A NEW CAUSE OF DIABETES THAT AFFECTS ~1.25M AMERICANS: WHO WOUDA THOUGHT?

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85TH SCIENTIFIC SESSIONS

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DISCLOSURES

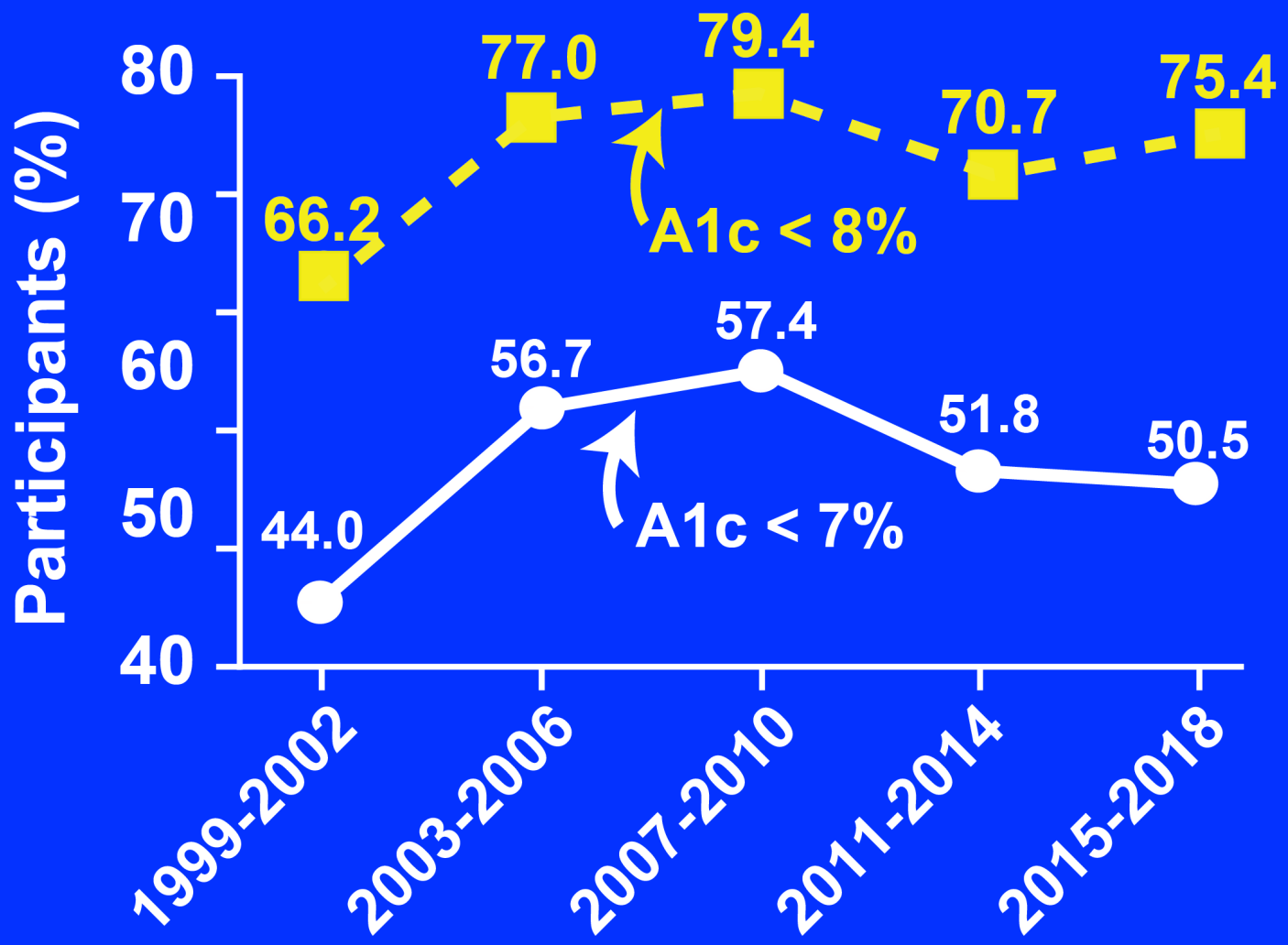
Advisory Board/ Consultant: Astra Zeneca, Novo Nordisk, Aardvark, Renalytix, CORCEPT, Alnylam, 89Bio, Regeneron

