glucose level measured 1 h after the load is ≥130 mg/dL, 135 mg/dL, or 140 mg/dL* (7.2 mmol/L, 7.5 mmol/L, or 7.8 mmol/L), proceed to a 100-g OGTT.

Step 2: The 100-g OGTT should be performed when the patient is fasting.

The diagnosis of GDM is made if at least two of the following four plasma glucose levels (measured fasting and 1 h, 2 h, 3 h after the OGTT) are met or exceeded:

	Carpenter/Coustan (59)	or	NDDG (60)
• Fasting	95 mg/dL (5.3 mmol/L)		105 mg/dL (5.8 mmol/L)
• 1 h	180 mg/dL (10.0 mmol/L)		190 mg/dL (10.6 mmol/L)
• 2 h	155 mg/dL (8.6 mmol/L)		165 mg/dL (9.2 mmol/L)
• 3 h	140 mg/dL (7.8 mmol/L)		145 mg/dL (8.0 mmol/L)

NDDG, National Diabetes Data Group. *The ACOG recommends either 135 mg/dL (7.5 mmol/L) or 140 mg/dL (7.8 mmol/L). A systematic review determined that a cutoff of 130 mg/dL (7.2 mmol/L) was more sensitive but less specific than 140 mg/dL (7.8 mmol/L) (55).

American Diabetes Association. Standards of Medical Care in Diabetes—2017 Diabetes Care Volume 40, Supplement 1, January 2017

Criteris diabetis gestacional

El macrosoma (pes >4 Kg) ha deixat de ser un factor de risc de prediabetes i DM

Table 2.6—Screening for and diagnosis of GDM

One-step strategy

Perform a 75-g OGTT, with plasma glucose measurement when patient is fasting and at 1 and 2 h, at 24–28 weeks of gestation in women not previously diagnosed with overt diabetes.

The OGTT should be performed in the morning after an overnight fast of at least 8 h.

The diagnosis of GDM is made when any of the following plasma glucose values are met or exceeded:

- Fasting: 92 mg/dL (5.1 mmol/L)
- 1 h: 180 mg/dL (10.0 mmol/L)
- 2 h: 153 mg/dL (8.5 mmol/L)

Two-step strategy

Step 1: Perform a 50-g GLT (nonfasting), with plasma glucose measurement at 1 h, at 24–28 weeks of gestation in women not previously diagnosed with overt diabetes.

If the plasma glucose level measured 1 h after the load is ≥130 mg/dL, 135 mg/dL, or 140 mg/dL* (7.2 mmol/L, 7.5 mmol/L, or 7.8 mmol/L), proceed to a 100-g OGTT.

Step 2: The 100-g OGTT should be performed when the patient is fasting.

The diagnosis of GDM is made if at least two of the following four plasma glucose levels (measured fasting and 1 h, 2 h, 3 h after the OGTT) are met or exceeded:

	Carpenter/Coustan (59)	or	NDDG (60)
• Fasting	95 mg/dL (5.3 mmol/L)		105 mg/dL (5.8 mmol/L)
• 1 h	180 mg/dL (10.0 mmol/L)		190 mg/dL (10.6 mmol/L)
• 2 h	155 mg/dL (8.6 mmol/L)		165 mg/dL (9.2 mmol/L)
• 3 h	140 mg/dL (7.8 mmol/L)		145 mg/dL (8.0 mmol/L)

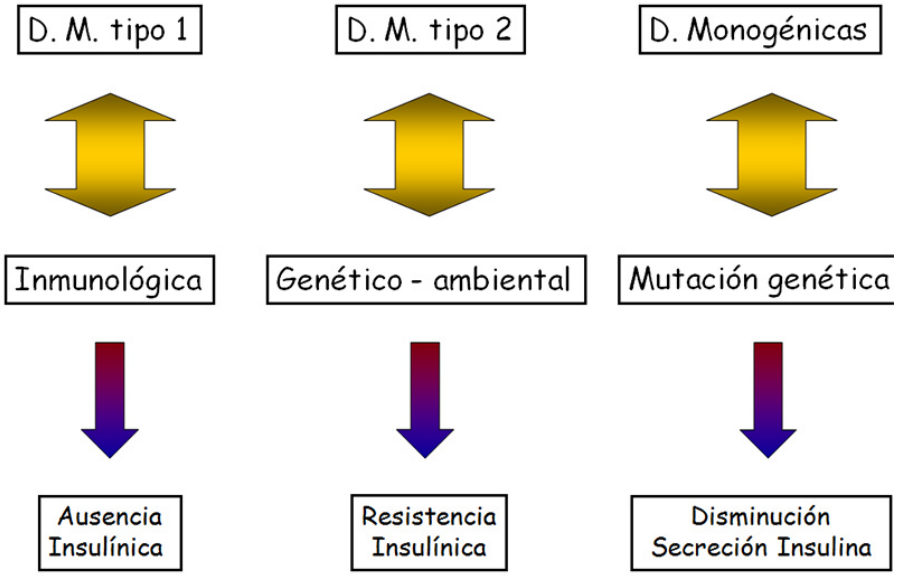
NDDG, National Diabetes Data Group. *The ACOG recommends either 135 mg/dL (7.5 mmol/L) or 140 mg/dL (7.8 mmol/L). A systematic review determined that a cutoff of 130 mg/dL (7.2 mmol/L) was more sensitive but less specific than 140 mg/dL (7.8 mmol/L) (55).

American Diabetes Association. Standards of Medical Care in Diabetes—2017 Diabetes Care Volume 40, Supplement 1, January 2017

3.-Diabetis monogènica

(Canvis:
1.- S´afegeix una taula amb les més comuns MODY

Diabetis monogènicas (sense canvis)



- Història familiar
- Començament en entre els 20-50 anys
- No tractament insulinic
- Absència de resistència a la insulina
- Absència d´autoinmunitat contra les cèl.lules beta pancreàtiques
- Autosòmica dominant. Alta penetració

Thanabalasingham et al. BMJ 2011;343:d6044 doi: 10.1136/bmj.d6044
Fajans SS et al. DIABETES CARE, VOLUME 34, AUGUST 2011

Diabetis monogènica

- Als nens diagnosticats de diabetis en els primers 6 mesos han de tenir probes de genètiques de Diabetis neonatal (A)

- Nens i adults joves diagnosticats de DM no característica de tipus 2 o tipus 1, en succesives generacions (patró autosòmic dominant) tenen que tenir proves genètiques de MODY (A)

Table 2.7–Most common causes of monogenic diabetes (68)

	Gene	Inheritance	Clinical features
MODY			
	GCK	AD	GCK-MODY: stable, nonprogressive elevated fasting blood glucose; typically does not require treatment; microvascular complications are rare; small rise in 2-h PG level on OGTT (<54 mg/dL [3 mmol/L])
	HNF1A	AD	HNF1A-MODY: progressive insulin secretory defect with presentation in adolescence or early adulthood; lowered renal threshold for glucosuria; large rise in 2-h PG level on OGTT (>90 mg/dL [5 mmol/L]); sensitive to sulfonylureas
	HNF4A	AD	HNF4A-MODY: progressive insulin secretory defect with presentation in adolescence or early adulthood; may have large birth weight and transient neonatal hypoglycemia; sensitive to sulfonylureas
	HNF1B	AD	HNF1B-MODY: developmental renal disease (typically cystic); genitourinary abnormalities; atrophy of the pancreas; hyperuricemia; gout
Neonatal diabetes			
	KCNJ11	AD	Permanent or transient: IUGR; possible developmental delay and seizures; responsive to sulfonylureas
	INS	AD	Permanent: IUGR; insulin requiring
	ABCC8	AD	Transient or permanent: IUGR; rarely developmental delay; responsive to sulfonylureas
	6q24 (*PLAGL1, HYMA1*)	AD for paternal duplications	Transient: IUGR; macroglossia; umbilical hernia; mechanisms include UPD6, paternal duplication or maternal methylation defect; may be treatable with medications other than insulin
	GATA6	AD	Permanent: pancreatic hypoplasia; cardiac malformations; pancreatic exocrine insufficiency; insulin requiring
	EIF2AK3	AR	Permanent: Wolcott-Rallison syndrome: epiphyseal dysplasia; pancreatic exocrine insufficiency; insulin requiring
	FOXP3	X-linked	Permanent: immunodysregulation, polyendocrinopathy, enteropathy X-linked (IPEX) syndrome: autoimmune diabetes; autoimmune thyroid disease; exfoliative dermatitis; insulin requiring

AD, autosomal dominant; AR, autosomal recessive; IUGR, intrauterine growth restriction.

