# Guías para el manejo de DM-2: actualización y recomendaciones

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## Conflictos de interés

- Conferencista: Astra Zeneca, Abbott Nutrición, Novartis Oncology, Novo Nordisk, Merck Sharp & Dohme, Roche, Glaxo SmithKline, Sanofi Aventis, Bayer, Pfizer, Novartis
- Advisory Board: Novartis Oncology, Sanofi Aventis, Astra Zeneca, Novo Nordisk, Stendhal, Pfizer
- Investigación clínica: Astra Zeneca, Novartis Pharma Logistics Inc., Merck Sharp & Dohme, Glaxo SmithKline, Organon, Boehringer Ingelheim, Roche, Novo Nordisk

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## Agenda

- Comparar guías: ADA, AACE, ALAD, ESC
- Recomendaciones en manejo de glucosa, presión arterial y lípidos
- Intrepretación personal de guías

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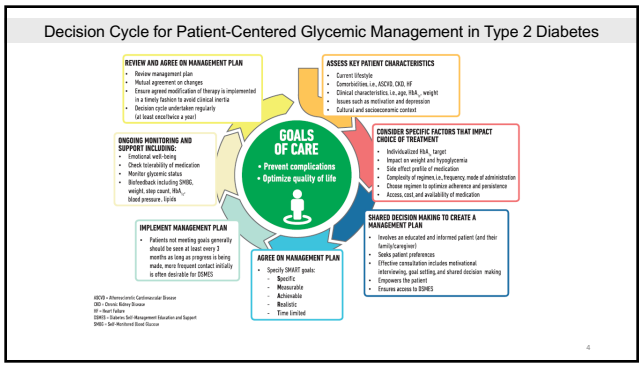
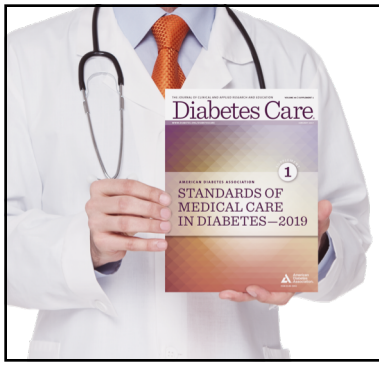



Metas de glucosa




Standards of Medical Care in Diabetes – 2019

## ADA: A1C Goals (1).

6.4 A reasonable A1C goal for many nonpregnant adults is <7% (53 mmol/mol) A

6.5 Providers might reasonably suggest more stringent A1C goals (such as <6.5% [48 mmol/mol]) for selected individual patients if this can be achieved without significant hypoglycemia or other adverse effects of treatment (i.e., polypharmacy). Appropriate patients might include those with short duration of diabetes, type 2 diabetes treated with lifestyle or metformin only, long life expectancy, or no significant cardiovascular disease C

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## ADA: A1C Goals (2).

6.6 Less stringent A1C goals (such as <8% [64 mmol/mol]) may be appropriate for patients with a history of severe hypoglycemia, limited life expectancy, advanced microvascular or macrovascular complications, extensive comorbid conditions, or long-standing diabetes in whom the goal is difficult to achieve despite diabetes self-management education, appropriate glucose monitoring, and effective doses of multiple glucose-lowering agents including insulin B

6.7 Reassess glycemic targets over time based on the criteria in **Fig. 6.1** or, in older adults, **Table 12.1** E

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**Table 12.2—Considerations for treatment regimen simplification and deintensification/deprescribing in older adults with diabetes (39,55)**

| Patient characteristics/ health status | Reasonable A1C/ treatment goal | Rationale/considerations | When may regimen simplification be required? | When may treatment deintensification/ deprescribing be required? |
|---|---|---|---|---|
| Healthy (few coexisting chronic illnesses, intact cognitive and functional status) | A1C <7.5% (58 mmol/mol) | • Patients can generally perform complex tasks to maintain good glycemic control when health is stable<br>• During acute illness, patients may be more at risk for administration or dosing errors that can result in hypoglycemia, falls, fractures, etc. | • If severe or recurrent hypoglycemia occurs in patients on insulin therapy (even if A1C is appropriate)<br>• If wide glucose excursions are observed<br>• If cognitive or functional decline occurs following acute illness | • If severe or recurrent hypoglycemia occurs in patients on noninsulin therapies with high risk of hypoglycemia (even if A1C is appropriate)<br>• If wide glucose excursions are observed<br>• In the presence of polypharmacy |
| Complex/intermediate (multiple coexisting chronic illnesses or 2+ instrumental ADL impairments or mild-to-moderate cognitive impairment) | A1C <8.0% (64 mmol/mol) | • Comorbidities may affect self-management abilities and capacity to avoid hypoglycemia<br>• Long-acting medication formulations may decrease pill burden and complexity of medication regimen | • If severe or recurrent hypoglycemia occurs in patients on insulin therapy (even if A1C is appropriate)<br>• If unable to manage complexity of an insulin regimen<br>• If there is a significant change in social circumstances, such as loss of caregiver, change in living situation, or financial difficulties | • If severe or recurrent hypoglycemia occurs in patients on noninsulin therapies with high risk of hypoglycemia (even if A1C is appropriate)<br>• If wide glucose excursions are observed<br>• In the presence of polypharmacy |