Grants: Astra Zeneca, 89Bio, Amgen, Medality, Eli Lilly

Speakers Bureau: Astra Zeneca, CORCEPT

GLYCEMIC CONTROL IN T2DM: HOW WELL ARE WE DOING? NHANES, 1999-2019

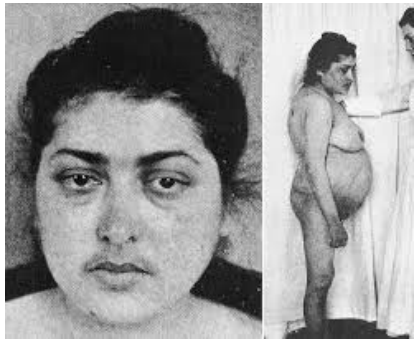
Fang et al, NEJM 384: 2219-2228, 2021



HYPERGLYCEMIA SECONDARY TO HYPERCORTISOLISM: A COMMONLY MISSED DIAGNOSIS OF DIFFICULT-TO-TREAT T2DM

SOME PATIENTS WITH HYPERCORTISOLISM PRESENT WITH CLASSIC PHENOTYPIC FEATURES OF CUSHING SYNDROME

- Easy bruising
- Facial plethora
- Proximal myopathy (or proximal muscle weakness)
- Striae (especially of reddish purple and >1 cm wide)
- Dorsocervical fat pad (“buffalo hump”)
- Facial fullness
- Obesity
- Supraclavicular fullness
- Acne
- Hirsutism



Original publication: Bulletin of the Johns Hopkins Hospital, 1932. Reprint: *Obes Res*, 1994. Accessed November 21, 2022. doi:10.1002/j.1550-8528.1994.tb00097.x

MOST INDIVIDUALS WITH HYPERCORTISOLISM PRESENT WITHOUT CLASSIC PHENOTYPIC FEATURES: BIG FOUR

Type 2 Diabetes (DTC)

Hypertension (DTC)

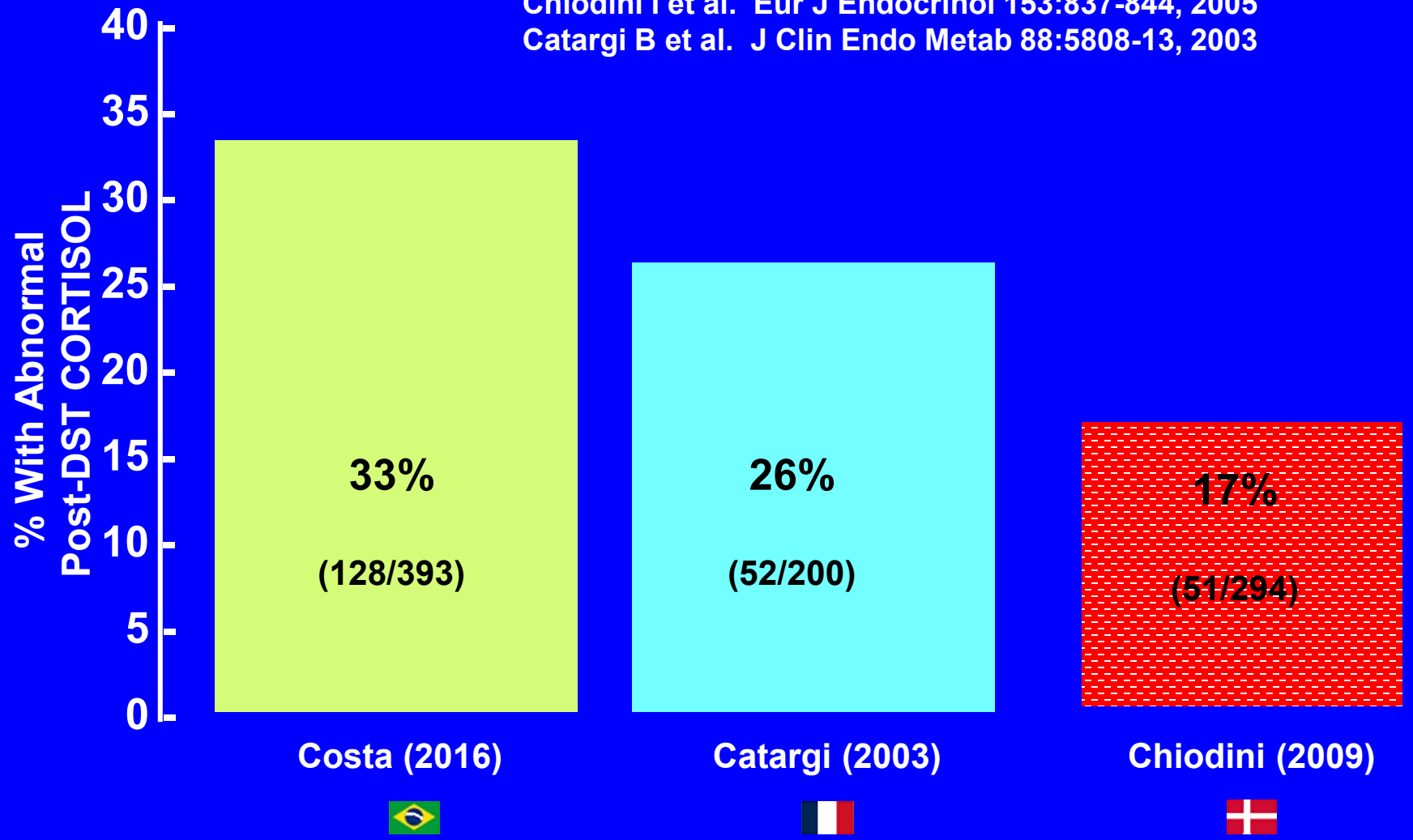
Obesity (visceral)