Diabetis monogènica - Criteris d'alerta

- La diabetis diagnosticada en els primers 6 mesos de vida

- La diabetis sense trets típics de la diabetis tipus 1 o tipus 2 (negatiu autoanticossos associats a la diabetis; no obesos, que no tenen altres característiques metabòliques, especialment amb forts antecedents familiars de diabetis)

- hiperglucèmia lleu en dejú (100-150 mg /dl - A1C lleu 5,6 i 7,6%) sobretot si NO son obesos

Table 2.7—Most common causes of monogenic diabetes (68)

	Gene	Inheritance	Clinical features
MODY			
	GCK	AD	GCK-MODY: stable, nonprogressive elevated fasting blood glucose; typically does not require treatment; microvascular complications are rare; small rise in 2-h PG level on OGTT (<54 mg/dL [3 mmol/L])
	HNF1A	AD	HNF1A-MODY: progressive insulin secretory defect with presentation in adolescence or early adulthood; lowered renal threshold for glucosuria; large rise in 2-h PG level on OGTT (>90 mg/dL [5 mmol/L]); sensitive to sulfonylureas
	HNF4A	AD	HNF4A-MODY: progressive insulin secretory defect with presentation in adolescence or early adulthood; may have large birth weight and transient neonatal hypoglycemia; sensitive to sulfonylureas
	HNF1B	AD	HNF1B-MODY: developmental renal disease (typically cystic); genitourinary abnormalities; atrophy of the pancreas; hyperuricemia; gout
Neonatal diabetes			
	KCNJ11	AD	Permanent or transient: IUGR; possible developmental delay and seizures; responsive to sulfonylureas
	INS	AD	Permanent: IUGR; insulin requiring
	ABCC8	AD	Transient or permanent: IUGR; rarely developmental delay; responsive to sulfonylureas
	6q24 (*PLAGL1, HYMA1*)	AD for paternal duplications	Transient: IUGR; macroglossia; umbilical hernia; mechanisms include UPD6, paternal duplication or maternal methylation defect; may be treatable with medications other than insulin
	GATA6	AD	Permanent: pancreatic hypoplasia; cardiac malformations; pancreatic exocrine insufficiency; insulin requiring
	EIF2AK3	AR	Permanent: Wolcott-Rallison syndrome: epiphyseal dysplasia; pancreatic exocrine insufficiency; insulin requiring
	FOXP3	X-linked	Permanent: immunodysregulation, polyendocrinopathy, enteropathy X-linked (IPEX) syndrome: autoimmune diabetes; autoimmune thyroid disease; exfoliative dermatitis; insulin requiring

AD, autosomal dominant; AR, autosomal recessive; IUGR, intrauterine growth restriction.

4.-Prevenció de la diabetis

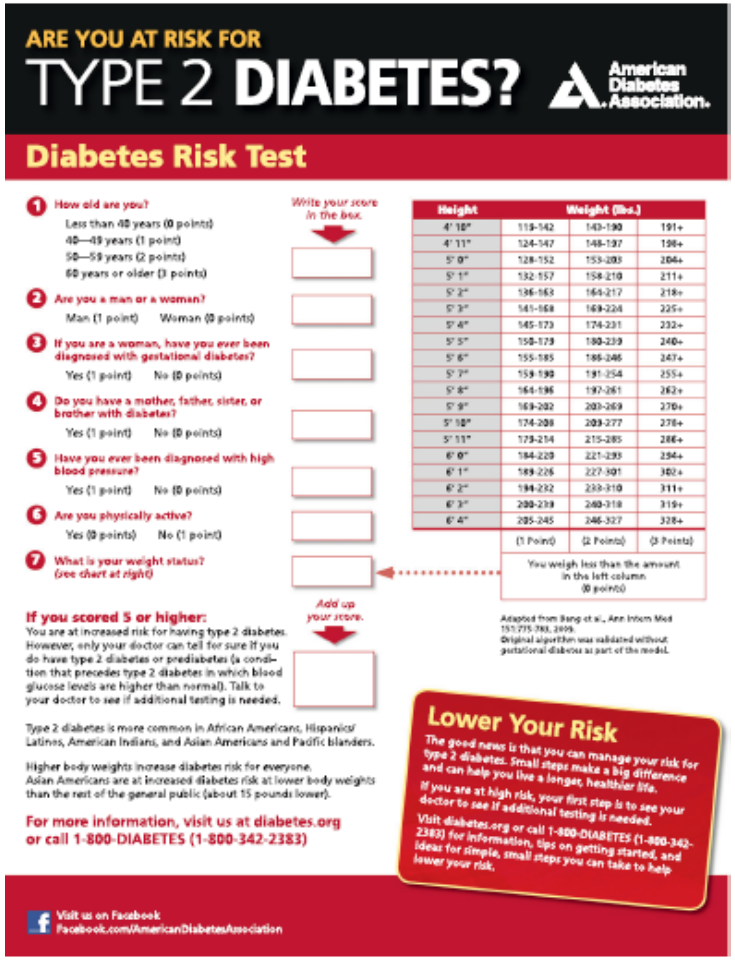
Canvis:

1.- Importancia del cribratge de prediabetis (nova redacció)

2.- Associació de la MET i el dèficit de Vit B12

Prevenció de la diabetis

- Prevenció Primària.- modificació dels estils de vida, intervenció farmacològica
- Prevenció Secundària.- cribratge
- Prevenció Terciària.- prevenció de complicacions micro y macrovasculars
- Prevenció Cuaternària.- prevenció de la sobreintervenció sanitaria



ARE YOU AT RISK FOR
TYPE 2 DIABETES?
American Diabetes Association.

Diabetes Risk Test

1. How old are you?
   - Less than 40 years (0 points)
   - 40—49 years (1 point)
   - 50—59 years (2 points)
   - 60 years or older (3 points)
2. Are you a man or a woman?
   - Man (1 point) Woman (0 points)
3. If you are a woman, have you ever been diagnosed with gestational diabetes?
   - Yes (1 point) No (0 points)
4. Do you have a mother, father, sister, or brother with diabetes?
   - Yes (1 point) No (0 points)
5. Have you ever been diagnosed with high blood pressure?
   - Yes (1 point) No (0 points)
6. Are you physically active?
   - Yes (0 points) No (1 point)
7. What is your weight status? (see chart at right)

Write your score in the box.

Add up your score.

Height	Weight (lbs.)		
4' 10"	119-142	143-190	191+
4' 11"	124-147	148-197	198+
5' 0"	128-152	153-203	204+
5' 1"	132-157	158-210	211+
5' 2"	136-163	164-217	218+
5' 3"	141-168	169-224	225+
5' 4"	145-173	174-231	232+
5' 5"	150-179	180-239	240+
5' 6"	155-185	186-246	247+
5' 7"	159-190	191-254	255+
5' 8"	164-196	197-261	262+
5' 9"	169-202	203-269	270+
5' 10"	174-208	209-277	278+
5' 11"	179-214	215-285	286+
6' 0"	184-220	221-293	294+
6' 1"	189-226	227-301	302+
6' 2"	194-232	233-310	311+
6' 3"	200-239	240-318	319+
6' 4"	205-245	246-327	328+
	(1 Point)	(2 Points)	(3 Points)

You weigh less than the amount in the left column (0 points)

Adapted from Bang et al., Ann Intern Med 151:775-783, 2009. Original algorithm was validated without gestational diabetes as part of the model.

If you scored 5 or higher:
You are at increased risk for having type 2 diabetes. However, only your doctor can tell for sure if you do have type 2 diabetes or prediabetes (a condition that precedes type 2 diabetes in which blood glucose levels are higher than normal). Talk to your doctor to see if additional testing is needed.

Type 2 diabetes is more common in African Americans, Hispanics/Latinos, American Indians, and Asian Americans and Pacific Islanders.

Higher body weights increase diabetes risk for everyone. Asian Americans are at increased diabetes risk at lower body weights than the rest of the general public (about 15 pounds lower).

For more information, visit us at diabetes.org or call 1-800-DIABETES (1-800-342-2383)

Lower Your Risk
The good news is that you can manage your risk for type 2 diabetes. Small steps make a big difference and can help you live a longer, healthier life.
If you are at high risk, your first step is to see your doctor to see if additional testing is needed.
Visit diabetes.org or call 1-800-DIABETES (1-800-342-2383) for information, tips on getting started, and ideas for simple, small steps you can take to help lower your risk.

Visit us on Facebook
Facebook.com/AmericanDiabetesAssociation

Figure 2.1—ADA risk test.

P. secundària: Cribratge de la diabetes

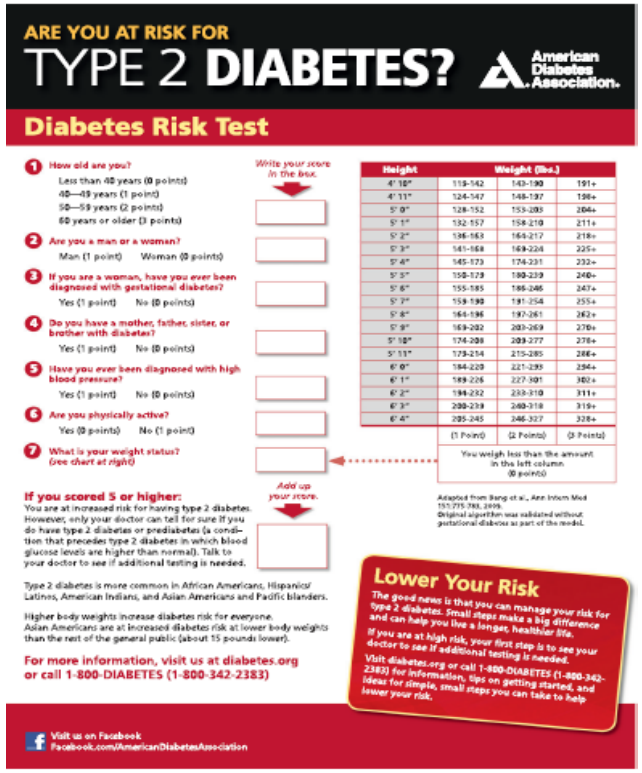
Table 2.3—Criteria for testing for diabetes or prediabetes in asymptomatic adults

1. Testing should be considered in overweight or obese (BMI ≥25 kg/m^2 or ≥23 kg/m^2 in Asian Americans) adults who have one or more of the following risk factors:
   - A1C ≥5.7% (39 mmol/mol), IGT, or IFG on previous testing
   - first-degree relative with diabetes
   - high-risk race/ethnicity (e.g., African American, Latino, Native American, Asian American, Pacific Islander)
   - women who were diagnosed with GDM
   - history of CVD
   - hypertension (≥140/90 mmHg or on therapy for hypertension)
   - HDL cholesterol level <35 mg/dL (0.90 mmol/L) and/or a triglyceride level >250 mg/dL (2.82 mmol/L)
   - women with polycystic ovary syndrome
   - physical inactivity
   - other clinical conditions associated with insulin resistance (e.g., severe obesity, acanthosis nigricans).
2. For all patients, testing should begin at age 45 years.
3. If results are normal, testing should be repeated at a minimum of 3-year intervals, with consideration of more frequent testing depending on initial results (e.g., those with prediabetes should be tested yearly) and risk status.

