ACTION FOR PREVENTION

Ensuring the kidney health of my patients living with type 2 diabetes

REFERENCE GUIDE

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PRACTICAL REFERENCE GUIDE FOR COMMUNITY PHARMACISTS:

Treatment for people living with type 2 diabetes (T2D) to reduce vascular complications

T2D PATIENT PROFILE

This information should appear in the patient's file for appropriate analysis.

RISK ASSESSMENT

Assess the cardiorenal risk and whether the target HbA1c has been achieved.

T2D ACTION

Write a pharmaceutical opinion if new medication is required

(See indications of SGLT2i and GLP-1 RA)

FOLLOW-UP

Carry out a suitable follow-up of the efficacy and safety.

RENAL

- eGFR
- ACR

eGFR: Estimated glomerular filtration rate (mL/min./1.73 m²)

ACR: Albumin-to-creatinine ratio (urinary; mg/mmol or mg/g)

CARDIO-VASCULAR

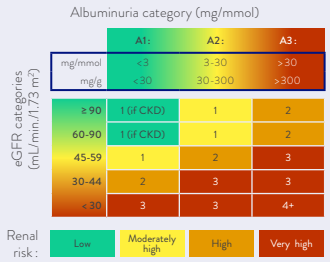
- Blood pressure
- Lipid profile

BLOOD GLUCOSE

- HbA1c

WRITE A PRESCRIPTION FOR LABORATORY TESTS

KDIGO RISK



RENAL RISK?

- Moderately high
- High
- Very high

RISK FACTORS:

- **Smoking**
- **Dyslipidemia** (medicated or LDL ≥3.4 mmol/L, HDL <1.0 mmol/L (men) or <1.3 mmol/L (women) or triglycerides ≥2.3 mmol/L)
- **Hypertension** (medicated or BP ≥130 mmHg systolic or ≥80 mmHg diastolic)

CV RISK?

- Heart failure
- Atherosclerotic cardiovascular disease
- >60 years with ≥ 2 risk factors?

TARGET:

- **≤7.0%** for most patients
- **≤ 6.5%** to reduce the risk of CKD and retinopathy in the presence of a low risk of hypoglycemia

TARGET HbA1c ACHIEVED?

- Yes
- No

WRITE A PHARMACEUTICAL OPINION

WRITE A PHARMACEUTICAL INTERVENTION NOTE

EDUCATION FOR PATIENTS:

- Advice for the prevention and management of side effects
- Adherence
- " SADMANS "

REASSESS:

- eGFR and urinary ACR at least 1x/year according to KDIGO risk
- HbA1c 1x/year; if risk factors present, 1–2x/year and validate whether optimal blood glucose
- CV and renal risk factors annually
- During onset of side effects and/or addition of treatments on a regular basis

PRESCRIPTION FOR LABORATORY TESTS

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PRESCRIPTION FORM FOR LABORATORY TESTS
(COMMUNITY PHARMACISTS)

FULL CONTACT INFORMATION OF THE PHARMACY (Required)

[Insert contact information here]
[Insert contact information here]

○ Routine ○ Stat

[Insert information here] [Insert information here]

PATIENT'S FIRST AND LAST NAME

[Insert patient's name here]

HEALTH INSURANCE NUMBER (Required)

[Insert health insurance number here]

ADDRESS

[Insert address here]
[Insert address here]

TELEPHONE NUMBER

[Insert telephone number here]

- ○ Urinary albumin-to-creatinine ratio
- ○ (ACR) eGFR
- ○ Serum creatinine

ELECTROLYTES

(Please check the desired electrolyte[s])

- ○ Sodium ○ Potassium
- ○ Fasting blood glucose (At least 8 hours before the test)
- ○ Blood glucose [Time] (Specify the desired time)
- ○ Hemoglobin (HbA1c)
- ○ Lipid profile (Cholesterol, triglycerides, HDL, LDL)
  (Fasting for 12 hours and 3 days with no alcohol before the test)

PHARMACIST SIGNATURE

LICENCE NUMBER

[Insert licence number]

DATE

[Insert date here]

PHARMACEUTICAL OPINION

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PATIENT LABEL

DATE : [Insert date here]