Osteoporosis/
Fractures

DTC = Difficult to Control

PREVALENCE OF HYPERCORTISOLISM IN POORLY-CONTROL T2DM INDIVIDUALS ON MULTIPLE ANTIDIABETIC AGENTS

Costa DS et al. J Diab Compl 30:1032-38, 2016
Chiodini I et al. Eur J Endocrinol 153:837-844, 2005
Catargi B et al. J Clin Endo Metab 88:5808-13, 2003



PREVALENCE OF HYPERCORTISOLISM IN POORLY CONTROLLED T2DM PEOPLE IN US: THE CATALYST TRIAL

Subjects: 1057 T2DM with A1c = 7.5-11.5%

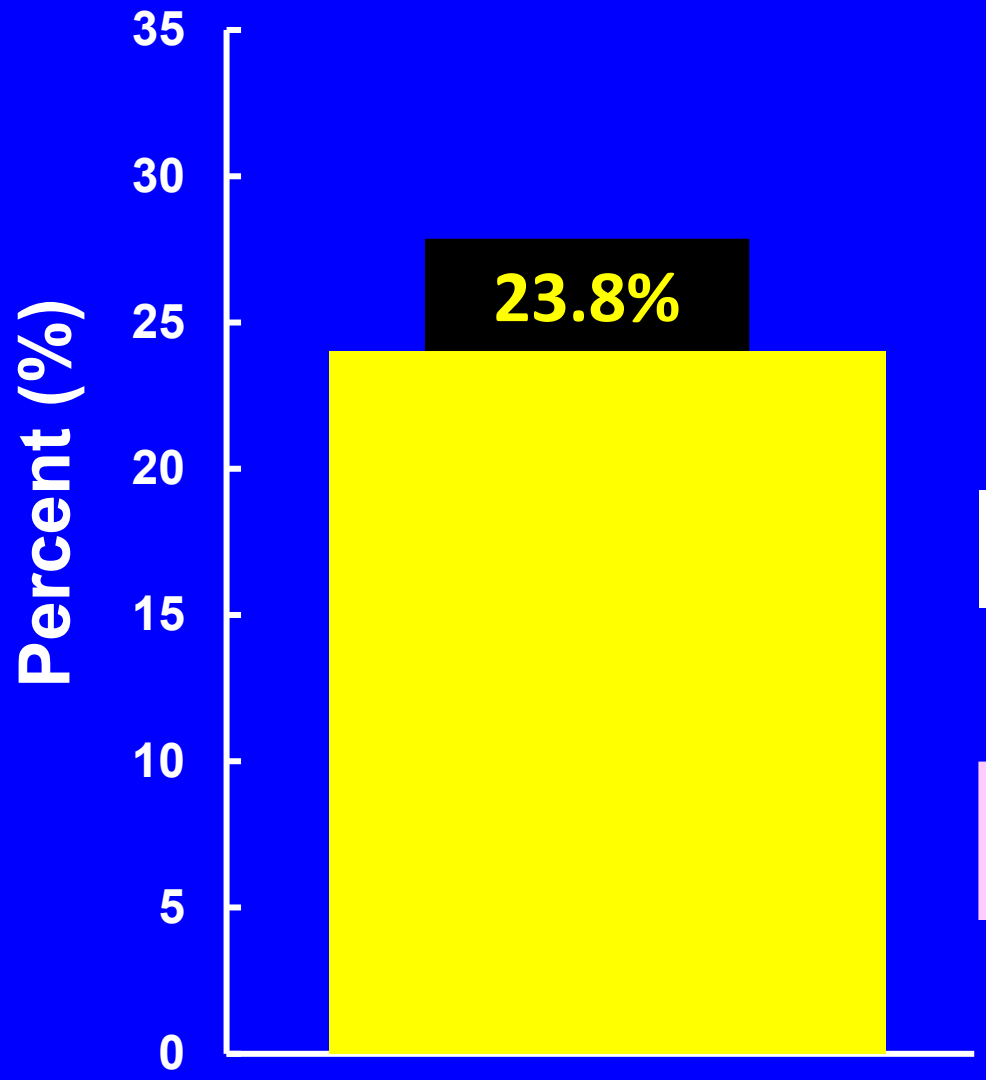
- ≥ 3 anti-hyperglycemic drugs
- insulin and any other antihyperglycemic drug
- ≥ 2 anti-hyperglycemic drugs plus ≥ 1 micro- or macrovascular complication
- ≥ 2 anti-hyperglycemic and ≥ 2 antihypertensive drugs