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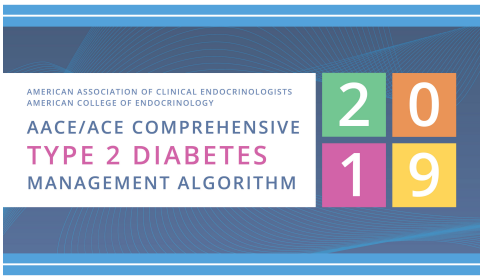
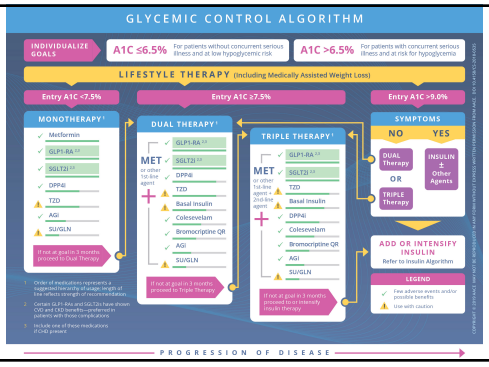



# 2019 ESC Guidelines on diabetes, pre-diabetes, and cardiovascular diseases

ESC European Society of Cardiology

## Recommendations for glycaemic control in individuals with DM

ESC European Society of Cardiology

| Recommendations | Class | Level |
|---|---|---|
| It is recommended to apply tight glucose control, targeting a near-normal HbA1c (<7.0% or <53 mmol/mol), to decrease microvascular complications in DM. | I | A |
| It is recommended that HbA1c targets are individualized according to duration of DM, comorbidities, and age. | I | C |
| Avoidance of hypoglycaemia is recommended. | I | C |
| The use of structured self-monitoring of blood glucose and/or continuous glucose monitoring should be considered to facilitate optimal glycaemic control. | IIa | A |
| An HbA1c target of <7.0% (or <53 mmol/mol) should be considered for the prevention of macrovascular complications in individuals with DM. | IIa | C |

www.escardio.org/guidelines

ESC Guidelines on Diabetes, pre-diabetes and cardiovascular diseases in collaboration with EASD (European Heart Journal 2019 - doi/10.1093/eurheartj/ehz486)

www.revistaalad.com

REVISTA DE LA ALAD

ASOCIACIÓN LATINOAMERICANA DE DIABETES

ISSN: 2248-6518

## Guías ALAD sobre el Diagnóstico, Control y Tratamiento de la Diabetes Mellitus Tipo 2 con Medicina Basada en Evidencia Edición 2019

## 5.3 ¿CUÁL DEBE SER LA META DE CONTROL GLUCÉMICO EN PACIENTES CON DM2?

5.3.1 La meta general de A1c en pacientes con diabetes tipo 2 debe ser menos de 7.0%.
**Recomendación A**

5.3.2 En pacientes de menos de 60 años de edad, reciente diagnóstico y sin comorbilidades importantes, se puede considerar una meta de 6.5%.
**Recomendación de consenso**

5.3.3 En el adulto mayor con deterioro funcional importante y/o comorbilidades que limitan la expectativa de vida, se puede considerar una meta de A1c hasta 8.0%
**Recomendación C**

## Comentarios…

- Si son los mismos estudios, por qué no nos ponemos de acuerdo entre 6.5 y 7.0%?
- Las metas hay que individualizarlas:
  - Contexto clínico
  - Disponibilidad terapéutica
  - Objetivos terapéuticos

## Impact of Intensive Therapy for Diabetes: Summary of Major Clinical Trials

| Study | Microvasc | CVD | | Mortality | |
|---|---|---|---|---|---|
| UKPDS | 7.0 vs 7.9% | ↔ | ↓ | ↔ | ↓ |
| DCCT / EDIC* | 7.0 vs 9% | ↔ | ↓ | ↔ | ↔ |
| *ACCORD* | 6.4 vs 7.5% | ↔ | | ↑ | |
| *ADVANCE* | 6.5 vs 7.3% | ↔ | | ↔ | |
| *VADT* | 6.9 vs 8.4% | ↔ | | ↔ | |

Initial Trial

Long Term Follow-up

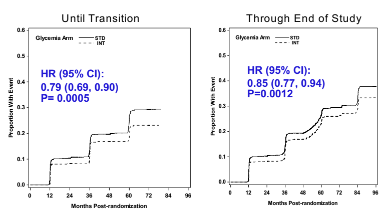
* in T1DM

Kendall DM, Bergenstal RM. © International Diabetes Center 2009

UK Prospective Diabetes Study (UKPDS) Group. *Lancet* 1998;352:854.
Holman RR et al. *N Engl J Med*. 2008;359:1577. DCCT Research Group. N Engl J Med 1993;329;977.
Nathan DM et al. *N Engl J Med*. 2005;353:2643. Gerstein HC et al. *N Engl J Med*. 2008;358:2545.
Patel A et al. N Engl J Med 2008;358:2560. Duckworth W et al. N Engl J Med 2009;360:129. (erratum: Moritz T. *N Engl J Med* 2009;361:1024)

## Results – Nephropathy Outcome #1

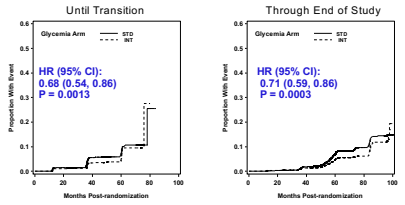
Development of microalbuminuria
(urine albumin:creatinine ratio ≥ 30 mg/g)




ACCORD

## Results – Nephropathy Outcome #2

Development of macroalbuminuria
(urine albumin:creatinine ratio ≥ 300 mg/g)