- ❑ Qualsevol edat amb sobrepès o obesitat (IMC > 25) i que tenen un o més factors de risc (B)
- ❑ Totes les persones a patir de 45 anys d´edat (B)
- ❑ Si les proves son normals, repetir cada 3 anys (C)
- ❑ Qualsevol prova es apropiada (B)

P. Primària: Control de la prediabetis

- Control glucèmic anual en persones amb prediabetis (E)
- Pacients amb prediabetis programa de intervenció conductual intensiva de l´estil de vida, pèrdua de 7% del pes + 150m de activitat física setmanals (DPP) (A)
- La metformina es pot emprar per prevenció de la DM2 (A)



ARE YOU AT RISK FOR
TYPE 2 DIABETES?

American Diabetes Association.

Diabetes Risk Test

1. How old are you?
   Less than 40 years (0 points)
   40—49 years (1 point)
   50—59 years (2 points)
   60 years or older (3 points)
2. Are you a man or a woman?
   Man (1 point) Woman (0 points)
3. If you are a woman, have you ever been diagnosed with gestational diabetes?
   Yes (1 point) No (0 points)
4. Do you have a mother, father, sister, or brother with diabetes?
   Yes (1 point) No (0 points)
5. Have you ever been diagnosed with high blood pressure?
   Yes (1 point) No (0 points)
6. Are you physically active?
   Yes (0 points) No (1 point)
7. What is your weight status? (see chart at right)

Write your score in the box.

Height	Weight (lbs.)		
4' 10"	119-142	143-190	191+
4' 11"	124-147	148-197	198+
5' 0"	128-152	153-205	206+
5' 1"	132-157	158-210	211+
5' 2"	136-163	164-217	218+
5' 3"	141-168	169-224	225+
5' 4"	145-173	174-231	232+
5' 5"	150-178	179-239	240+
5' 6"	155-185	186-246	247+
5' 7"	159-190	191-254	255+
5' 8"	164-196	197-261	262+
5' 9"	169-202	203-269	270+
5' 10"	174-208	209-277	278+
5' 11"	179-214	215-285	286+
6' 0"	184-220	221-293	294+
6' 1"	189-226	227-301	302+
6' 2"	194-232	233-310	311+
6' 3"	200-239	240-318	319+
6' 4"	205-245	246-327	328+
	(1 Point)	(2 Points)	(3 Points)

You weigh less than the amount in the left column (0 points)

Add up your score.

If you scored 5 or higher:
You are at increased risk for having type 2 diabetes. However, only your doctor can tell for sure if you do have type 2 diabetes or prediabetes (a condition that precedes type 2 diabetes in which blood glucose levels are higher than normal). Talk to your doctor to see if additional testing is needed.

Type 2 diabetes is more common in African Americans, Hispanics/Latinos, American Indians, and Asian Americans and Pacific Islanders.

Higher body weights increase diabetes risk for everyone. Asian Americans are at increased diabetes risk at lower body weights than the rest of the general public (about 15 pounds lower).

For more information, visit us at diabetes.org or call 1-800-DIABETES (1-800-342-2383)

Adapted from Bang et al., Ann Intern Med 151:775-783, 2009.
Original algorithm was validated without gestational diabetes as part of the model.

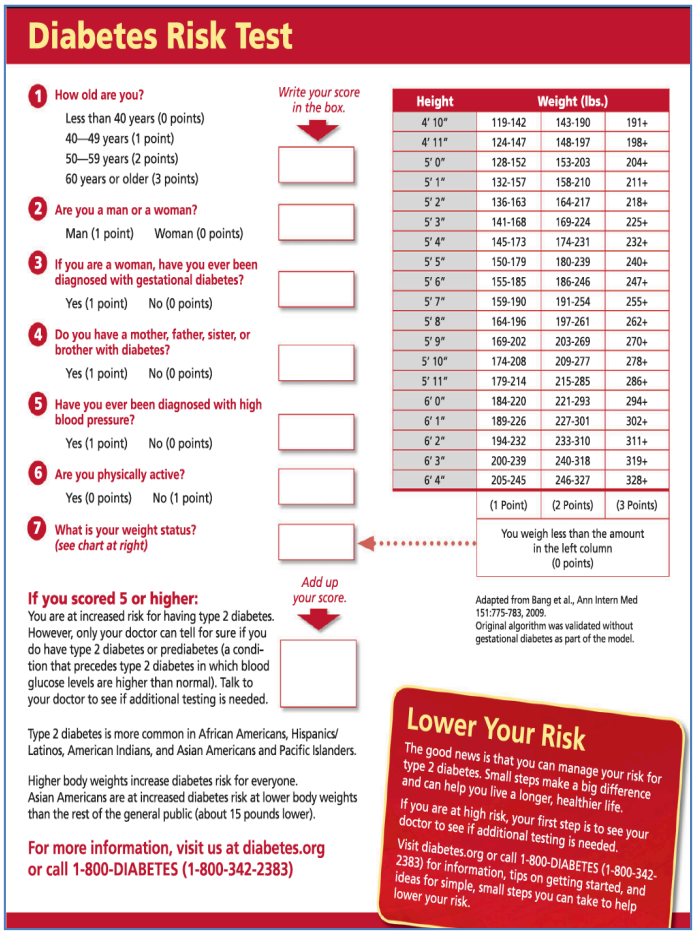
Lower Your Risk
The good news is that you can manage your risk for type 2 diabetes. Small steps make a big difference and can help you live a longer, healthier life.
If you are at high risk, your first step is to see your doctor to see if additional testing is needed.
Visit diabetes.org or call 1-800-DIABETES (1-800-342-2383) for information, tips on getting started, and ideas for simple, small steps you can take to help lower your risk.

Visit us on Facebook
Facebook.com/AmericanDiabetesAssociation

figure 2.1—ADA risk test.

P Primaria: Control de la prediabetis

- ❑ La metformina es pot emprar per prevenció de la DM2 en persones amb prediabetis, si:
- ✓ + IMC > 35 Kg/m2
- ✓ Dones amb DG prèvia i
- ✓ Menors de 60 anys
- ✓ HbA1c elevada a pesar interv EV (A)



Diabetes Risk Test

1. How old are you?
   - Less than 40 years (0 points)
   - 40—49 years (1 point)
   - 50—59 years (2 points)
   - 60 years or older (3 points)
2. Are you a man or a woman?
   - Man (1 point) Woman (0 points)
3. If you are a woman, have you ever been diagnosed with gestational diabetes?
   - Yes (1 point) No (0 points)
4. Do you have a mother, father, sister, or brother with diabetes?
   - Yes (1 point) No (0 points)
5. Have you ever been diagnosed with high blood pressure?
   - Yes (1 point) No (0 points)
6. Are you physically active?
   - Yes (0 points) No (1 point)
7. What is your weight status? *(see chart at right)*

Write your score in the box.

Add up your score.

Height	Weight (lbs.)		
4' 10"	119-142	143-190	191+
4' 11"	124-147	148-197	198+
5' 0"	128-152	153-203	204+
5' 1"	132-157	158-210	211+
5' 2"	136-163	164-217	218+
5' 3"	141-168	169-224	225+
5' 4"	145-173	174-231	232+
5' 5"	150-179	180-239	240+
5' 6"	155-185	186-246	247+
5' 7"	159-190	191-254	255+
5' 8"	164-196	197-261	262+
5' 9"	169-202	203-269	270+
5' 10"	174-208	209-277	278+
5' 11"	179-214	215-285	286+
6' 0"	184-220	221-293	294+
6' 1"	189-226	227-301	302+
6' 2"	194-232	233-310	311+
6' 3"	200-239	240-318	319+
6' 4"	205-245	246-327	328+
	(1 Point)	(2 Points)	(3 Points)

You weigh less than the amount in the left column (0 points)

Adapted from Bang et al., Ann Intern Med 151:775-783, 2009.
Original algorithm was validated without gestational diabetes as part of the model.

If you scored 5 or higher:
You are at increased risk for having type 2 diabetes. However, only your doctor can tell for sure if you do have type 2 diabetes or prediabetes (a condition that precedes type 2 diabetes in which blood glucose levels are higher than normal). Talk to your doctor to see if additional testing is needed.

Type 2 diabetes is more common in African Americans, Hispanics/Latinos, American Indians, and Asian Americans and Pacific Islanders.

Higher body weights increase diabetes risk for everyone. Asian Americans are at increased diabetes risk at lower body weights than the rest of the general public (about 15 pounds lower).

For more information, visit us at diabetes.org or call 1-800-DIABETES (1-800-342-2383)

Lower Your Risk

The good news is that you can manage your risk for type 2 diabetes. Small steps make a big difference and can help you live a longer, healthier life.

If you are at high risk, your first step is to see your doctor to see if additional testing is needed.