PATIENT LABEL

DEAR DOCTOR,

After reviewing the information to which I have access, I would like to bring your attention to the following:

THIS PATIENT HAS A RENAL RISK THAT IS:

☐ Moderately high ☐ High ☐ Very high

THIS PATIENT HAS A HIGH CARDIOVASCULAR RISK DUE TO:

○ Heart failure ○ Presence of atherosclerotic cardiovascular disease

○ Due to age >60 years and ≥2 risk factors (smoking, dyslipidemia or hypertension)

THIS PATIENT HAS NOT ACHIEVED THE TARGET HbA1c:

— Target: ≤ [#] % — Value measured: [#] %

Under these circumstances and in the context of the patient's diabetes treatment, I believe the patient would benefit from the following intervention(s):

○ Addition of an ACE inhibitor or ARB

— Medication: [Insert medication here] — Dose: [Insert dose here]

○ Addition of an SGLT2i

— Medication: [Insert medication here] — Dose: [Insert dose here]

○ Addition of a GLP-1 RA

— Medication: [Insert medication here] — Dose: [Insert dose here]

○ Addition of an antihyperglycemic agent

— Medication: [Insert medication here] — Dose: [Insert dose here]

○ Adjustment of treatment

— Medication: [Insert medication here] — Dose: [Insert dose here]

○ Discontinuing a medication

— Medication: [Insert medication here]

Please also consider that, if you agree with this proposal, the following follow-up to be carried out is suggested:

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FOLLOW-UP TO BE CARRIED OUT:

☐ By the physician ☐ By the pharmacist

SUGGESTED FOLLOW-UP:

☐ Adjustments to the medication dosage based on efficacy and safety

Laboratory tests

- ☐ eGFR after [Time] weeks
- ○ Urinary albumin-to-creatinine ratio
- ○ (ACR) HbA1c
- ○ Blood glucose
- ○ Serum creatinine
- ○ Serum potassium
- ○ Serum sodium
- ○ Lipid profile (cholesterol, triglycerides, HDL, LDL)
- ☐ Other (e.g. apo B) :

[Insert other information here]
[Insert other information here]

Regardless of the follow-up agreed upon, we will keep you informed of any change or any other intervention that we may carry out in relation to the items contained in this document.

If you agree with this proposal, please fill out the "Physician information" section below and return it to us by fax.

If your recommendations are not found within the choices offered above, you can enter them in the "new prescription" section below.

Yours faithfully,

[Insérez information ici]

PHYSICIAN INFORMATION:

Name: [Insert name here]

Licence number: [Insert licence number here]

Fax: [Insert fax number here]

Telephone: [Insert telephone number here]

PHARMACIST INFORMATION:

Name: [Insert name here]

Licence number: [Insert licence number here]

Fax: [Insert fax number here]

Telephone: [Insert telephone number here]

NEW PRESCRIPTION:

Medication: [Insert medication here]

Date : [Insert date here]

Qty: [Insert quantity here]

Refills: [Insert information here]

Name: [Insert name here]

Licence number: [Insert licence number here]

Signature :

PHARMACY INTERVENTION NOTE

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PATIENT IDENTIFICATION

[Insert patient's name here]

○ For your attention ◉ To be given to the prescriber

DATE : [Insert date here]

This note contains important information for your treatment. Store it carefully. This information has also been added to your pharmacological file.

PATIENT LABEL

SITUATION REQUIRING INTERVENTION:

Problem related to the medication

Medication (specify or attach label here)

DETAILS:

[Insert details here]
[Insert details here]
[Insert details here]
[Insert details here]

INTERVENTION:

Due to an adverse event (noticed or possible)

I lowered the dose to

COMMENTS:

[Insert your comments here]
[Insert your comments here]
[Insert your comments here]
[Insert your comments here]
[Insert your comments here]

AGREED FOLLOW-UP:

I will contact the prescriber

We will contact you upon receipt of an answer

PLEASE CONTACT US IF YOU HAVE ANY QUESTIONS.