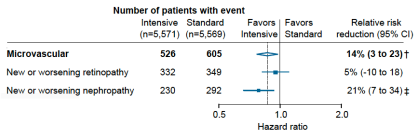




ACCORD

ADVANCE

## Major microvascular events




†P=0.01
‡P=0.006

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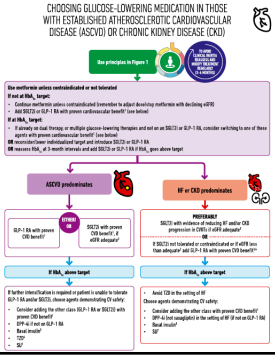
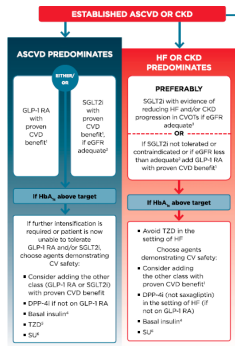
## Por lo tanto…

- Deberíamos llevar al menos a 7% en la mayoría de los pacientes, a menos que sean pacientes adultos mayores, frágiles o con corta expectativa de vida
- Se puede tratar de llevar a menos de 6.5% en pacientes jóvenes, de recién inicio, especialmente si lo logramos con pocas hipoglicemias y efectos adversos
  - El beneficio es principalmente prevención de aparición de microalbuminuria en alrededor de 20%
  - No es insignificante!

| Parámetro | ADA | AACE | ESC | ALAD |
|---|---|---|---|---|
| Hba1c | <7% | <6.5% | <7% | <7% |
| | | | | |
| | | | | |
| | | | | |

Cómo tratamos la hiperglicemia?






- If A1C is above target despite recommended first-line treatment and the patient has ASCVD or CKD:
  - **ASCVD Predominates:**
    - Add GLP-1 RA with proven CVD benefit, OR
    - Add SGLT-2 inhibitor with proven CVD benefit (if eGFR adequate)
  - **If HF or CKD Predominates:**
    - Add SGLT-2 inhibitor with evidence of benefit
    - If can't take an SGLT-2 inhibitor, use a GLP-1 RA with proven CVD benefit

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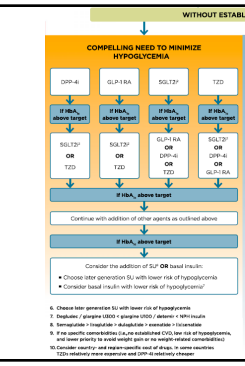


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Within many of these trials the benefit of treatment (in terms of MACE endpoints) was less pronounced in subjects with lower risk for ASCVD; however data from DECLARE-TIMI 58 and REWIND trials indicate that the CV benefits of SGLT2 inhibitors (in terms of reduction in the risk for heart failure hospitalization) and GLP-1 receptor agonists (in terms of lower risk of MACE) may extend to higher-risk type 2 diabetes patients in the primary prevention group. In addition, canagliflozin significantly reduced the risk of MACE events and hospitalization for HF in patients with diabetic kidney disease, regardless of prior ASCVD status. For patients at high risk for cardiovascular events due to established ASCVD or multiple risk factors for ASCVD (which may include diabetic kidney disease), incorporating one of the SGLT2 inhibitors or GLP-1 receptor agonists that have been demonstrated to reduce cardiovascular events is recommended (Table 9.1).

**Suggested citation:** American Diabetes Association. 9. Pharmacologic Approaches to Glycemic Treatment: Standards of Medical Care in Diabetes—2019 [web annotation]. Diabetes Care 2019;42(Suppl. 1):S90–S102.

- **UPDATE: 11.3** For patients with type 2 diabetes and diabetic kidney disease, consider use of a sodium-glucose cotransporter 2 inhibitor in patients with an eGFR ≥ 30 and particularly in those with >300 mg/g albuminuria to reduce risk of CKD progression, cardiovascular events, or both. **A** In patients with CKD who are at increased risk for CV events, use of a glucagon-like peptide 1 receptor agonist may reduce risk of progression of albuminuria, cardiovascular events, or both (Table 9.1). **C**

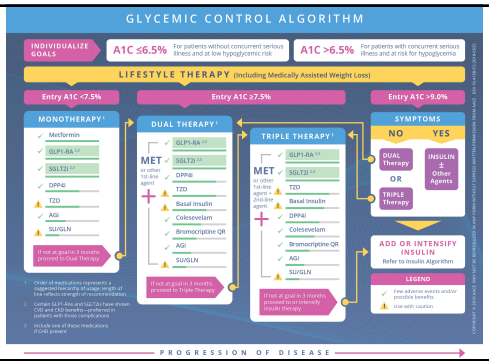
- **UPDATE: 11.8** Based on findings from the Canagliflozin and Renal Events in Diabetes with Established Nephropathy Clinical Evaluation (CREDENCE) trial, recommendation 11.8 in Section 11. Microvascular Complications and Foot Care has been removed and is no longer a recommendation.