Visit diabetes.org or call 1-800-DIABETES (1-800-342-2383) for information, tips on getting started, and ideas for simple, small steps you can take to help lower your risk.

5.- Objetius glucèmics

Canvis:
1.- Recomanacions del International Hypoglycaemia Study Group,

-Inzucchi SE, et al ADA, EASD. Management of hyperglycemia in type 2 diabetes: a patient-centered approach: position statement of the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD). Diabetes Care. 2012 Jun;35(6):1364-79.

Reviews/Consensus Reports/ADA Statements

POSITION STATEMENT

Management of Diabetes: A Po

Position Statement of the the European Association

Silvio E. Inzucchi, MD[1]
Richard M. Bergenstal, MD[2]
John B. Buse, MD, PhD[3]
Michaela Diamant, MD, PhD[4]
Ele Ferrannini, MD[5]

Glycemic management in type 2 diabetes mellitus has become increasingly complex and, to some extent, controversial, with a widening array of

Management of Hyperglycemia in Type 2 Diabetes, 2015: A Patient-Centered Approach

Update to a Position Statement of the American Diabetes Association and the European Association for the Study of Diabetes

Diabetes Care 2015;38:140–149 | DOI: 10.2337/dc14-2441

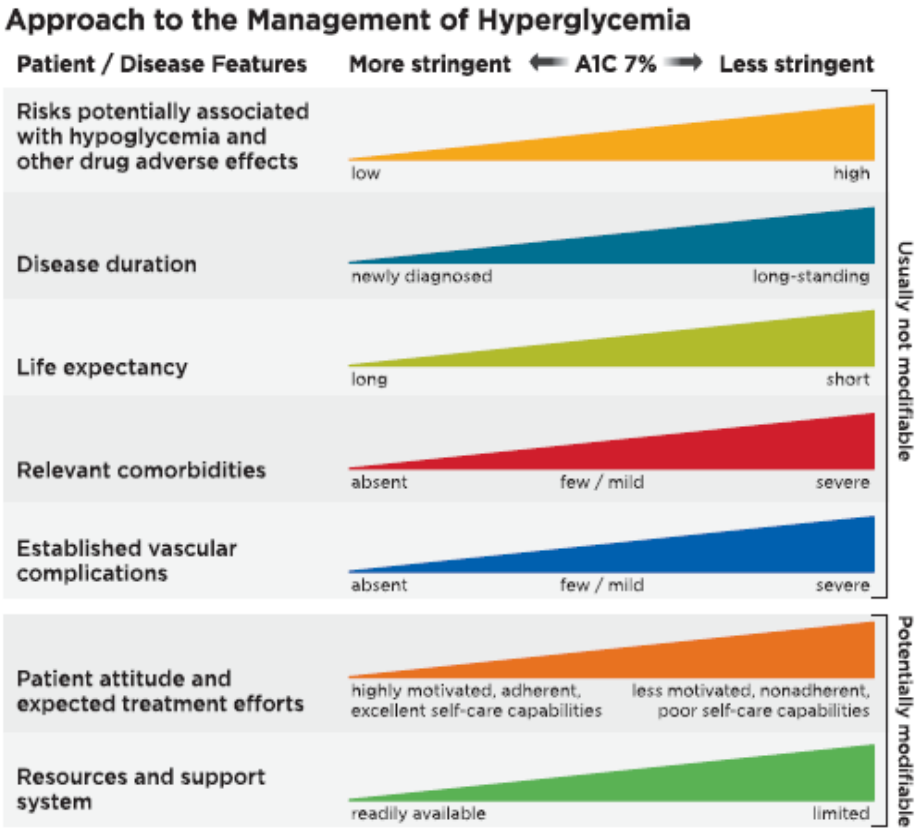
Silvio E. Inzucchi,[1] Richard M. Bergenstal,[2] John B. Buse,[3] Michaela Diamant,[4] Ele Ferrannini,[5] Michael Nauck,[6] Anne L. Peters,[7] Apostolos Tsapas,[8] Richard Wender,[9,10] and David R. Matthews[11,12,13]

[1]Section of Endocrinology, Yale University School of Medicine, Yale-New Haven Hospital, New Haven, CT
[2]International Diabetes Center at Park Nicollet, Minneapolis, MN
[3]Division of Endocrinology, University of North Carolina School of Medicine, Chapel Hill, NC
[4]Diabetes Center/Department of Internal Medicine, VU University Medical Center, Amsterdam, the Netherlands
[5]Department of Medicine, University of Pisa School of Medicine, Pisa, Italy
[6]Diabeteszentrum Bad Lauterberg, Bad Lauterberg

In 2012, the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD) published a position statement on the management of hyperglycemia in patients with type 2 diabetes (1,2). This was needed because of an increasing array of antihyperglycemic drugs and growing uncertainty regarding their proper selec-

Preguntes:

- Existeixen riscs associats a la hipoglucèmia?
- Quina es la durada de la malaltia?
- Quina es la seva esperança de vida?
- Existeix qualque comorbiditat?
- Existeixen complicacions vasculars establertes?
- Té recursos per atendre la seva diabetis?
- Quina és l´actitud del pacient?



American Diabetes Association. Standards of Medical Care in Diabetes—2017 Diabetes Care Volume 40, Supplement 1, January 2017

Objetius glucèmics (sense canvis)

- En general < 7% HbA1c (A)

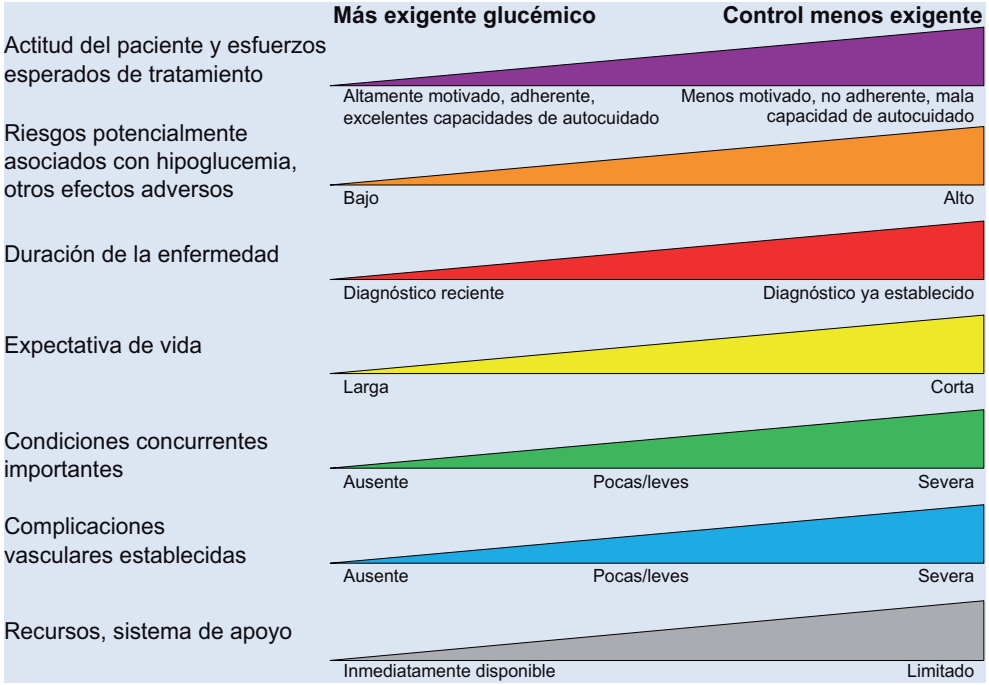
  (prevenció de les lesions microvasculars)

- Més estricte < 6,5% (C)

  (pacients recent diagnosticats, llarga esperança de vida sense malaltia cardiovascular)

- Menys estricte < 8 % (B)

  (història d´hipoglucèmies severes, esperança de vida limitada, comorbilitat, complicacions micro o macro vasculars i/o dificultat per assolir els objetius en polimedicats)



American Diabetes Association. Standards of Medical Care in Diabetes—2017
Diabetes Care Volume 40, Supplement 1, January 2017

Les objectius glucèmics

Table 6.2—Summary of glycemic recommendations for many nonpregnant adults with diabetes

A1C	<7.0% (53 mmol/mol)*
Preprandial capillary plasma glucose	80–130 mg/dL* (4.4–7.2 mmol/L)
Peak postprandial capillary plasma glucose†	<180 mg/dL* (10.0 mmol/L)

*More or less stringent glycemic goals may be appropriate for individual patients. Goals should be individualized based on duration of diabetes, age/life expectancy, comorbid conditions, known CVD or advanced microvascular complications, hypoglycemia unawareness, and individual patient considerations. †Postprandial glucose may be targeted if A1C goals are not met despite reaching preprandial glucose goals. Postprandial glucose measurements should be made 1–2 h after the beginning of the meal, generally peak levels in patients with diabetes.

