

Comorbidities and Stroke: Diabetes

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Conflicts of Interest

- I have no conflicts of interest related to the subject matter

Learning Objectives

- Review relationship between diabetes and stroke
- Compare and contrast medications with CV safety data
- Discuss medication access solutions

T2DM comorbidities and CVD risk factors

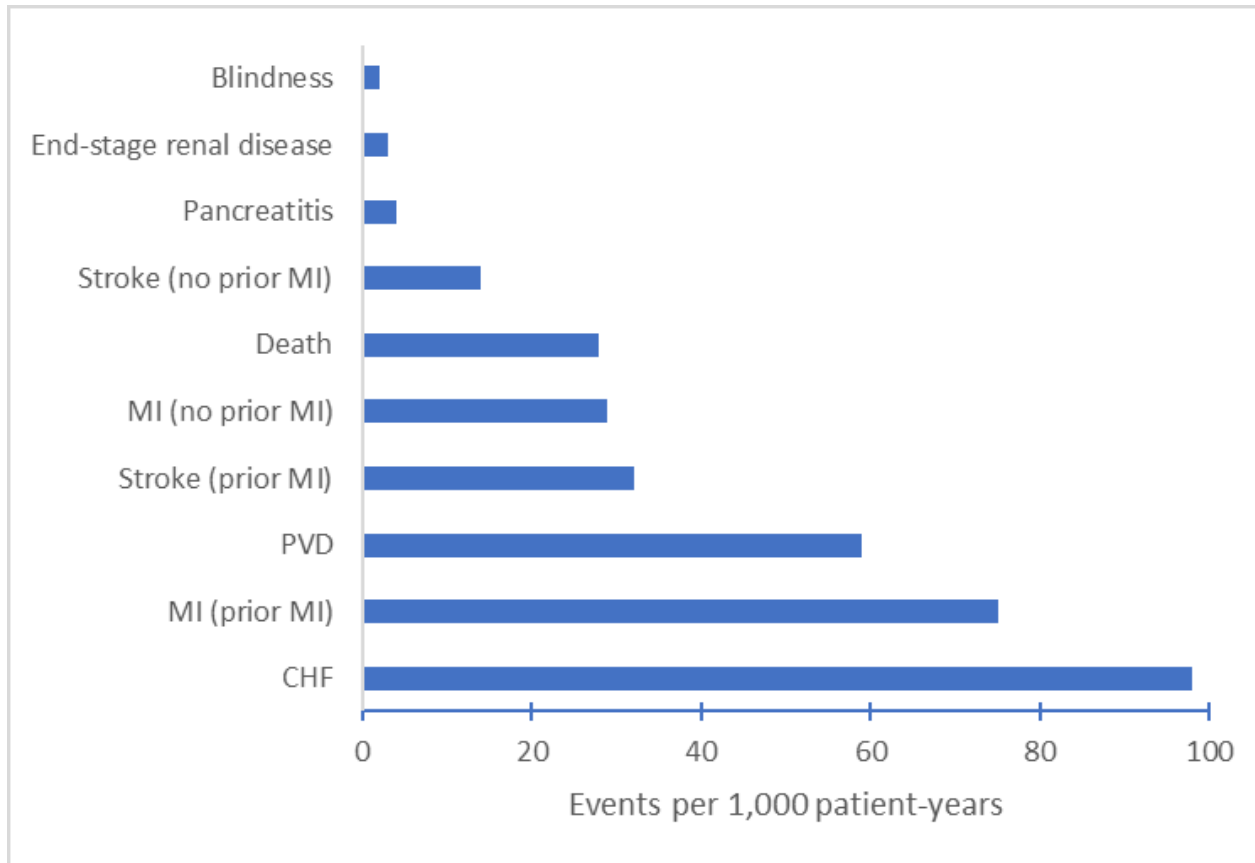
CV disease risk factors

- Hypertension (74%)
- Dyslipidemia (67%)
- Obesity (88%)
- Family history of premature CAD
- Advancing age
- Smoking
- Albuminuria

