The VAT Trap Metabolic Classification System

How CGM results, carbohydrate sensitivity and visceral fat combine

STEP 1 — INNATE RESPONSE
Glucotype (GT)

GT1 → Handles carbohydrates easily
GT2 → Moderate carbohydrate sensitivity
GT3 → High carbohydrate sensitivity
U → Unclassified (low carb diet prevents testing)
↓

STEP 2 — CURRENT METABOLIC STATE
Current Glucose Profile (CGP)

CGP I → Very stable glucose
CGP II → Occasional carbohydrate spikes
CGP III → Frequent carb-related spikes
CGP IV → Frequent spikes including >10 mmol/L
CGP V → Very frequent and prolonged spikes
↓

STEP 3 — BODY FAT RISK
VAT Grade (Waist-to-Height Ratio)

A → Very low visceral fat
B → Healthy target range
C → Above metabolic VAT threshold
D → High visceral adiposity
E → Very high visceral adiposity
↓

FINAL METABOLIC CODE

GT + CGP + VAT Grade

Example Interpretation for Readers

GT2 – CGP IV E

This describes a person who:

- Is **biologically sensitive to carbohydrates**
- Shows **frequent glucose spikes**
- Has **high visceral fat**

This person may be at high risk of:

- Prediabetes
- Type 2 diabetes
- Metabolic syndrome

They may benefit from:

- Carbohydrate restriction
- Weight reduction
- GLP-1 based therapies

GT1 – CGP II B

This person:

- Handles carbohydrates well
- Has occasional spikes but mostly normal glucose
- Has healthy visceral fat levels

Typically **lower metabolic risk**.

A glucotype classification: based on glucose excursions observed over a week in response to carbohydrate intake

Graph	High GV	Any Glucose >7.8 mmol/L taking into account diaries	Any Glucose values >10 mmol/L? taking into account diaries	GT
Flat glucose profile with absent food diary or zero glycaemic foods ie low or zero carb diet on reg form with no photos or diary to draw from or food diaries showing zero carb intake all week		<1	0	U
Flat glucose profile despite plenty of high glycaemic foods	no	Yes 0-0.99 per day with carbs	None related to carb intake except *	1
Spikes over 7.8 mmol/L seen **on days standard carbs consumed**	no	Yes 1-2.99 per day with carbs	None on days with standard carbs (can spike after exercise or high sugar intake) except **	2
Frequent spikes >3/day with carbs and/or also seen with **even low glycaemic food consumed** and/or at least one > 10 mmol/L (not exercise or high sugar related) seen during any week of CGM	yes or no	Yes >3 per day with carbs	Yes usually see 1 or more >10 mmol/L seen with any carbs **NOT exercise**	3

** NB Where a GT 1 has one or more value over 10 mmol/L unrelated to exercise or high sugar intake, upgrade to GT2 and ** where a GT2 has one or more value over 10 mmol/L unrelated to exercise or high sugar intake, upgrade to GT3*

CGP classification based on glucose excursions observed over a week

Graph	High GV	Average number of episodes/ **/day** where glucose >7.8 mmol/L	Number of episodes/ **week** where glucose >7.8 mmol/L	Number of episodes/ week where glucose >10 mmol/L	Current Glucose Profile (CGP)
Flat glucose profile or infrequent spikes	no	<1/day	Less than 3 in any one week	0	I
Daily carb related spikes	no	1-1.99	3-13/week	0 *	II
Frequent carb-related spikes	no	2-2.99	14-20/week	0 **	III
Either frequent (>3/day) or >2/day >7.8 mmol/L **PLUS** at least one > 10 mmol/L seen in a week	yes or no	>2 3 or more /day	>14/ week with some>10 mmol/L or >21/week with or **without** any over 10 mmol/L	1-4 per 7 days	IV
Frequent and more prolonged spikes with over 2/ day also some >10 mmol/L	yes	>2 per day	As for IV	5 or more spikes> 10 mmol/L per 7 days	V

** NB Where a Type II has one or more value over 10 mmol/L unrelated to exercise, upgrade to IV. ** Where a Type III has one or more value over 10 mmol/L upgrade to IV GV= glucose variability, CGP = current glucose profile*

MEN — MASTER A–E CHART

Universal Risk Grades

Grade	WhtR	Interpretation
A	<0.40	*Very low visceral burden*
B	0.40–0.49	*Target / low-risk zone*
C	0.50–0.54	*Above metabolic VAT threshold*
D	0.55–0.59	*High visceral adiposity*
E	≥0.60	*Very high visceral adiposity*

Ethnic-Specific Targets

Population	VATI Target (cm^3/m^3)	Suggested WHTR Target
Caucasian	<35–38	≤0.49
East Asian	<32–35	≤0.47–0.48
South Asian	<30–34	≤0.46–0.47
Middle Eastern	<34–36	≤0.48–0.49
Black/African descent	<27–36	≤0.49

*While published VATI range reflects heteroqenalty in datasets.
VATI = Visceral Adipose Tissue Index, WHTR = Weist to-Height Ratio.

WOMEN — MASTER A–E CHART

Universal Risk Grades

Grade	WhtR	Interpretation
A	<0.38–0.40	*Very low visceral burden*
B	0.40–0.47	*Target / low-risk zone*
C	0.48–0.52	*Crosses VAT metabolic threshold*
D	0.53–0.57	*High visceral adiposity*
E	≥0.58–0.60	*Very high visceral adiposity*

Ethnic-Specific Targets

Population	VATI Target (cm^2/m^3)	Suggested WHTR Target
Caucasian	<22-25	**≤0.47-0.48**
East Asian	<20-22	**≤0.45-0.46**
South Asian	<19-21	**≤0.44-0.46**
Middle Eastern	<21-21	**≤0.46-0.47**
Black/African descent	<21-37*	**≤0.47-0.49**

*Wide published VATI range reflects hetorogeneity in datasets.
VATI = Visceral Adipose Tissue Index, WHTR = Waier-to-Height Ratio.