American Diabetes Association. Standards of Medical Care in Diabetes—2017 Diabetes Care Volume 40, Supplement 1, January 2017

5.- Objetius glucèmics. AACE 2017

FOR GLYCEMIC CONTROL

INDIVIDUALIZE GOALS

A1C ≤ 6.5%

For patients without concurrent serious illness and at low hypoglycemic risk

A1C > 6.5%

For patients with concurrent serious illness and at risk for hypoglycemia

COPYRIGHT © 2017 AACE MAY NOT BE REPRODUCED IN ANY FORM WITHOUT EXPRESS WRITTEN PERMISSION FROM AACE. DOI 10.4158/EP161682.CS

La hipoglucèmia

Table 6.3—Classification of hypoglycemia (61)

Level	Glycemic criteria	Description
Glucose alert value (level 1)	≤70 mg/dL (3.9 mmol/L)	Sufficiently low for treatment with fast-acting carbohydrate and dose adjustment of glucose-lowering therapy
Clinically significant hypoglycemia (level 2)	<54 mg/dL (3.0 mmol/L)	Sufficiently low to indicate serious, clinically important hypoglycemia
Severe hypoglycemia (level 3)	No specific glucose threshold	Hypoglycemia associated with severe cognitive impairment requiring external assistance for recovery

- Interrogar activament al malat en cada contacte sobre la possibilitat de hipoglucèmies
- Canvi: hipoglucèmia clinicament significativa **54 mg/dl (3,0 mmol/l)**
- Valors d´alerta quan la glucèmia es **≤ 70 mg/dl (3,9 mmol/l)**

6.- Tractament farmacològic de la diabetis tipus 2

Canvis:

1.- Canvia el títol “Approaches to Glycemic Treatment” a “Pharmacologic Approaches to Glycemic Treatment”

2.- Deficiència de Vit B12 pel ús de MET – recomanació de mesurar-la

3.- Biosimilars de la insulina

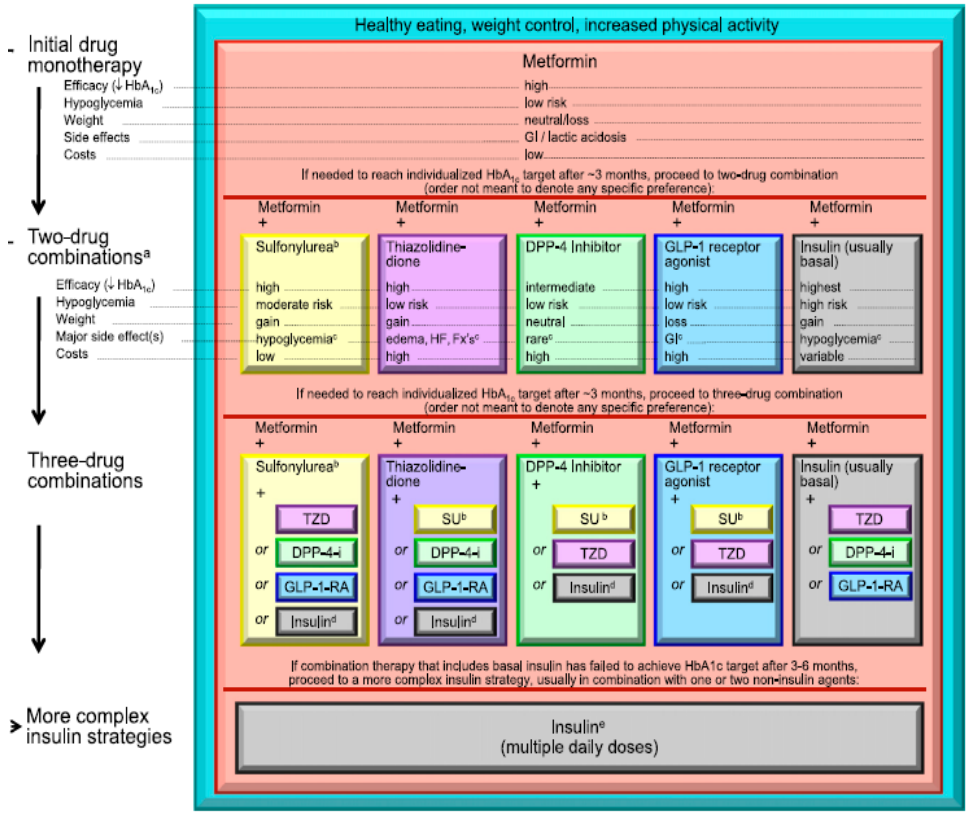
4.- Consideracions sobre l´empagliflocina i el liraglutide

5.- Taules d’actualització del cost de la insulina

6.- Afegir l'ús per no inferioritat de la INS basal + anal GLP-1 I de insulina premix en front a pauta basal-bolus

Tractament farmacològic

- La MET es el fàrmac inicial si no està contraindicat (A)
- Se associa amb deficiència de Vit B12 (B)
- Insulina en persones sintomàtiques o HbA1c ≥ 10% o Glu 300 mg/dl (E)
- Si amb MET no s´arriva al objetiu amb dosis màx en 3 mesos afegir un altra ADO o insulina (A)



-American Diabetes Association. Standards of Medical Care in Diabetes—2017 Diabetes Care Volume 40, Supplement 1, January 2017

.

Tractament farmacològic

Start with Monotherapy unless:

A1C is greater than or equal to 9%, **consider Dual Therapy.**

A1C is greater than or equal to 10%, blood glucose is greater than or equal to 300 mg/dL, or patient is markedly symptomatic, **consider Combination Injectable Therapy** (See Figure 8.2).

Monotherapy — Metformin — Lifestyle Management

EFFICACY*	high
HYPO RISK	low risk
WEIGHT	neutral/loss
SIDE EFFECTS	GI/lactic acidosis
COSTS*	low

If A1C target not achieved after approximately 3 months of monotherapy, proceed to 2-drug combination (order not meant to denote any specific preference — choice dependent on a variety of patient- & disease-specific factors):

Dual Therapy — Metformin + — Lifestyle Management

	Sulfonylurea	Thiazolidinedione	DPP-4 inhibitor	SGLT2 inhibitor	GLP-1 receptor agonist	Insulin (basal)
EFFICACY*	high	high	intermediate	intermediate	high	highest
HYPO RISK	moderate risk	low risk	low risk	low risk	low risk	high risk
WEIGHT	gain	gain	neutral	loss	loss	gain
SIDE EFFECTS	hypoglycemia	edema, HF, fxs	rare	GU, dehydration, fxs	GI	hypoglycemia
COSTS*	low	low	high	high	high	high

If A1C target not achieved after approximately 3 months of dual therapy, proceed to 3-drug combination (order not meant to denote any specific preference — choice dependent on a variety of patient- & disease-specific factors):

Triple Therapy — Metformin + — Lifestyle Management

Sulfonylurea +	Thiazolidinedione +	DPP-4 inhibitor +	SGLT2 inhibitor +	GLP-1 receptor agonist +	Insulin (basal) +
TZD	SU	SU	SU	SU	TZD
or DPP-4-i	or DPP-4-i	or TZD	or TZD	or TZD	or DPP-4-i
or SGLT2-i	or SGLT2-i	or SGLT2-i	or DPP-4-i	or SGLT2-i	or SGLT2-i
or GLP-1-RA	or GLP-1-RA	or Insulin§	or GLP-1-RA	or Insulin§	or GLP-1-RA
or Insulin§	or Insulin§		or Insulin§		

If A1C target not achieved after approximately 3 months of triple therapy and patient (1) on oral combination, move to basal insulin or GLP-1 RA, (2) on GLP-1 RA, add basal insulin, or (3) on optimally titrated basal insulin, add GLP-1 RA or mealtime insulin. Metformin therapy should be maintained, while other oral agents may be discontinued on an individual basis to avoid unnecessarily complex or costly regimens (i.e., adding a fourth antihyperglycemic agent).

e 8.2)

American Diabetes Association. Standards of Medical Care in Diabetes—2017
Diabetes Care Volume 40, Supplement 1, January 2017

6.- Tractament Farmacològic- AACE 2017

GLYCEMIC CONTROL ALGORITHM

LIFESTYLE THERAPY
(Including Medically Assisted Weight Loss)

Entry A1C < 7.5%

MONOTHERAPY*

- ✓ Metformin
- ✓ GLP-1 RA
- ✓ SGLT-2i
- ✓ DPP-4i
- ⚠ TZD
- ✓ AGi
- ⚠ SU/GLN

If not at goal in 3 months proceed to Dual Therapy

Entry A1C ≥ 7.5%

DUAL THERAPY*

MET or other 1st-line agent +

- ✓ GLP-1 RA
- ✓ SGLT-2i
- ✓ DPP-4i
- ⚠ TZD
- ⚠ Basal Insulin
- ✓ Colesevelam
- ✓ Bromocriptine QR
- ✓ AGi
- ⚠ SU/GLN

If not at goal in 3 months proceed to Triple Therapy

TRIPLE THERAPY*

MET or other 1st-line agent + 2nd-line agent +

- ✓ GLP-1 RA
- ✓ SGLT-2i
- ⚠ TZD
- ⚠ Basal insulin
- ✓ DPP-4i
- ✓ Colesevelam
- ✓ Bromocriptine QR
- ✓ AGi
- ⚠ SU/GLN