PHARMACIST: [Insert pharmacist's name here]

INFORMATION: RENAL RISK (KDIGO)

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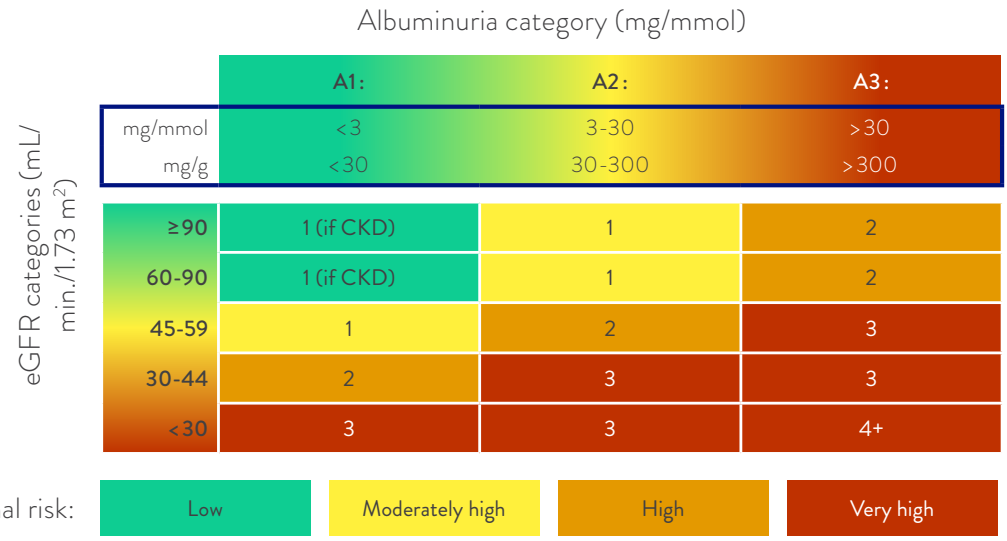
ASSESS THE PATIENT ACCORDING TO THE KDIGO TOOL TO DETERMINE THE PATIENT'S RISK LEVEL:



The numbers suggest the number of times these measurements should be taken per year.

For people with atherosclerotic cardiovascular disease, CKD or HF OR aged > 60 years and have 2 CV risk factors (Fig. 2.1)

DIABETES CANADA

2020

ADD or REPLACE antihyperglycemic agent by selecting an agent with proven cardiorenal benefits

		Confirmed cardiovascular or renal disease			Risk factors
		Atherosclerotic cardiovascular disease	CKD	HF	> 60 years with 2 CV risk factors†
Lower risks on events	Major CV events	**GLP-1 receptor agonist GLP-1†† or SGLT2 inhibitor***	SGLT2 inhibitor* or GLP-1 receptor agonist††		**GLP-1 receptor agonist††**
	Hospitalizations for HF	SGLT2 inhibitor*	**SGLT2 inhibitor***	**SGLT2 inhibitor*** (and lower CV mortality rate)	SGLT2 inhibitor*
	Renal pathology progression	SGLT2 inhibitor*	**SGLT2 inhibitor***		SGLT2 inhibitor*
Highest level of evidence		**Level A**	Level B	*Level C or D*	

† Smoking; dyslipidemia (lipid-lowering treatment or observed and untreated level of LDL cholesterol ≥ 3.4 mmol/L or HDL cholesterol <1.0 mmol/L for men and <1.3 mmol/L for women or triglycerides ≥ 2.3 mmol/L); or hypertension (antihypertensive treatment or systolic BP ≥ 140 mmHg or diastolic BP ≥ 95 mmHg untreated)

†† Discontinue DPP-4 inhibitor when starting a GLP-1 receptor agonist

* Start only if eGFR is > 30 mL/min./1.73 m²

INFORMATION: CARDIOVASCULAR RISK

DIABETES CANADA

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RISK FACTORS:

- **Smoking**
- **Dyslipidemia** (medicated or LDL ≥3.4 mmol/L, HDL <1.0 mmol/L (men) or <1.3 mmol/L (women) or triglycerides ≥2.3 mmol/L)
- **Hypertension** (medicated or BP ≥130 mmHg systolic or ≥80 mmHg diastolic)

For people with atherosclerotic cardiovascular disease, CKD or HF OR aged > 60 years and have 2 CV risk factors (Fig. 2.1)