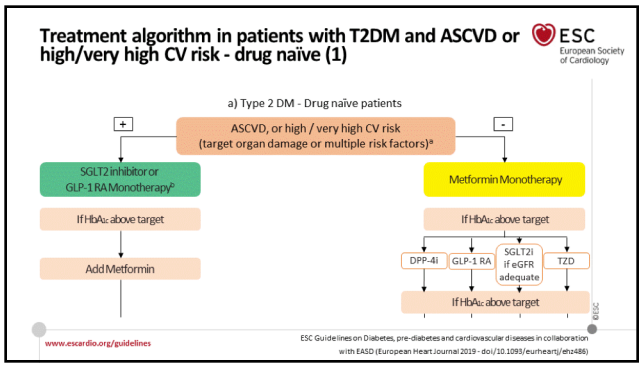
**Reference:** Perkovic V, Jardine MJ, Neal B, et al. Canagliflozin and renal outcomes in type 2 diabetes and nephropathy. N Engl J Med 2019 April 14 [Epub ahead of print]. https://doi.org/10.1056/NEJMoa1811744

**Annotation published:** June 3, 2019.

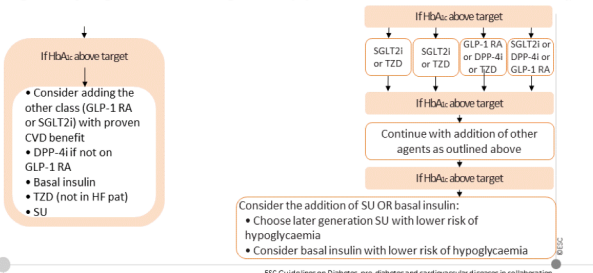
**Annotation approved by PPC:** May 26, 2019.

**Suggested citation:** American Diabetes Association. 11. Microvascular complications and foot care: Standards of Medical Care in Diabetes—2019 [web annotation]. Diabetes Care 2019;42(Suppl. 1):S124–S138.



## Treatment algorithm in patients with T2DM and ASCVD or high/very high CV risk - drug naïve (2)

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ESC Guidelines on Diabetes, pre-diabetes and cardiovascular diseases in collaboration with EASD (European Heart Journal 2019 - doi/10.1093/eurheartj/ehz486)

## Recommendations for glucose-lowering treatment in DM (1)

| Recommendations | Class | Level |
|---|---|---|
| **SGLT2 inhibitors** | | |
| Empagliflozin, canagliflozin, or dapagliflozin are recommended in patients with T2DM and CVD or at very high/high CV risk to reduce CV events. | I | A |
| Empagliflozin is recommended in patients with T2DM and CVD to reduce the risk of death. | I | B |

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## Recommendations for glucose-lowering treatment in DM (2)

| Recommendations | Class | Level |
|---|---|---|
| **GLP1-RAs** | | |
| Liraglutide, semaglutide or dulaglutide are recommended in patients with T2DM and CVD or at very high/high CV risk to reduce CV events. | I | A |
| Liraglutide is recommended in patients with T2DM and CVD or at very high/high CV risk to reduce the risk of death. | I | B |

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## Recommendations for glucose-lowering treatment in DM (3)

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| Recommendations | Class | Level |
|---|---|---|
| **Biguanides** | | |
| Metformin should be considered in overweight patients with T2DM without CVD and at moderate CV risk. | IIa | C |
| **Insulin** | | |
| Insulin-based glycaemic control should be considered in patients with ACS with significant hyperglycaemia (>10 mmol/L or >180 mg/dL), with the target adapted according to comorbidities. | IIa | C |

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## Recommendations for T2DM treatment to reduce heart failure risk (1)

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| Recommendations | Class | Level |
|---|---|---|
| SGLT2 inhibitors (empagliflozin, canagliflozin, dapagliflozin) are recommended to lower risk of HF hospitalization in patients with DM. | I | A |
| Metformin should be considered for DM treatment in patients with HF, if the eGFR is stable and >30 mL/min/1.73 $m^2$. | IIa | C |
| GLP1-RAs (lixisenatide, liraglutide, semaglutide, exenatide, dulaglutide) have a neutral effect on the risk of HF hospitalization, and may be considered for DM treatment in patients with HF. | IIb | A |

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## Recommendations for the prevention and management of CKD in patients with DM (2)

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| Recommendations | Class | Level |
|---|---|---|
| A RAAS blocker (ACEI or ARB) is recommended for the treatment of hypertension in DM, particularly in the presence of proteinuria, microalbuminuria, or LVH. | I | A |
| Treatment with a SGLT2 inhibitor (emplagliflozin, canagliflozin, dapagliflozin) is associated with a lower risk of renal endpoints and is recommended if eGFR is 30 to <90 mL/min/1.73 $m^2$). | I | B |
| Treatment with the GLP1-RAs liraglutide and semaglutide is associated with a lower risk of renal endpoints and should be considered for DM treatment if eGFR is>30 mL/min/1.73$m^2$. | IIa | B |

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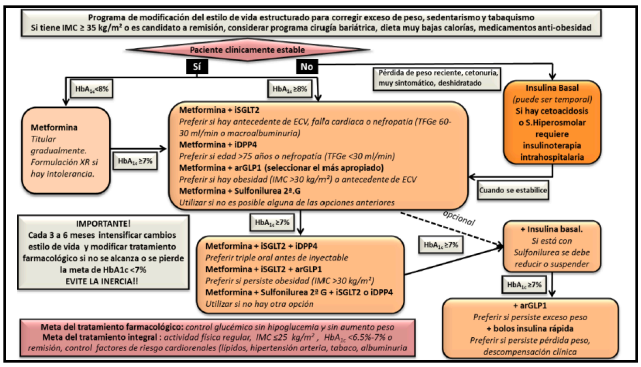



13.2.7 El tratamiento con un inhibidor de SGLT-2 (empagliflozina, canagliflozina o dapagliflozina) se asocia a un menor riesgo de deterioro de la función renal.