CV complications

- Coronary artery disease
- Cerebrovascular disease
- Heart failure
- Myocardial infarction
- Peripheral artery disease
- Stroke

Risk of events



Diabetes and stroke

A1C	eAG	
	mg/dl	mmol/l
%		
6	126	7.0
6.5	140	7.8
7	154	8.6
7.5	169	9.4
8	183	10.1
8.5	197	10.9
9	212	11.8
9.5	226	12.6
10	240	13.4

Comparison of A1C and eAG meter readings.

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Management

Risk factor management

- Lifestyle modifications
- Dyslipidemia
- Hypertension

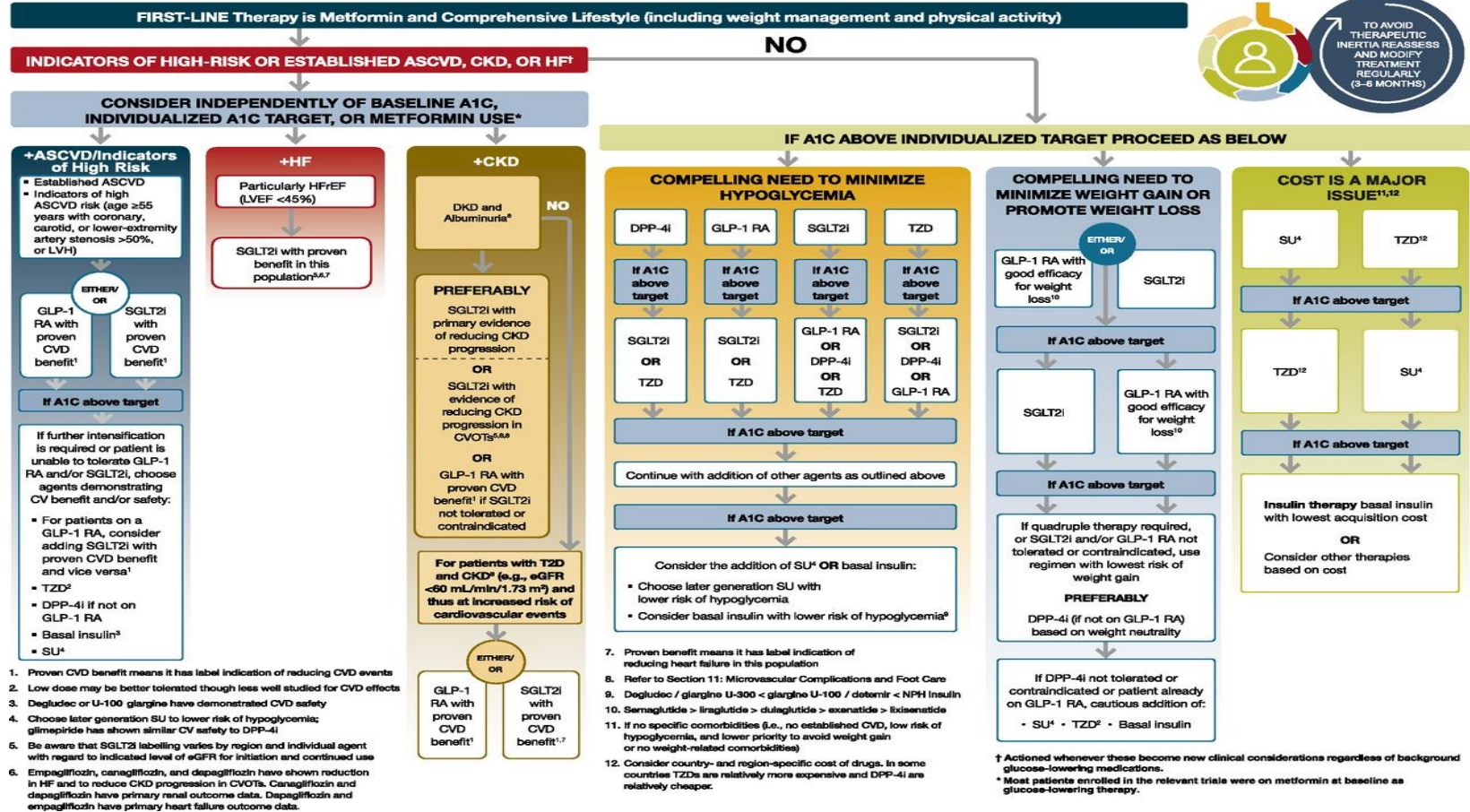
Lipid management

- Moderate-intensity statins
 - <40y/o w/ ASCVD risk factors*
 - 40-75y/o and >75y/o w/o ASCVD