2020

ADD or REPLACE antihyperglycemic agent by selecting an agent with proven cardiorenal benefits

		Confirmed cardiovascular or renal disease			Risk factors
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	Hospitalizations for HF	SGLT2 inhibitor*	**SGLT2 inhibitor***	**SGLT2 inhibitor*** (and lower CV mortality rate)	SGLT2 inhibitor*
	Renal pathology progression	SGLT2 inhibitor*	**SGLT2 inhibitor***		SGLT2 inhibitor*
Highest level of evidence		**Level A**	Level B	*Level C or D*	

† Smoking; dyslipidemia (lipid-lowering treatment or observed and untreated level of LDL cholesterol ≥3.4 mmol/L or HDL cholesterol <1.0 mmol/L for men and <1.3 mmol/L for women or triglycerides ≥2.3 mmol/L); or hypertension (antihypertensive treatment or systolic BP ≥140 mmHg or diastolic BP ≥95 mmHg untreated)

†† Discontinue DPP-4 inhibitor when starting a GLP-1 receptor agonist

* Start only if eGFR is >30 mL/min./1.73 m²

INFORMATION: TARGET HbA1c

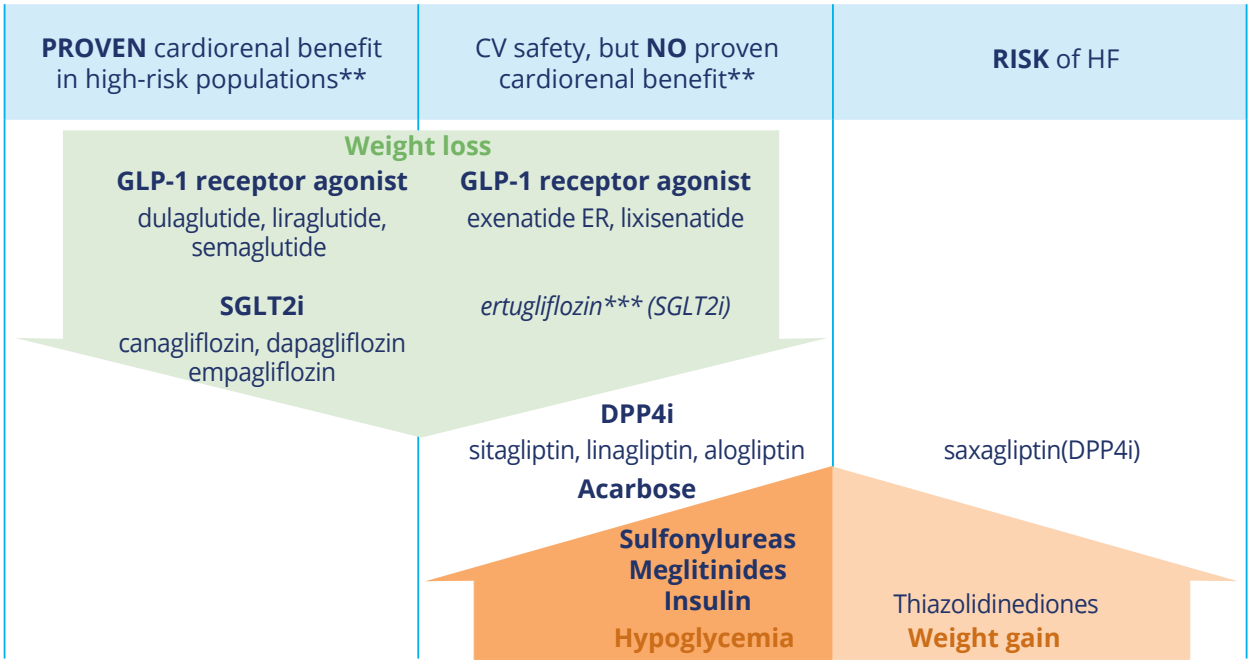
TARGET:

- ≤ 7.0% for most patients
- ≤ 6.5% to reduce the risk of CKD and retinopathy in the presence of a low risk of hypoglycemia

If an additional reduction in the blood glucose level is necessary (Fig. 2.2)

2020

ADD or REPLACE antihyperglycemic agent†† based on clinical priorities††† start insulin for symptomatic hyperglycemia and/or metabolic decompensation (Fig. 3)



†† The efficacy of all antihyperglycemic agents in lowering blood glucose is supported by level A evidence.