Methods: 1 mg –Dexamethasone Suppression Test (DST) with 1.8 ug/dl cortisol cut point

Buse JB et al. Diabetes Care, on line, April 2025

PREVALENCE OF HYPERCORTISOLISM IN CATALYST

Buse JB et al. Diabetes Care, on line, April 2025



252 of 1057
CATALYST participants screened have hypercortisolism

Post-DST cortisol: 3.5 µg/dL
Post-DST dexamethasone: 413 ng/dL

Approximately 1 in 3 have an adrenal adenoma

PREVALENCE OF HYPERCORTISOLISM IN PATIENTS WITH POORLY CONTROLLED T2DM ON MULTIPLE ANTIDIABETIC AGENTS

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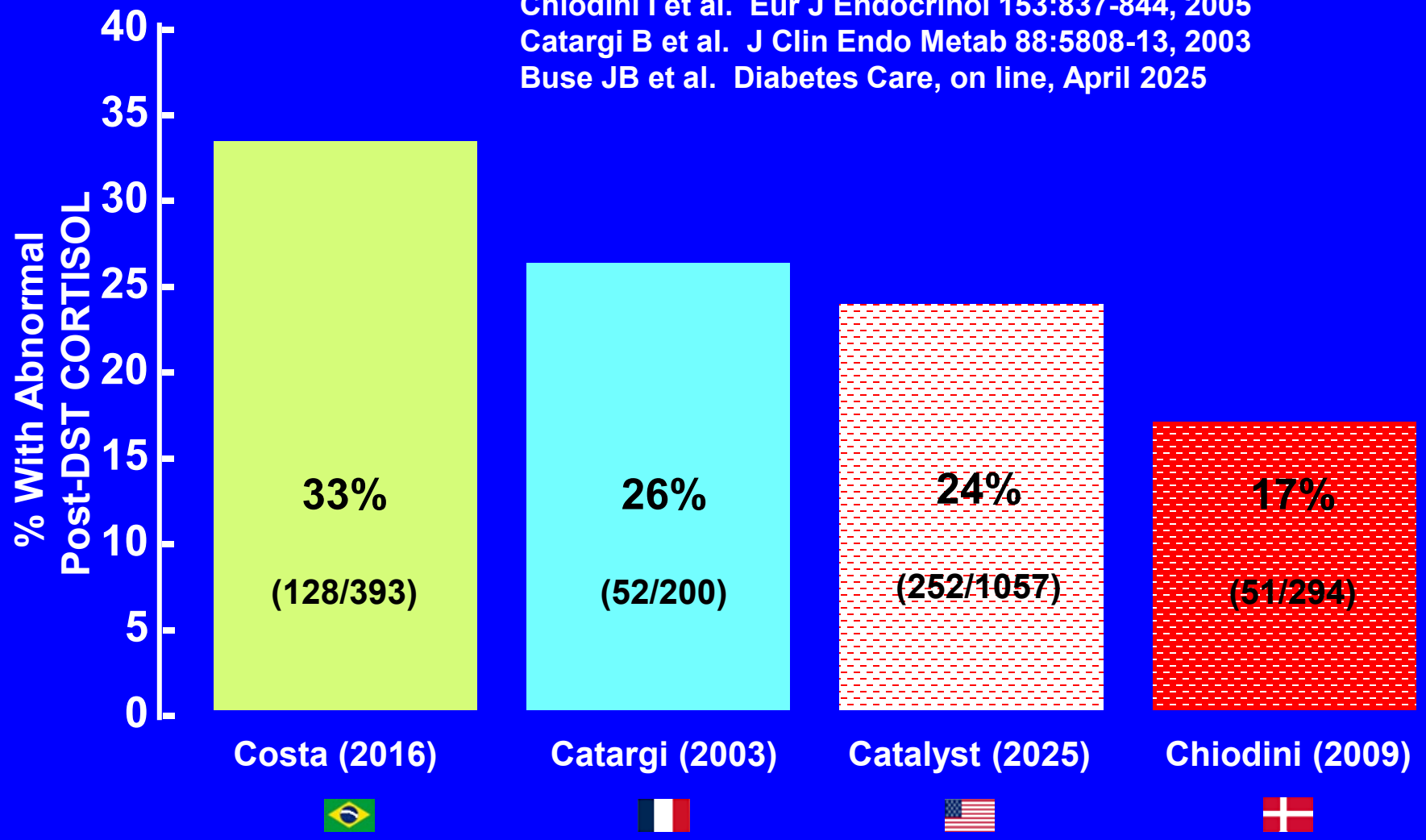