**Recomendación B**

13.2.8 El tratamiento con un agonista GLP-1 (liraglutida o semaglutida) se asocia a un menor riesgo de deterioro de la función renal.

**Recomendación B**

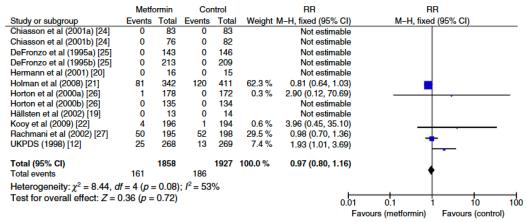
**14.6.4** En pacientes con elevado riesgo cardiovascular o enfermedad cardiovascular documentada, el tratamiento con el inhibidor del cotransportador de sodio-glucosa tipo 2 (iSGLT-2) los inhibidores de SLGT2 disminuye el riesgo de hospitalización por insuficiencia y de muerte cardiovascular

**14.6.5** El tratamiento farmacológico para la insuficiencia cardiaca sistólica en pacientes con diabetes incluye tres tipos de antagonistas neurohormonales: los inhibidores de la enzima convertidora de angiotensina (IECA) o bloqueadores del receptor de angiotensina 2 (ARA2), los beta-bloqueadores (BB) metoprolol, bisoprolol y carvedilol, y los antagonistas del receptor de mineralocorticoides espironolactona y eplerenona.

## Reflexiones…

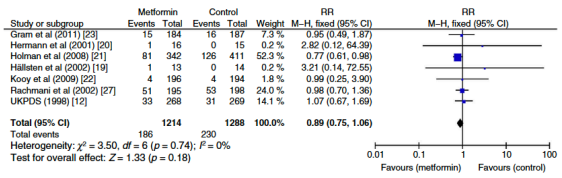
- Tenemos suficiente evidencia para quitar de primera línea a metformin en pacientes con enfermedad cardiovascular?
  - UKPDS no es la mejor evidencia científica para los estándares de hoy
  - Es la referencia más citada pero no es la única

## Metanálisis: metformin y mortalidad cardiovascular




Griffin SJ. Diabetologia. 2017;60:1620

## Metanálisis: metformin e IAM




Griffin SJ. Diabetologia. 2017;60:1620

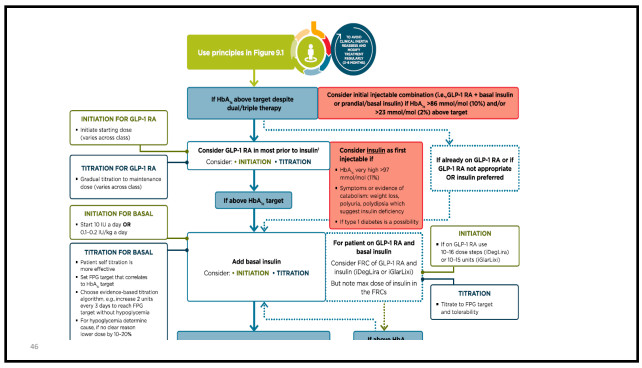
## Reflexiones…

- Tenemos suficiente evidencia para quitar de primera línea a metformin en pacientes con enfermedad cardiovascular?
  - UKPDS no es la mejor evidencia científica para los estándares de hoy
  - Es la referencia más citada pero no es la única
- Es una droga barata, segura, disponible en la mayoría de los lugares del mundo
- Depende de la rigurosidad con la que se quiere interpretar los ensayos clínicos
- No hay interés comercial en hacer un estudio comparativo directo entre metformin y alguno de los agentes nuevos en desenlaces CV

## Reflexiones

- En todos los demás, más o menos de acuerdo:
  - Alto riesgo CV o prevención secundaria: iSGLT2 ó arGLP-1
  - Nefropatía: iSGLT2 (mayor evidencia) ó arGLP-1 (menor evidencia)
  - Falla cardíaca: iSGLT2