††† Take into account the degree of hyperglycemia, costs and coverage by insurance, renal function, comorbidities, side effects profile and the possibility of pregnancy.

** In studies of CV events conducted in people with atherosclerotic cardiovascular disease, CKD, HF or at high CV risk.

*** The VERTIS study (study of CV events with ertugliflozin) presented to the ADA in June 2020 demonstrated the non-inferiority for major CV events. Manuscript unpublished at the time of writing.

SICK DAYS — SADMANS

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ENSURE THE SAFETY OF PATIENTS WITH A RISK OF DEHYDRATION (VOMITING, DIARRHEA, BEFORE MAJOR SURGERY, AND DURING SERIOUS ILLNESS AND INFECTION)

Ensure adequate rehydration (water, broth, diet soda, sugar-free Kool-Aid™, diet Jell-O™; avoid drinks containing caffeine).

Discontinue the administration of medications **according to the sick days management appendix**.

Resume when diet/hydration has returned to normal.

S	Sulphonylureas, other secretagogues
A	ACE inhibitors
D	Diuretics, direct renin inhibitors
M	Metformin
A	Angiotensin receptor blockers
N	Non-steroidal anti-inflammatory drugs
S	SGLT2 inhibitors

CARDIORENAL INDICATIONS IN PEOPLE WITH T2D — SGLT2i AND GLP-1 RA AVAILABLE IN CANADA

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SGLT2 inhibitor

	Canagliflozin	Dapagliflozin	Empagliflozin
Cardiovascular indication	Indicated to reduce the risk of MACE in adults with T2D and confirmed cardiovascular disease.	Indicated to reduce the risk of hospitalization for heart failure in adults with T2D with CV risk factors or confirmed CV disease.	Indicated to reduce the incidence of death of CV origin in patients with T2D who also have confirmed CV disease.
Renal indication	Indicated to reduce the risk of end-stage renal disease, doubling of serum creatinine and death of CV origin in adults with T2D and diabetic nephropathy with albuminuria (>33.9 mg/mmol).	Indicated to reduce the risk of sustained eGFR decline, end-stage kidney disease, and cardiovascular and renal death in adults with chronic kidney disease (CKD).	*None*
Heart failure Indication	*None*	Indicated in adults, as an adjunct to standard of care therapy, for the treatment of heart failure with reduced ejection fraction (HFrEF) to reduce the risk of cardiovascular (CV) death, hospitalization for heart failure and urgent heart failure visit.	Indicated in adults as an adjunct to standard of care therapy for the treatment of chronic heart failure.
Add-on/combination therapy to improve the control of blood glucose	Monotherapy or in combination with:: • Metformin • A sulphonylurea (with or without metformin) • Pioglitazone and metformin • Metformin and sitagliptin • Insulin (with or without metformin)	Monotherapy or in combination with:: • Metformin • A sulphonylurea • Metformin and a sulphonylurea • Sitagliptin (with or without metformin) • Insulin (with or without metformin)	Monotherapy or in combination with:: • Metformin • Metformin and a sulphonylurea • Pioglitazone (with or without metformin) • Linagliptin and metformin • Basal or prandial insulin (with or without metformin)

GLP-1 RA

	Dulaglutide	Liraglutide	Semaglutide
Cardiovascular indication	Indicated to reduce the risk of non-fatal stroke in adults with T2D who have multiple CV risk factors or confirmed CV disease.	Indicated to reduce the frequency of death of cardiovascular origin in patients with T2D and confirmed CV disease.	*None*
Add-on/combination therapy to improve the control of blood glucose	Monotherapy or in combination with: • Metformin • Metformin and a sulphonylurea • An SGLT2i and metformin • Insulin and metformin	Monotherapy or in combination with: • Metformin • Metformin and a sulphonylurea • Metformin and insulin	Monotherapy or in combination with: • Metformin • Metformin and a sulphonylurea • Metformin or a sulphonylurea and an SGLT2 • Insulin and metformin