- High-intensity statins
 - Age 50-70y/o w/ ASCVD risk factors
 - All ages w/ established ASCVD

Lipid management

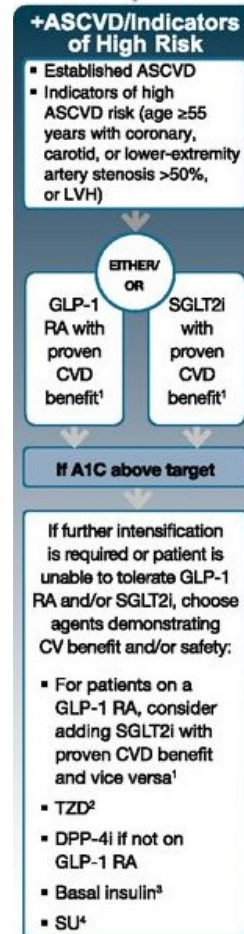
High-Intensity Statin Therapy	Moderate-Intensity Statin Therapy	Low-Intensity Statin Therapy
Daily dose lowers LDL on average by $\geq 50\%$	Daily dose lowers LDL on average by approximately 30-49%	Daily dose lowers LDL on average by $< 30\%$
Atorvastatin 40-80 mg Rosuvastatin 20-40 mg	Atorvastatin 10-20 mg Rosuvastatin 5-10 mg Simvastatin 20-40 mg Pravastatin 40-80 mg Lovastatin 40 mg Fluvastatin XL 80 mg Fluvastatin 40 mg BID Pitavastatin 2-4 mg	Simvastatin 10 mg Pravastatin 10-20 mg Lovastatin 20 mg Fluvastatin 20-40 mg