PREVALENCE OF HYPERGLYCEMIA SECONDARY TO HYPERCORTISOLISM

40 million Americans have T2DM

↓ ~25% have A1c > 8.0%

10 million Americans

↓ ~50% are on > 2-3 OHAs ± insulin

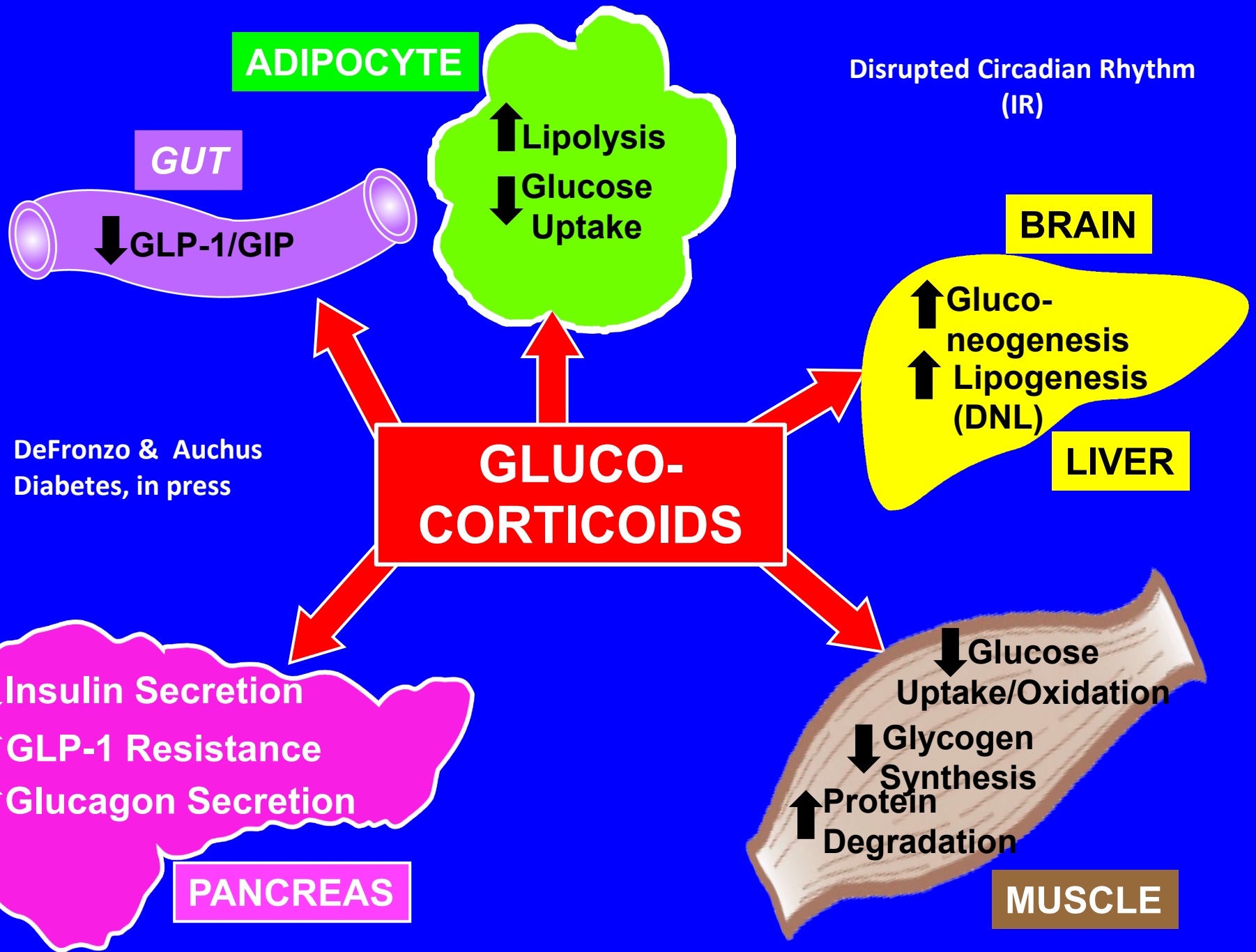
5 million Americans

↓ ~25% have hypercortisolism

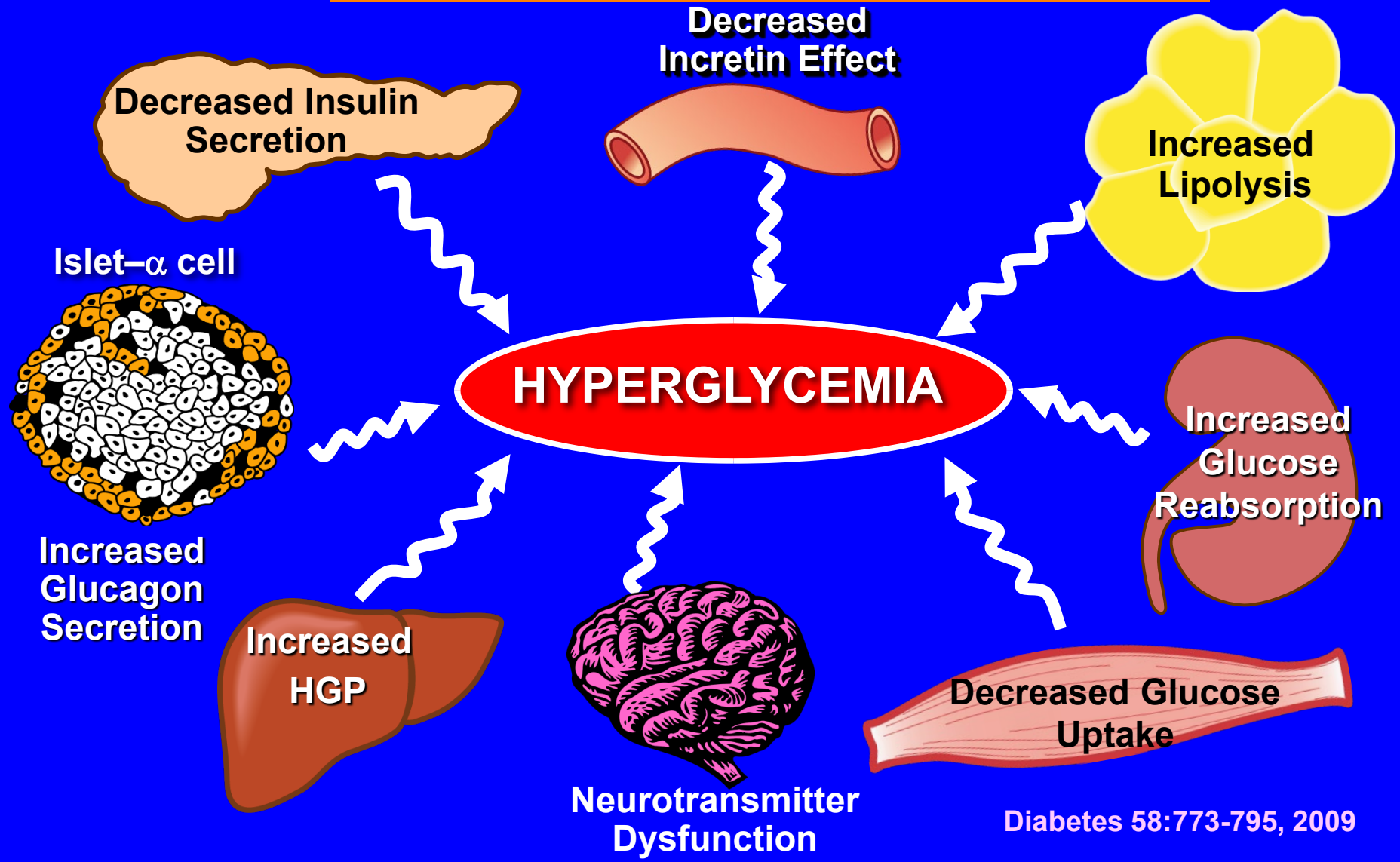
1.125 million Americans

HOW DOES HYPERCORTISOLISM CAUSE HYPERGLYCEMIA?