## Cómo iniciar inyectables?


Use principles in Figure 9.1
If HbA1c above target despite dual/triple therapy
Consider initial injectable combination (i.e., GLP-1 RA + basal insulin or prandial/basal insulin) If HbA1c >86 mmol/mol (10%) and/or >23 mmol/mol (2%) above target
INITIATION FOR GLP-1 RA
• Initiate starting dose (varies across class)
TITRATION FOR GLP-1 RA
• Gradual titration to maintenance dose (varies across class)
INITIATION FOR BASAL
• Start 10 IU a day OR 0.1–0.2 IU/kg a day
TITRATION FOR BASAL
• Patient self titration is more effective
• Set FPG target that correlates to HbA1c target
• Choose evidence-based titration algorithm: e.g., increase 2 units every 3 days to reach FPG target without hypoglycemia
• For hypoglycemia determine cause, if no clear reason lower dose by 10–20%
Consider GLP-1 RA in most prior to insulin1
Consider: • INITIATION • TITRATION
If above HbA1c target
Add basal insulin
Consider: • INITIATION • TITRATION
Consider insulin as first injectable if
• HbA1c very high >97 mmol/mol (11%)
• Symptoms or evidence of catabolism: weight loss, polyuria, polydipsia which suggest insulin deficiency
• If type 1 diabetes is a possibility
If already on GLP-1 RA or if GLP-1 RA not appropriate OR insulin preferred
For patient on GLP-1 RA and basal insulin
Consider FRC of GLP-1 RA and insulin (DegLira or GlarLixi)
But note max dose of insulin in the FRCs
INITIATION
• If on GLP-1 RA use 10–16 dose steps (DegLira) or 10–15 units (GlarLixi)
TITRATION
• Titrate to FPG target and tolerability
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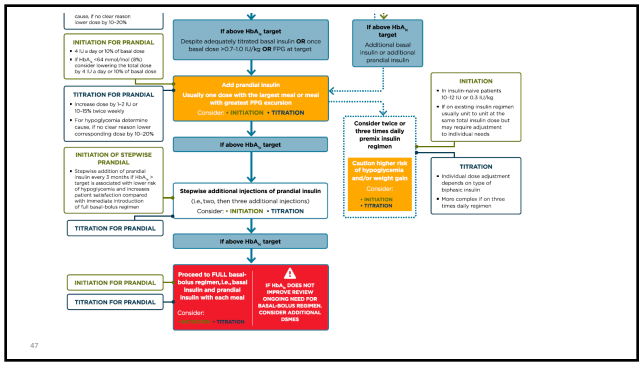
If above HbA1c target
Despite adequately titrated basal insulin OR once basal dose >0.7–1.0 IU/kg OR FPG at target
If above HbA1c target
Additional basal insulin or additional prandial insulin
INITIATION FOR PRANDIAL
• # 1 u a day or 10% of basal dose
• If HbA1c <64 mmol/mol (8%) consider lowering the total dose by 4 IU a day or 10% of basal dose
TITRATION FOR PRANDIAL
• Increase dose by 1–2 IU or 10–15% twice weekly
• For hypoglycemia determine cause, if no clear reason lower corresponding dose by 10–20%
INITIATION OF STEPWISE PRANDIAL
• Stepwise addition of prandial insulin every 3 months if HbA1c target is associated with lower risk of hypoglycemia and increases patient satisfaction compared with immediate introduction of full basal-bolus regimen
TITRATION FOR PRANDIAL
Add prandial insulin
Usually one dose with the largest meal or meal with greatest PPG excursion
Consider: • INITIATION • TITRATION
If above HbA1c target
Stepwise additional injections of prandial insulin
(i.e., two, then three additional injections)
Consider: • INITIATION • TITRATION
If above HbA1c target
Proceed to FULL basal-bolus regimen, i.e., basal insulin and prandial insulin with each meal
Consider: • INITIATION • TITRATION
IF HbA1c DOES NOT IMPROVE REVIEW ONGOING NEED FOR BASAL-BOLUS REGIMEN, CONSIDER ADDITIONAL DOSES
INITIATION FOR PRANDIAL
TITRATION FOR PRANDIAL
Consider twice or three times daily premix insulin regimen
Caution higher risk of hypoglycemia and/or weight gain
Consider:
• INITIATION
• TITRATION
INITIATION
• In insulin-naive patients 10–12 IU or 0.3 IU/kg
• If on existing insulin regimen usually unit to unit at the same total insulin dose but may require adjustment to individual needs
TITRATION
• Individual dose adjustment depends on type of biphasic insulin
• More complex if on three times daily regimen
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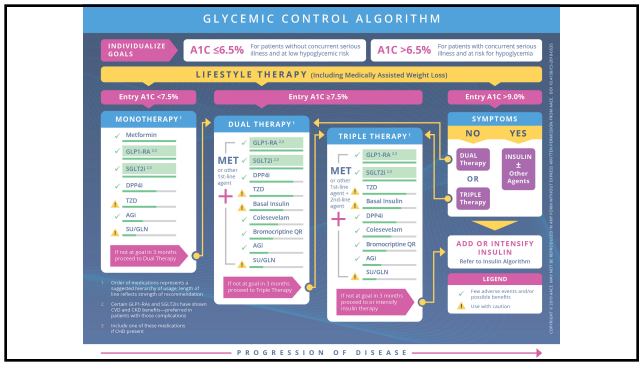
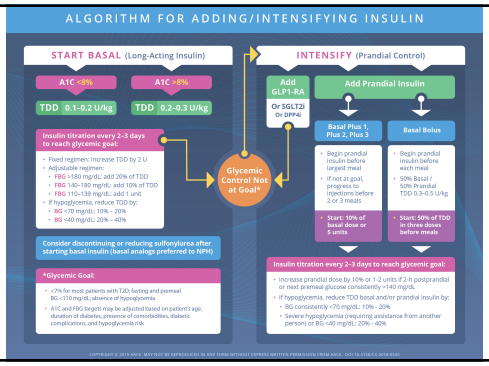

GLYCEMIC CONTROL ALGORITHM
INDIVIDUALIZE GOALS
A1C ≤6.5% For patients without concurrent serious illness and at low hypoglycemic risk
A1C >6.5% For patients with concurrent serious illness and at risk for hypoglycemia
LIFESTYLE THERAPY (Including Medically Assisted Weight Loss)
Entry A1C <7.5%
Entry A1C ≥7.5%
Entry A1C >9.0%
MONOTHERAPY1
Metformin
GLP1-RA2,3
SGLT2i2,3
DPP4i
TZD
AGI
SU/GLN
If not at goal in 3 months, proceed to Dual Therapy
DUAL THERAPY1
MET or other 1st-line agent
GLP1-RA2,3
SGLT2i2,3
DPP4i
TZD
Basal Insulin
Colesevelam
Bromocriptine QR
AGI
SU/GLN
If not at goal in 3 months, proceed to Triple Therapy
TRIPLE THERAPY1
MET or other 1st-line agent + 2nd-line agent
GLP1-RA2,3
SGLT2i2,3
TZD
Basal Insulin
DPP4i
Colesevelam
Bromocriptine QR
AGI
SU/GLN
If not at goal in 3 months, proceed to or intensify insulin therapy
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
1 Order of medications represents a suggested hierarchy of usage; length of line reflects strength of recommendation.
2 Certain GLP-1 RAs and SGLT2is have shown CVD and CKD benefits—preferred in patients with those complications.
3 Include one of these medications if CVD present
PROGRESSION OF DISEASE