Glycemic management



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Glycemic management



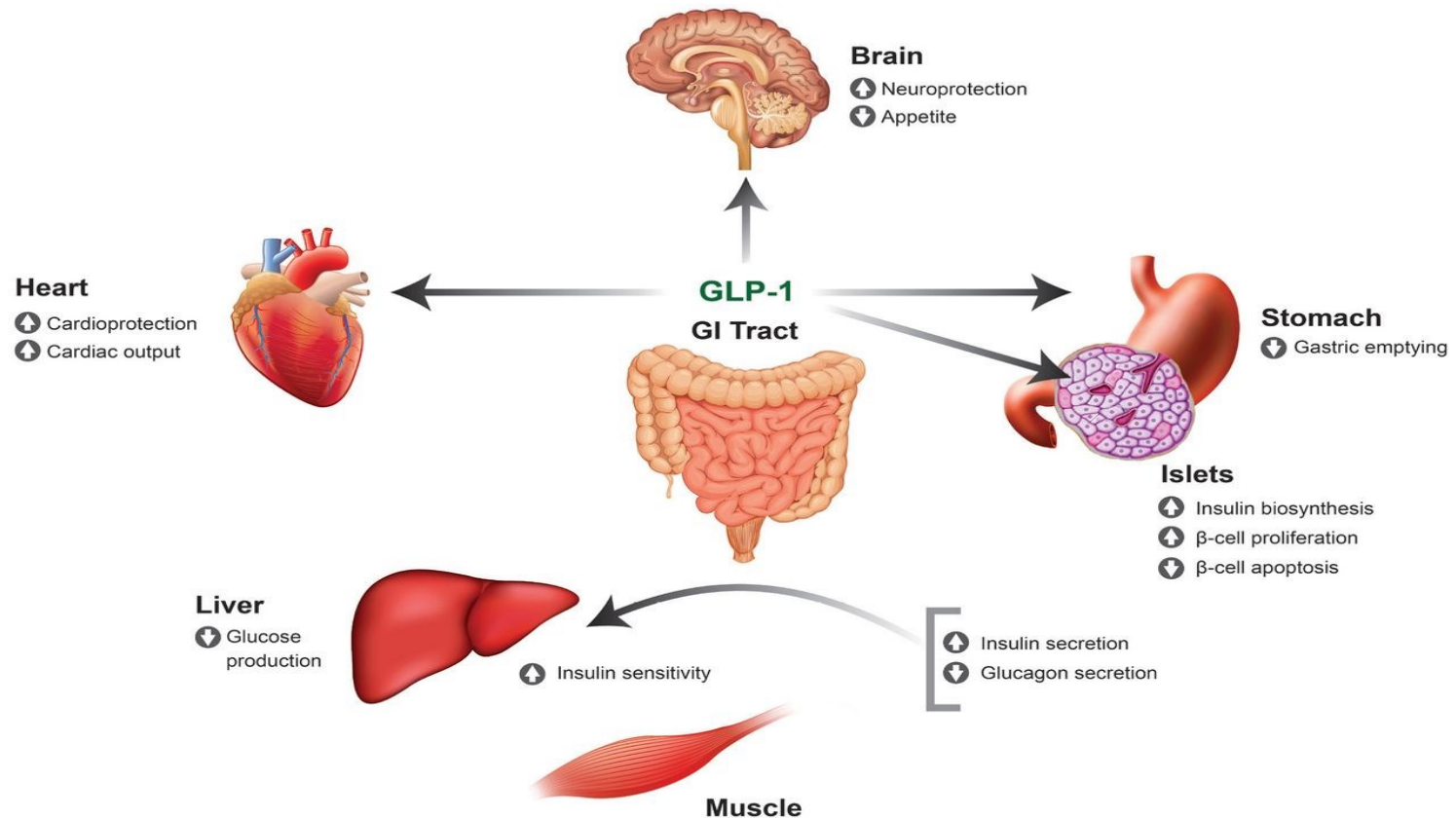
Metformin

- First-line agent
- Inhibits gluconeogenesis
- Increases glucose utilization
- Decreases food intake, body weight
- IR vs ER

Glucagon like peptide-1 receptor agonists (GLP-1 RAs)

- Synthetic version of naturally produced hormone
- Affects glucose control through several mechanisms
- Cost
- Usually injections