If not at goal in 3 months proceed to or intensify insulin therapy

Entry A1C > 9.0%

SYMPTOMS

NO	YES
DUAL Therapy OR TRIPLE Therapy	INSULIN ± Other Agents

ADD OR INTENSIFY INSULIN

Refer to Insulin Algorithm

LEGEND

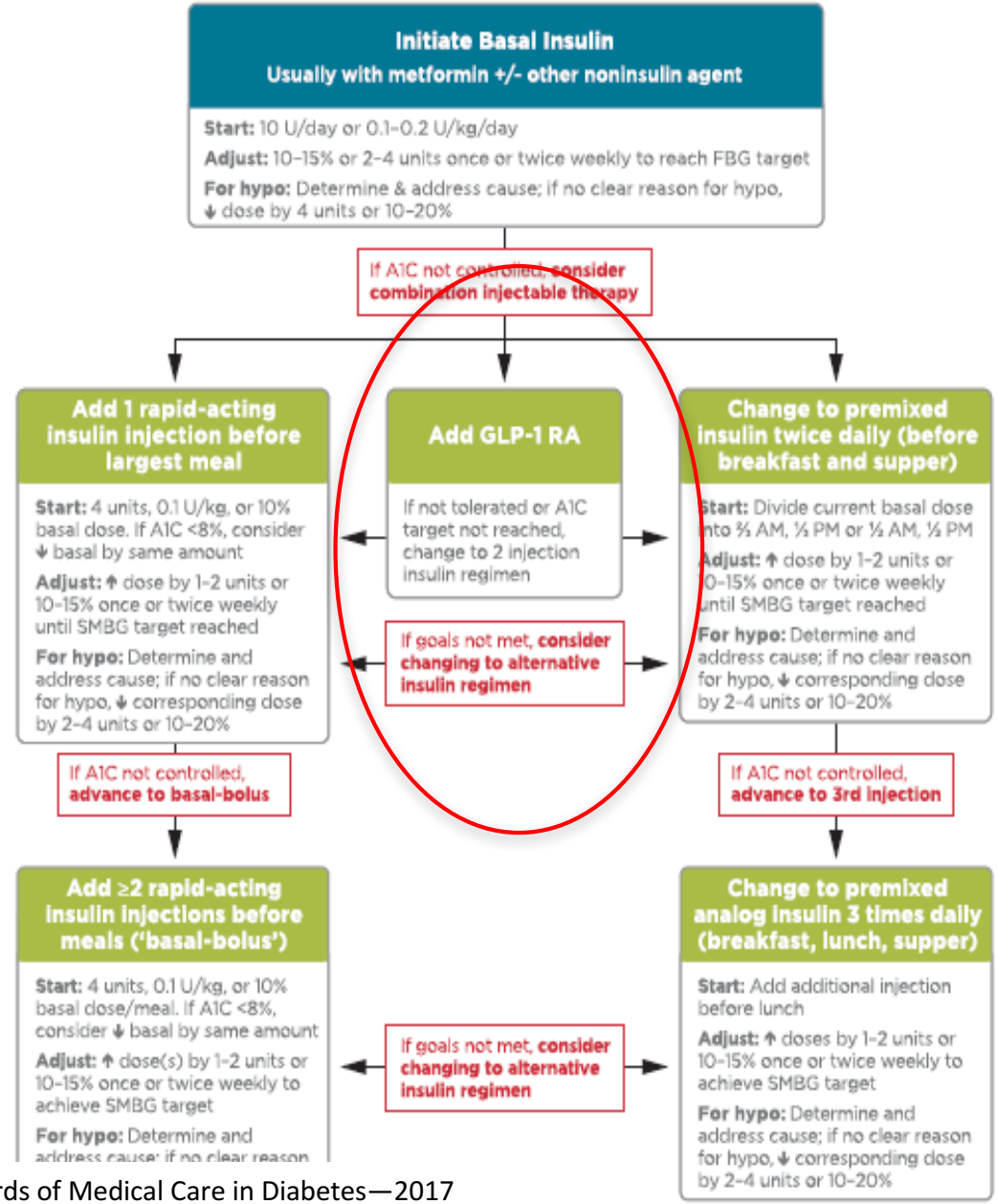
- ✓ Few adverse events and/or possible benefits
- ⚠ Use with caution

* Order of medications represents a suggested hierarchy of usage; length of line reflects strength of recommendation

PROGRESSION OF DISEASE

COPYRIGHT © 2017 AACE MAY NOT BE REPRODUCED IN ANY FORM WITHOUT EXPRESS WRITTEN PERMISSION FROM AACE. DOI 10.4158/EP161682.CS

Tractament farmacològic



American Diabetes Association. Standards of Medical Care in Diabetes—2017
Diabetes Care Volume 40, Supplement 1, January 2017

Tractament farmacològic

Noves taules comparant el costs del fàrmacs i insulines

Table 8.2—Median monthly cost of maximum approved daily dose of noninsulin glucose-lowering agents in the U.S. (48)

Class	Compound(s)	Dosage strength/product (if applicable)	Median AWP (min, max)†	Maximum approved daily dose*
Biguanides	• Metformin	500 mg (IR)	$84 ($5, $94)	2,000 mg
		850 mg (IR)	$108 ($5, $108)	2,550 mg
		1,000 mg (IR)	$86 ($4, $87)	2,000 mg
		500 mg (ER)	$90 ($82, $6,672)	2,000 mg
		750 mg (ER)	$72 ($65, $92)	1,500 mg
		1,000 mg (ER)	$1,028 ($1,010, $7,213)	2,000 mg
Sulfonylureas (2nd Gen)	• Glyburide	5 mg	$94 ($64, $103)	20 mg
		6 mg (micronized)	$50 ($48, $71)	12 mg (micronized)
	• Glipizide	10 mg (IR)	$74 ($67, $97)	40 mg (IR)
		10 mg (XL)	$97	20 mg (XL)
	• Glimepiride	4 mg	$74 ($71, $198)	8 mg
Meglitinides (glinides)	• Repaglinide	2 mg	$799 ($163, $878)	16 mg
	• Nateglinide	120 mg	$156	360 mg
TZDs	• Pioglitazone	45 mg	$349 ($348, $349)	45 mg
	• Rosiglitazone	4 mg	$355	8 mg
α-Glucosidase inhibitors	• Acarbose	100 mg	$104 ($104, 105)	300 mg
	• Miglitol	100 mg	$241	300 mg
DPP-4 inhibitors	• Sitagliptin	100 mg	$436	100 mg
	• Saxagliptin	5 mg	$436	5 mg
	• Linagliptin	5 mg	$428	5 mg
	• Alogliptin	25 mg	$436	25 mg
Bile acid sequestrant	• Colesevelam	625 mg tabs	$679	3.75 g
		1.875 g suspension	$1,357	3.75 g
Dopamine-2 agonists	• Bromocriptine	0.8 mg	$719	4.8 mg
SGLT2 inhibitors	• Canagliflozin	300 mg	$470	300 mg
	• Dapagliflozin	10 mg	$470	10 mg
	• Empagliflozin	25 mg	$470	25 mg
GLP-1 receptor agonists	• Exenatide	10 μg pen	$729	20 μg
	• Exenatide (extended-release)	2 mg powder for suspension or pen	$692	2 mg**
	• Liraglutide	18 mg/3 mL pen	$831	1.8 mg
	• Albiglutide	50 mg pen	$527	50 mg**
	• Dulaglutide	1.5/0.5 mL pen	$690	1.5 mg**
Amylin mimetics	• Pramlintide	120 μg pen	$2,124	120 μg/injection††

ER and XL, extended release; IR, immediate release; TZD, thiazolidinedione. †Calculated for 30 day supply (AWP unit price × number of doses required to provide maximum approved daily dose × 30 days); median AWP listed alone when only one product and/or price. *Utilized to calculate median AWP (min, max); generic prices used, if available commercially. **Administered once weekly. ††AWP calculated based on 120 μg three times daily.

Table 8.3—Median cost of insulins in the U.S. calculated as average wholesale price per 1,000 units of specified dosage form/product (48)

Insulins	Compounds	Dosage form/product	Median AWP package price (min, max)*
Rapid-acting analogs			
	• Lispro	U-100 vial	$306
		U-100 3 mL cartridges	$306 ($306, $379)
		U-100 prefilled pen; U-200 prefilled pen	$394
	• Aspart	U-100 vial	$306
		U-100 3 mL cartridges	$380
		U-100 prefilled pen	$395
	• Glulisine	U-100 vial	$283
		U-100 prefilled pen	$365
	• Inhaled insulin	Inhalation cartridges	$557 ($453, $754)
Short-acting			
	• Human Regular	U-100 vial	$165
Intermediate-acting			
	• Human NPH	U-100 vial	$165
		U-100 prefilled pen	$350
Concentrated Human Regular insulin			
	• U-500 Human Regular insulin	U-500 vial	$165
		U-500 prefilled pen	$213
Basal analogs			
	• Glargine	U-100 vial; U-100 prefilled pen; U-300 prefilled pen	$298
	• Detemir	U-100 vial; U-100 prefilled pen	$323
	• Degludec	U-100 prefilled pen; U-200 prefilled pen	$355
Premixed products			
	• NPH/Regular 70/30	U-100 vial	$165
		U-100 prefilled pen	$350
	• Lispro 50/50	U-100 vial	$317
		U-100 prefilled pen	$394
	• Lispro 75/25	U-100 vial	$317
		U-100 prefilled pen	$394
	• Aspart 70/30	U-100 vial	$318
		U-100 prefilled pen	$395

AWP listed alone when only one product and/or price.

7.- Cirurgia Metabòlica

(antigament bariàtrica)

Canvis:

1.- Es reforça el paper de la CB a dins del tractament de la DM2

2.- Canvia el nom per cirurgia metabòlica

3.- Canvis en els criteris de IMC per la CB

Cirurgia metabòlica

- ❑ Hi han estudis que mostran remissions de la DM2 amb la CB als dos anys del 75% i als 6 anys del 62%.
- ❑ I remisions dels altres factors de risc cardiovascular
- ❑ Swedish Obese Subjects (SOS) study, als 15 anys mostrà fins a un 30% reducció de ECV i fins un 50% de MCV

Adams TD, et al . Health benefits of gastric bypass surgery after 6 years. JAMA. 2012 Sep 19;308(11):1122-31.