## Reflexiones

- arGLP-1 debería ser el primer inyectable
- … limitante es el costo!
- Es una alternativa para intensificación
- Facilidad de usar un único dispositivo

## Metas de presión arterial

## Hypertension/Blood Pressure Control: Treatment Goals (1).

10.3 For patients with diabetes and hypertension, blood pressure targets should be individualized through a shared decision-making process that addresses cardiovascular risk, potential adverse effects of antihypertensive medications, and patient preferences C

10.4 For individuals with diabetes and hypertension at high cardiovascular risk (existing atherosclerotic cardiovascular disease or 10-year atherosclerotic cardiovascular disease risk >15%), a blood pressure target of <130/80 mmHg may be appropriate, if it can be safely attained C

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## Hypertension/Blood Pressure Control: Treatment Goals (2).

10.5 For individuals with diabetes and hypertension at lower risk for cardiovascular disease (10-year atherosclerotic cardiovascular disease risk <15%), treat to a blood pressure target <140/90 mmHg A

10.6 In pregnant patients with diabetes and preexisting hypertension who are treated with antihypertensive therapy, blood pressure targets of 120-160/80-105 mmHg are suggested in the interest of optimizing long-term maternal health and minimizing impaired fetal growth E

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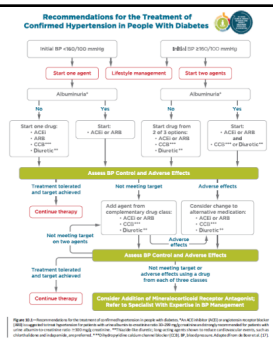


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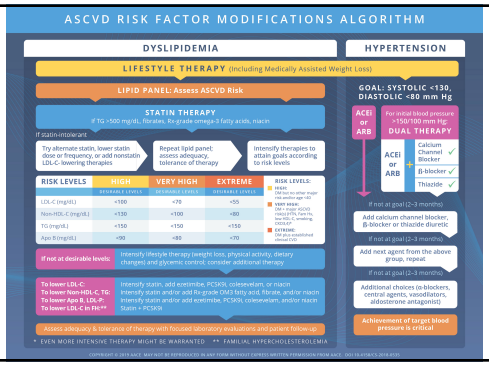



## Recommendations for the management of BP in patients with DM and pre-DM (1)

ESC European Society of Cardiology

| Recommendations | Class | Level |
|---|---|---|
| **Treatment targets** | | |
| Antihypertensive drug treatment is recommended for people with DM when office BP is >140/90 mmHg. | I | A |
| It is recommended that patients with hypertension and DM are treated in an individualized manner. The BP goal is to target SBP to 130 mmHg and <130 mmHg if tolerated, but not <120 mmHg. In older people (aged >65 years), the SBP goal is to a range of 130 - 139 mmHg. | I | A |
| It is recommended to target DBP <80 mmHg, but not <70 mmHg. | I | C |
| An on-treatment SBP of <130 mmHg may be considered in patients at particularly high risk of a cerebrovascular event, such as those with a history of stroke. | IIb | C |

www.escardio.org/guidelines

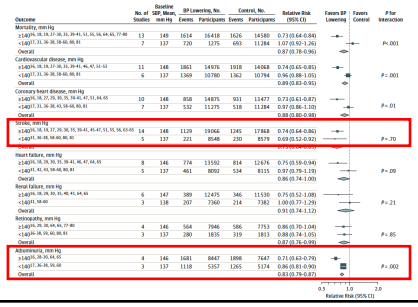
ESC Guidelines on Diabetes, pre-diabetes and cardiovascular diseases in collaboration with EASD (European Heart Journal 2019 - doi/10.1093/eurheartj/ehz486)

## 11.1 ¿CUÁL DEBE SER LA META DE PRESIÓN ARTERIAL EN UN PACIENTE CON DM2?

11.1.1 Se debe alcanzar una meta entre 130 mmHg y 140 mmHg para la presión arterial sistólica (PAS), y menor o igual a 80 mmHg para la presión arterial diastólica (PAD). En mayores de 65 años, la meta para la sistólica es 130-139

Recomendación B

## Reducción de eventos según PA inicial




Emdin CA. JAMA. 2015;313:603

## Reflexiones

- De dónde viene entonces las metas más estrictas (<130 mm Hg de PAS)?
- Son extrapolaciones del SPRINT, que no incluyó pacientes diabéticos!
- Sí hay evidencia que metas más estrictas pueden ser beneficiosos para el riñón e ictus, pero no tenemos datos suficientes para el corazón
- Por lo tanto… al menos <140 mm Hg PAS y si se puede llevar a <130 mm Hg sin efectos adversos (ortostatismo)

| Parámetro | ADA | AACE | ESC | ALAD |
|---|---|---|---|---|
| Hba1c | <7% | <6.5% | <7% | <7% |
| Presión sistólica | <130 mm Hg (alto riesgo)<br><140 mm Hg (riesgo intermedio) | <130 mm Hg | 120-130 mm Hg | <140 mm Hg |
| Presión diastólica | <80 mm Hg (alto riesgo)<br><90 mm Hg (riesgo intermedio | <80 mm Hg | 70-80 mm Hg | <80 mm Hg |

# Manejo de dislipidemia

## Lipid Management: Statin Treatment (1).

10.19 For patients of all ages with diabetes and atherosclerotic cardiovascular disease or 10-year atherosclerotic cardiovascular disease risk >20%, high-intensity statin therapy should be added to lifestyle therapy A

10.20 For patients <40 years with additional atherosclerotic cardiovascular disease risk factors, the patient and provider should consider using moderate-intensity statin in addition to lifestyle therapy C

10.21 For patients with diabetes aged 40-75 years A and >75 years B without atherosclerotic cardiovascular disease, use moderate-intensity statin in addition to lifestyle therapy.