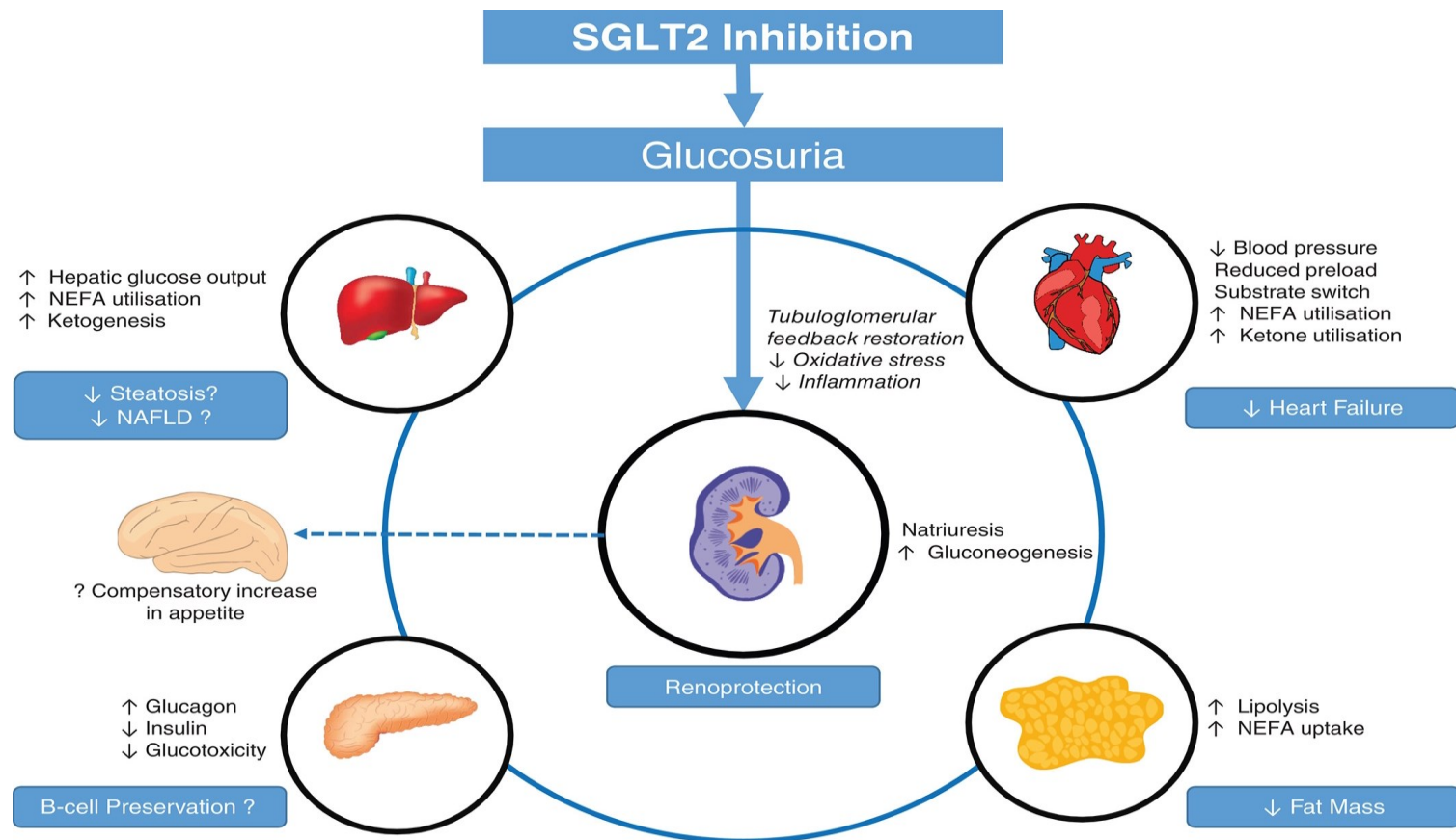
Glucagon like peptide-1 receptor agonists (GLP-1 RAs)