Sjöström L. Review of the key results from the Swedish Obese Subjects (SOS) trial: a prospective controlled intervention study of bariatric surgery. J Intern Med. 2012 Nov 19. doi: 10.1111/joim.12012. [Epub ahead of print]

Vest AR, et al. Bariatric surgery and cardiovascular outcomes: a systematic review. Heart. 2012 Dec;98(24):1763-77. doi: 10.1136/heartjnl-2012-301778. Epub 2012 Oct 17.

Cirurgia metabòlica

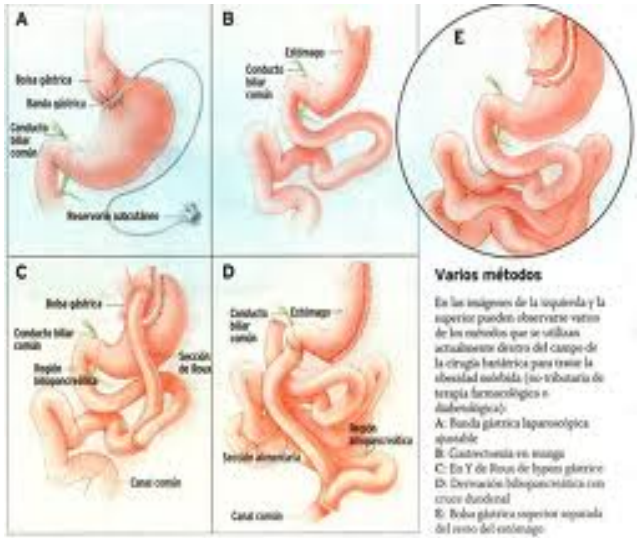


Table 7.1—Treatment for overweight and obesity in type 2 diabetes

	BMI category (kg/m^2)				
Treatment	23.0* or 25.0–26.9	27.0–29.9	27.5* or 30.0–34.9	35.0–39.9	≥40
Diet, physical activity, and behavioral therapy	†	†	†	†	†
Pharmacotherapy		†	†	†	†
Metabolic surgery			†	†	†

*Cutoff points for Asian American individuals.
†Treatment may be indicated for selected motivated patients.

- ❑ Recomenada pel tractament de la DM2 si IMC ≥ 40 independentment del nivel de control (A)
- ❑IMC entre 35-39,9 si la hiperglucèmia no es controla malgrat el tractament adequat (A)
- ❑IMC entre 30-34,9 si la hiperglucèmia no es controla malgrat el tractament adequat (incloent insulina) (B) ¿¿¿??

American Diabetes Association. Standards of Medical Care in Diabetes—2017
Diabetes Care Volume 40, Supplement 1, January 2017

Cirugía metabòlica

Table 7.1—Treatment for overweight and obesity in type 2 diabetes

	BMI category (kg/m^2)				
Treatment	23.0* or 25.0–26.9	27.0–29.9	27.5* or 30.0–34.9	35.0–39.9	≥40
Diet, physical activity, and behavioral therapy	†	†	†	†	†
Pharmacotherapy		†	†	†	†
Metabolic surgery			†	†	†

*Cutoff points for Asian American individuals.
†Treatment may be indicated for selected motivated patients.

8.- Tractament de la hipertensió arterial

Canvis:

1.- Pacient sense albuminúria qualsevol grup farmacològic es pot utilitzar com a primera opció

2.- Objectiu TA en embarassada: 120-160/80-105

- Cribratge

La pressió arterial s'ha de mesurar en cada visita. Confirmar en una segona determinació **B**

- Objectius

Objectiu de TA <140/90 mm Hg $ **A**

Pacients amb MCV <130/80 mm Hg si es pot aconseguir fàcilment **C**

TA en l'embaràs 120-160/80-105 **E**

Tractament

- TA> **120/80** mm Hg, s'ha de recomanar estil de vida saludable: pèrdua de pes, reducció de la ingesta de sodi, moderació de la ingesta d'alcohol i exercici físic **B**
- TA >**140/90** mm Hg: Iniciar tractament farmacològic + hàbits saludables **A**
- TA >**160/100** biteràpia inicial **A**
- IECA o ARA2 si CAC ≥300 mg / g creatinina **A**
  CAC 30-299 mg / g de creatinina **B**
- IECA, ARA2 o diürètic, cal monitoritzar **B**
  - Creatinina sèrica,
  - Filtrat glomerular (EGFR)
  - Calièmia
- **Tractament inicial**: qualsevol dels 4 grups farmacològics i l'associació entre ells (excepte IECA + ARA2) * **A**

$ *Emdin. JAMA 2015; Cochrane Syst Rev 2013*

* *Bangalore S. BMJ 2016; 352:i348*

9.- Maneig de la dislipèmia

No hi han canvis.

Cribratge

- Determinació de perfil lipídic en el moment del diagnòstic, i cada 5 anys com a mínim **E**

- Al iniciar el tractament amb estatines i periòdicament per avaluar la resposta al tractament i l'adherència **E**

Objectius de LDL

- No es descriuen

Tractament

- PÈRDUA PES (si està indicat); reducció de greixos saturats, greixos trans i colesterol; augment dels àcids grassos omega-3, fibra i esterols vegetals i AUGMENT DE L'ACTIVITAT FÍSICA **A**

- Intensificar ESTILS DE VIDA saludables i optimitzar el control glucèmic en pacients amb nivells elevats de triglicèrids (≥150 mg / dl i / o colesterol HDL baix (<40 mg/dl homes, <50 mg/dl) **C**

- La INTENSITAT de la teràpia amb estatines dependrà de la resposta del pacient (efectes 2ª, tolerabilitat, nivells de colesterol LDL) **E**

- La TERÀPIA COMBINADA (estatines / fibrats) no es recomana. Pot ser considerada en els homes amb triglicèrids ≥204 mg/dl HDL baix (<34 mg/dl) $ **B**

- TRIGLICÊRIDS ≥500 mg/dl, avaluar la presència de causes 2ª i teràpia per reduir el risc de pancreatitis **C**

- EZETIMIBE+ESTATINA de moderada intensitat en pacients amb síndrome coronària aguda recent i LDL C ≥50 mg/dl * **A**
i en pacients amb història de MCV que no poden tolerar la teràpia amb estatines d'alta intensitat **E**

$ *ACCORD study group. N Engl J Med 2010; * IMPROVE –IT. N Engl J Med 2015*

TABLE 8. High- and Moderate-Intensity Statin Therapy*

High-Intensity Statin Therapy (Lowers LDL cholesterol by ≥50%)	Moderate-Intensity Statin Therapy (Lowers LDL cholesterol by 30 to <50%)
• Atorvastatin 40–80 mg	• Atorvastatin 10–20 mg
• Rosuvastatin 20–40 mg	• Rosuvastatin 5–10 mg
	• Simvastatin 20–40 mg
50%	• Pravastatin 40–80 mg **30-50%**
	• Lovastatin 40 mg
	• Fluvastatin XL 80 mg
	• Pitavastatin 2–4 mg

*Once-daily dosing.

TABLE 7. Recommendations for Statin and Combination Treatment in People With Diabetes

Age (years)	Risk Factors	Recommended Statin Intensity*
<40	None	None
	ASCVD risk factor(s)**	Moderate or high **C**
	ASCVD	High **A**
40–75	None	Moderate **B**
	ASCVD risk factors	High **B**
	ASCVD	High **A**
	ACS and LDL cholesterol ≥50 mg/dL (1.3 mmol/L) or in patients with a history of ASCVD who cannot tolerate high-dose statins	Moderate plus ezetimibe **A**
>75	None	Moderate **B**
	ASCVD risk factors	Moderate or high **B**
	ASCVD	High **A**
	ACS and LDL cholesterol ≥50 mg/dL (1.3 mmol/L) or in patients with a history of ASCVD who cannot tolerate high-dose statins	Moderate plus ezetimibe **A**

**In addition to lifestyle therapy.*

***ASCVD risk factors include LDL cholesterol ≥100 mg/dL (2.6 mmol/L), high blood pressure, smoking, chronic kidney disease, albuminuria, and family history of premature ASCVD.*

10.- Ús dels antiagregants en el pacient amb diabetis

No hi han canvis.

Recomanacions

- **En prevenció 2ª** esta indicat l'ús de AAS (75–162mg/dia) **A**

- En pacients al·lèrgics , utilitzar clopidogrel (75 mg/day) **B**

- Després d'un síndrome coronari agut està indicada la doble anti agregació com a mínim durant un any **B**

- **Prevenció primària**: Considerar AAS (75–162mg/dia) en pacients amb RCV alt

ORIGINAL RESEARCH ARTICLE

Low-Dose Aspirin for Primary Prevention of Cardiovascular Events in Patients With Type 2 Diabetes Mellitus

10-Year Follow-Up of a Randomized Controlled Trial

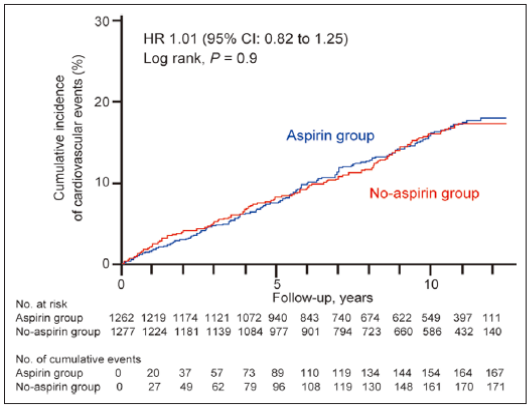


Figure 3. Sensitivity analyses for the efficacy of low-dose aspirin on cardiovascular events based on the intention-to-treat cohort. Sensitivity analyses on the intention-to-treat cohort showed that low-dose aspirin did not affect cardiovascular events (hazard ratio [HR], 1.01; 95% confidence interval [CI], 0.82–1.25; log-rank P=0.9).