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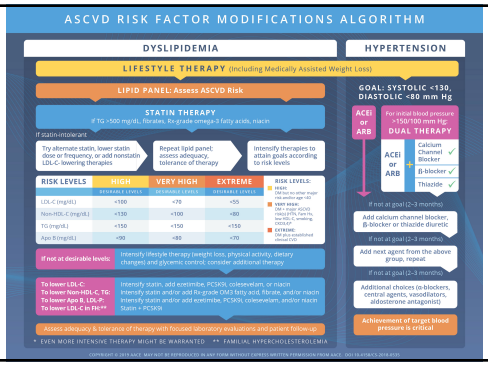
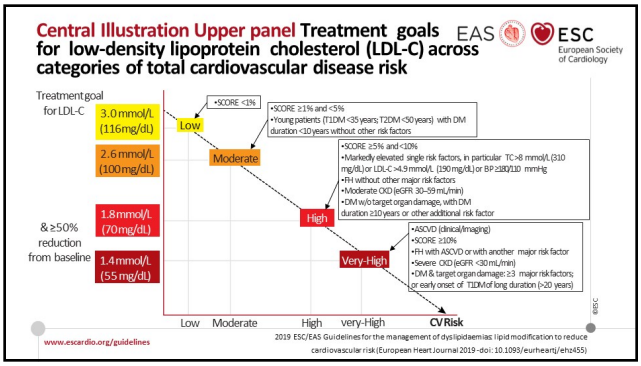
- Section 10 is updated based on the outcome of Reduction of Cardiovascular Events with Icosapent Ethyl–Intervention Trial (REDUCE-IT), which determined the addition of icosapent ethyl to statin therapy for patients with high triglyceride levels reduced cardiovascular events. The *Standards of Care* now include a recommendation that icosapent ethyl be considered for patients with diabetes and atherosclerotic cardiovascular disease (ASCVD) or other cardiac risk factors on a statin with controlled LDL-C, but with elevated triglycerides (135-499) to reduce cardiovascular risk.




## 12.1 ¿CUÁLES SON LAS METAS DE PERFIL LIPÍDICO EN EL PACIENTE CON DM2?

12.1.1 El nivel de colesterol de LDL (cLDL) recomendado para las personas con diabetes sin enfermedad cardiovascular (ECV) es < 100 mg/d. El nivel correspondiente para los casos en prevención secundaria es < 70 mg/dl. Valores aún menores (< 55mg/dl) aplican para casos con muy alto riesgo (CHD o con complicaciones crónicas.
**Recomendación A**

12.1.2 Es deseable mantener un nivel de triglicéridos < 150 mg/dl y un nivel de colesterol HDL > 40 mg/dl.
**Recomendación C**

## Comentarios

- Las metas de LDL se derivan del promedio de LDL alcanzado en los ensayos de estatinas
- No hay ensayos clínicos diseñados con metas de LDL
- Sin embargo, hasta el momento los estudios que han comparado una nueva intervención y bajar más el LDL ha sido efectivo en reducir MACE, al menos ezetimibe e inhibidores de PCSK9
- Los 2 ensayos realizados en prevención primaria en DM (CARDS y HPS-DM) han sido en pacientes >40 años con factores de riesgo adicionales (retinopatía, microalbuminuria, tabaquismo)

| Parámetro | ADA | AACE | ESC | ALAD |
|---|---|---|---|---|
| Hba1c | <7% | <6.5% | <7% | <7% |
| Presión sistólica | <130 mm Hg (alto riesgo)<br><140 mm Hg (riesgo intermedio) | <130 mm Hg | 120-130 mm Hg | <140 mm Hg |
| Presión diastólica | <80 mm Hg (alto riesgo)<br><90 mm Hg (riesgo intermedio | <80 mm Hg | 70-80 mm Hg | <80 mm Hg |
| LDL | Alto riesgo estatinas alta intensidad<br><br>40-70 años sin ECV estatinas de intensidad moderada | <55 mg/dl riesgo extremo<br><70 mg/dl altísimo riesgo<br><100 mg/dl alto riesgo | <55 mg/dl muy alto riesgo<br><70 mg/dl alto riesgo<br><100 mg/dl riesgo moderado | <55 mg/dl muy alto riesgo<br><70 mg/dl prevención secundaria<br><100 mg/dl sin ECV |

## Conclusiones

- Metformin sigue siendo primera línea en mayoría de guías
- Segundo agente va a depender de la presencia de enfermedad cardiovascular, enfermedad renal crónica o falla cardíaca
- Primer inyectable debería ser arGLP1
- Post insulina basal una forma de intensificar es con arGLP1

# Preguntas…

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Puede descargar la presentación en:

www.EndoDrChen.com