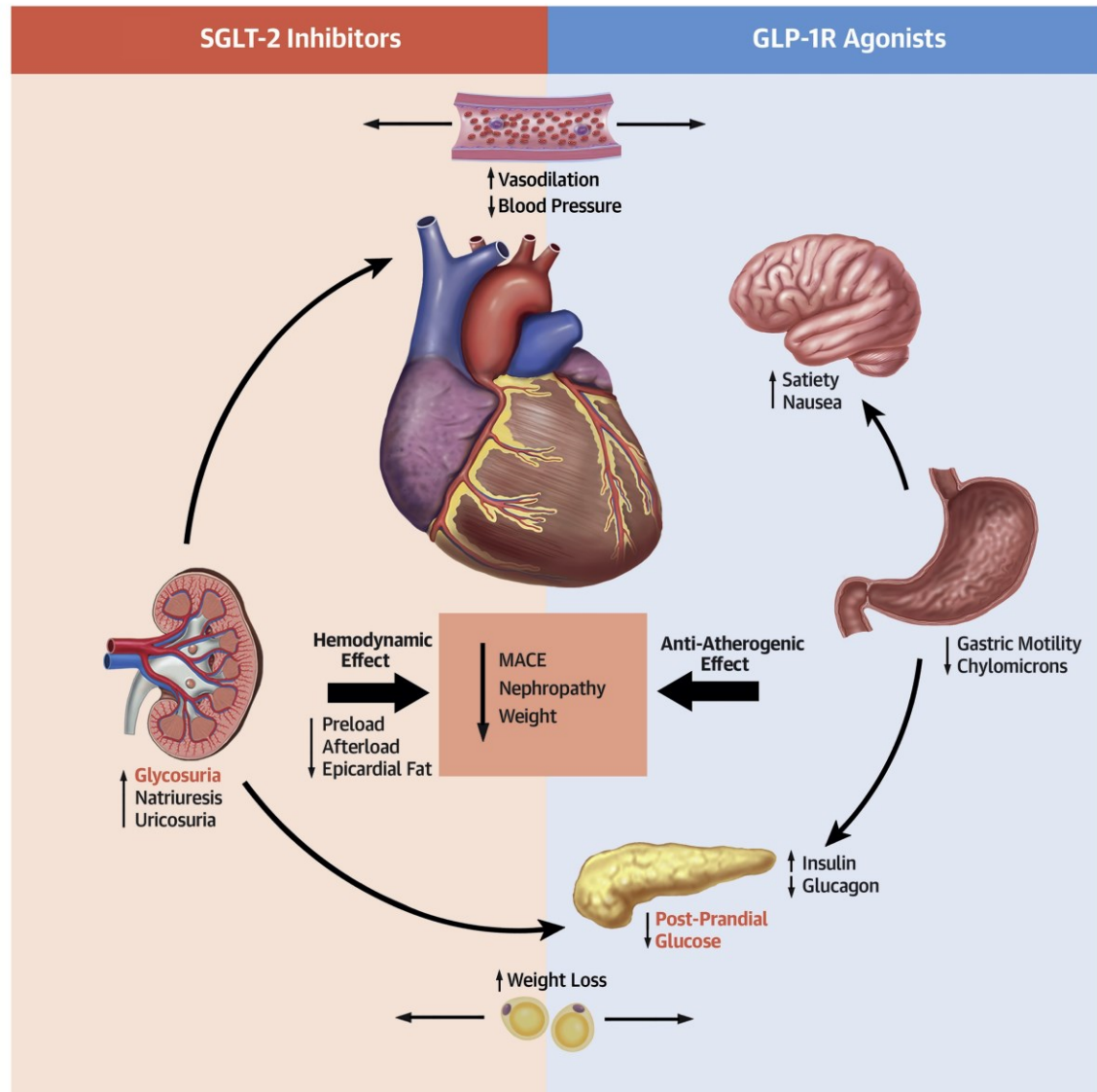
Sodium-glucose co-transporter 2 inhibitors (SGLT-2 inhibitors)

- Promote renal excretion of glucose
- Slight reduction in BP
- Cost
- Once-daily tablets

Sodium-glucose co-transporter 2 inhibitors (SGLT-2 inhibitors)



CENTRAL ILLUSTRATION: Diversity of Physiologic Effects of SGLT2i and GLP1RA



Wilcox, T. et al. J Am Coll Cardiol. 2020;75(16):1956-74.

Medication cost

- Manufacturer coupons
- Patient assistance programs
- Medication assistance

Conclusion

- Diabetes and stroke risk
- Lifestyle modifications
- Optimizing medication regimens