Circulation. 2017;135:659–670. DOI: 10.1161/CIRCULATIONAHA.116.025760

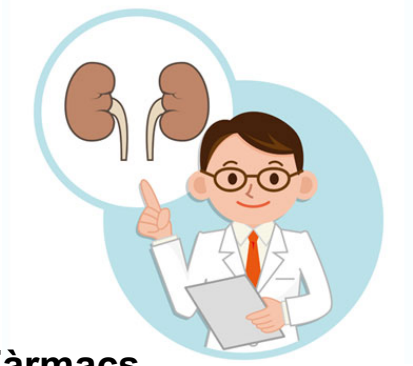
11.- La malaltia renal diabètica

No hi ha canvis:

Cribatge

Anualment determinar: Excreció d'albúmina en orina (EUA) **B**
Filtrat glomerular calculat (GFR)

- DM1 als ≥5 anys del diagnòstic
- DM2 en el moment del diagnòstic i si HTA associada.



Tractament

- Optimitzar el control glucèmic **A**
- Optimitzar el control de la tensió arterial (<140/90 mm Hg) **A**
- En pacients amb EUA elevada o risc CV o progressió de la MRD considerar xifres de TA <130/80 mm Hg
- En ancians evitar xifres de PAD < 70 mm Hg
- Reduir la ingesta de proteïnes (0.8 g/kg de pes/dia).
  En pacients dialitzats la restricció proteica ha de ser superior **B**
  (ha passat de A a B)

Fàrmacs

➢ IECA o ARA2:

- **EUA (30–299 mg/g)** **B**
- **EUA > 300 mg/g i/o eGFR < 60 mL.** **A**

➢ **NO IECA o ARA2:**

- **Normotensió** **B**
- **EUA Normal** **B**
- **eGFR ≥ 90 mL/min** **B**

Maneig del pacient segons el filtrat glomerular

eGFR (mL/min/1.73 m^2)		Recommended management
All patients		Yearly measurement of UACR, serum Cr, potassium eGFR
45–60	B	Referral to a nephrologist if possibility for nondiabetic kidney disease exists (duration of type 1 diabetes <10 years, persistent albuminuria, abnormal findings on renal ultrasound, resistant hypertension, rapid fall in eGFR, or active urinary sediment on urine microscopic examination)
		Consider the need for dose adjustment of medications
		Monitor eGFR every 6 months
	E	Monitor electrolytes, bicarbonate, hemoglobin, calcium, phosphorus, and parathyroid hormone at least yearly
		Assure vitamin D sufficiency
		Vaccinate against Hep B virus
		Consider bone density testing
		Referral for dietary counseling
30–44	E	Monitor eGFR every 3 months
		Monitor electrolytes, bicarbonate, calcium, phosphorus, parathyroid hormone, hemoglobin, albumin, and weight every 3–6 months
		Consider the need for dose adjustment of medications
<30	A	Referral to a nephrologist

12.- La retinopatia diabètica

Canvis:

1.- Importància del consell sobre el risc de la retinopatia durant l'embaràs

Cribatge

Anualment exploració ocular amb dilatació pupil·lar **B**

- DM1 als ≥5 anys del diagnòstic
- DM2 en el moment del diagnòstic

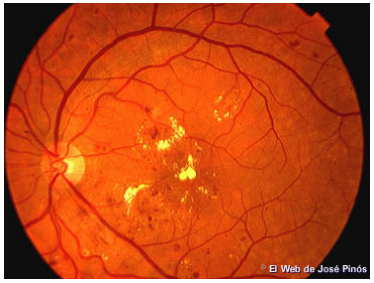
- Si no hi ha signes de retinopatia i el control de la glucèmia és adequat, el cribratge por ser **bianual** **B**

- La retinografia no pot substituir un examen ocular complert **E**

Embarassada:

-Examen retina abans de la concepció i cada 3 mesos fins 1 any després del part **B**

-Consell i informació sobre el risc d'empitjorament de la retinopatia durant l'embaràs **B**



Recomanacions

- Optimitzar el control de la glucèmia **A**
- Optimitzar el control de la TA (<140/90 mm Hg) **A**
- Optimitzar el control lipídic i fenofibrat* en lesions lleus no proliferatives **A**

Tractament

- Derivar immediatament al oftalmòleg davant qualsevol lesió retiniana **A**
- Fotocoagulació amb laserterapia en lesions proliferatives i No proliferatives severes **A**
- Injecció intravítrea amb anti-VEGT (Factor de creixement endotelial) en l'edema macular **A**
- No contraindicada la antiagregació amb AAS **A**

** ACCORD Eye study. Ophtalmology 2014;121:2443-51*

13.- La neuropatia diabètica

Canvis:

1.- Tractament del dolor neuropàtic

Cribratge

Anualment exploració de la neuropatia perifèrica distal

- DM1 als ≥5 anys del diagnòstic
- DM2 en el moment del diagnòstic

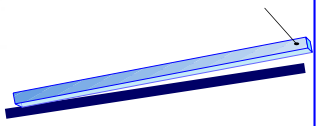
B

Inclou

- Fibres petites
  - sensibilitat tèrmica
  - sensibilitat dolorosa (pinprick)

B

- Fibres llargues
  - sensibilitat vibratòria (diapasó 128-Hz)
  - sensibilitat protectora (Monofilament). Peu diabètic



- Neuropatia autònoma si altres c. microvascular

E

Tractament

- Optimitzar el control glucèmic **B**
- Tractament del dolor neuropàtic per millorar la QV **B**
- La **Pregabalina o duloxetina** , tractament inicial del dolor neuropàtic **A**

14.- El peu diabètic

Canvis:

1.- Importància de la inspecció del peus en cada visita

2.- Consell específic sobre la importància de calçat adequat en els pacients amb risc de peu diabètic

14.- Peu diabètic

Avaluació integral del peu anualment. **B**

- **Antecedents d'úlceres, amputacions, peu de Charcot**
- **Angioplàstia o cirurgia vascular,**
- **Tabaquisme**
- **Retinopatia i nefropatia**
- **Símptomes de neuropatia (dolor, entumiment)**
- **Símptomes de vasculopatia (claudicació)**

Inspecció dels peus en cada visita. **C** **(nou)**

- **Inspecció de la pell**
- **Avaluació de les deformitats del peu**
- **Avaluació neurològica (monofilament)**
- **Avaluació vascular, (polsos cames i peus)**

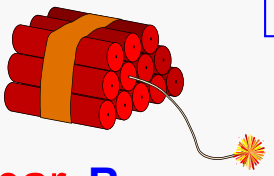
Proporcionar educació general dels peus auto-cura preventiu per a tots els pacients amb diabetis. **B**

Derivació a unitat vascular. C

- ≥ 50 anys
- Símptomes de vasculopatia (claudicació)
- Polsos absents

Derivació a una unitat de peu diabètic. C

- Fumadors
- Antecedents de vasculopatia
- Monofilament patològic
- Anomalies estructurals del peu



Abordatge multidisciplinar. B

- Úlceres
- Antecedents d'amputacions
- Peu de Charcot
- Dialitzats

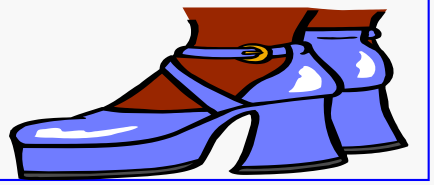
Utilitzar sabates terapéutiques. B (nou)

Pacients d'alt risc

Neuropatia severa

Deformitats

Amputacions



Quin concepte ha quedat sense canvis

- Criteris diagnòstics i cribratge de la DM
- Abordatge de les complicacions

Que esperaves que canvies i no ha canviat.

- Res, han inclòs totes les evidencies que han aparegut en l'últim any en les recomanacions

Que us sembla?

- Globalment pocs canvis de pes excepte el disposar de nous fàrmacs pel tractament del diabètic amb Malaltia cardiovascular

CONCLUSIONS. Novetats més destacades

- **Valoració global centrada en el pacient**

- **Les comorbiditats s'han ampliat:**
  - **Malalties autoimmunes**
  - **Trastorns psicològics (ansietat, depressió alteracions de la ingesta)**
  - **Trastorn mental sever**
  - **Trastorns de la son**

- **Indicacions de la cirurgia (metabòlica enlloc de bariàtrica). Es rebaixa a > 30 kg/m^2 (27.5 kg/m^2 en Asiàtics) si no estan ben controlats**

- **Medicació de 1ª línia per la HTA. Es recomana qualsevol dels 4 grups terapèutics (no exclusivament els IECAs): diürètics tiacídics, betablocs, IECA/ARA2, calç-antagonistes**

CONCLUSIONS. Novetats més destacades

- **Nou algoritme de insulinització que dona més opcions al pacient**

- **Recomanació del GLP-1 liraglutida i el SGLT-2 inhibidor empagliflozina en pacients amb MCV**

- **Nova definició de hipoglucèmia important (<54 mg/dL) Es recomana registrar-la en la practica clínica.**

- **En la taula de les medicacions s'ha inclòs el cost dels medicaments**

1

AMERICAN DIABETES ASSOCIATION

STANDARDS OF MEDICAL CARE IN DIABETES—2017

Gràcias!!