SUMMARY: GLUCOCORTICOIDS AND IMPAIRED GLUCOSE TOLERANCE



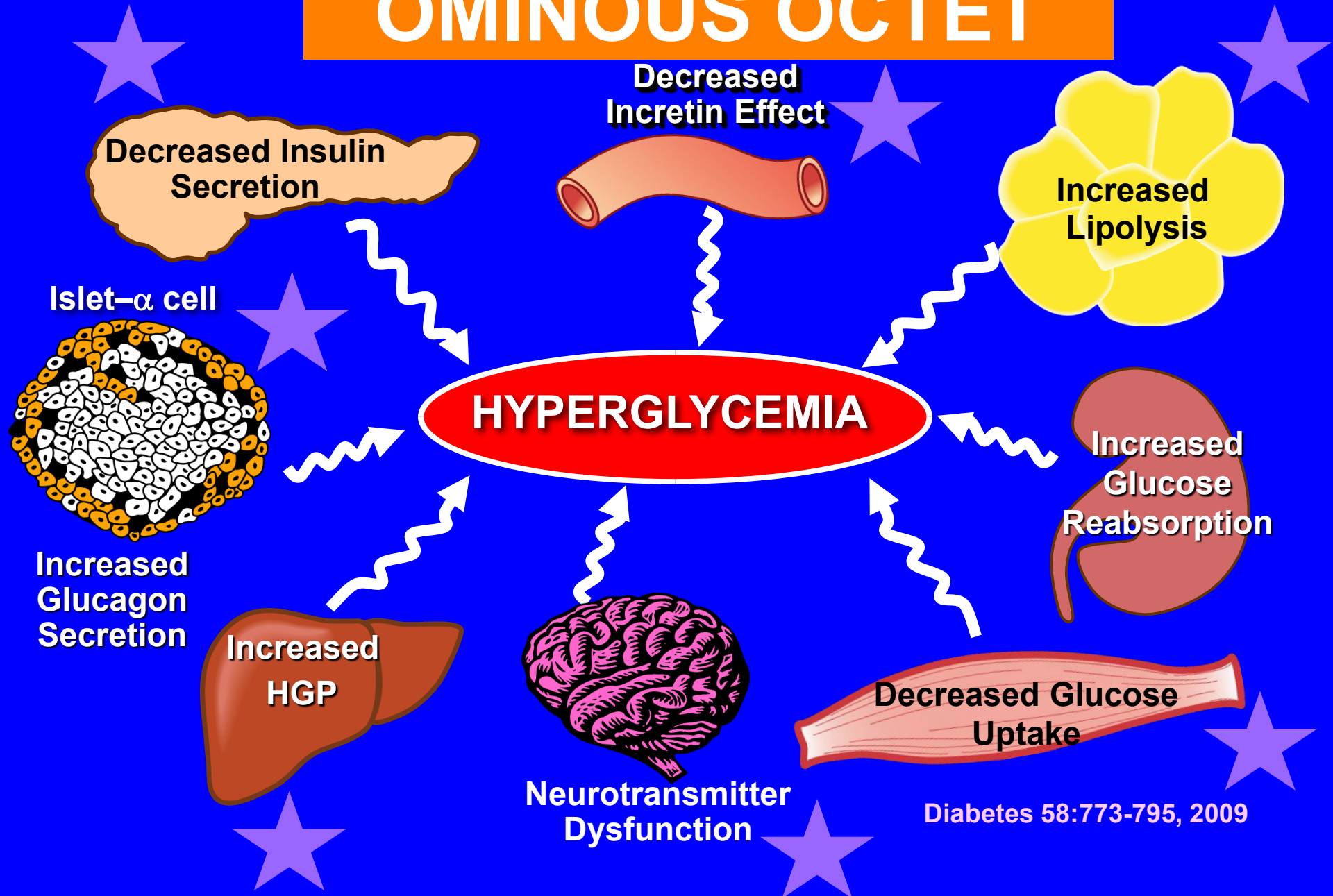
OMINOUS OCTET



Diabetes 58:773-795, 2009

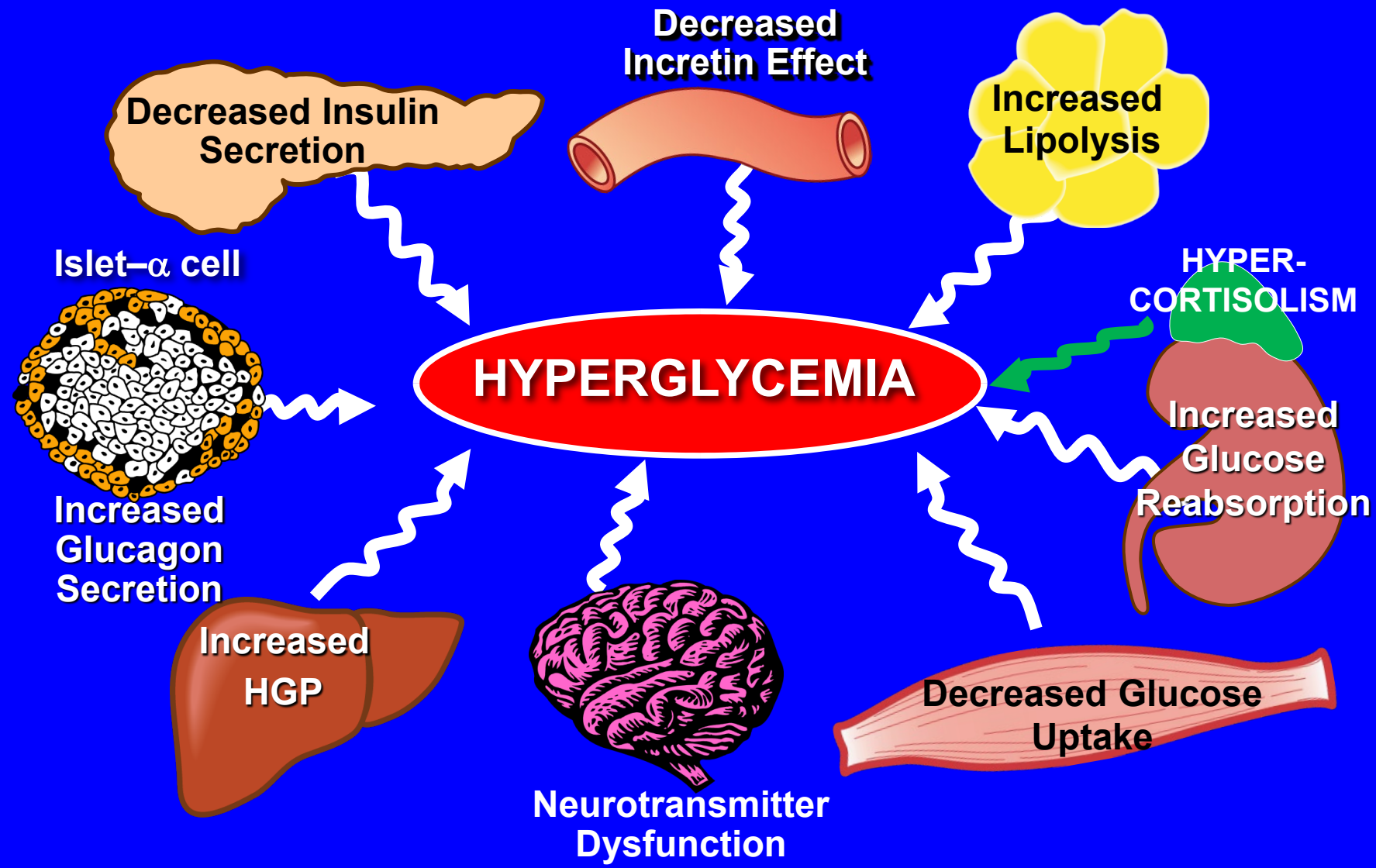
DeFronzo RA. Diabetes 58:773-795, 2009

OMINOUS OCTET



Diabetes 58:773-795, 2009

THE NOXIOUS NINE



THANK YOU!