

Master Clinician's Cheat Sheet: The Patient First Care Model (PFCM)

Operationalizing the Shared Agency Framework (SAF) for GLP-1 and GIP/GLP-1 Metabolic Care · By Cat Clark, Author of FAT BITCH

1. The Neuro-Stress Foundation: The Cortisol-Willpower Loop (PMID: 23849196)

Traditional compliance framing fails because it ignores the physical remodeling of neural architecture under chronic hypothalamic-pituitary-adrenal (HPA) axis activation. Under the Shared Agency Framework (SAF), executive function lapses are treated as biological system alerts rather than behavioral defiance.

- **Executive Function Remodeling:** Sustained hypercortisolemia drives dendritic retraction in the Prefrontal Cortex (impulse regulation and long-term planning) while inducing hypertrophy in the Amygdala (threat detection and survival urgency).
- **The Chemical Override:** When a patient reports losing dietary control under stress, primal survival signaling has physically muted prefrontal executive centers. Labeling this non-compliance compounds HPA activation via medical shame.
- **Clinical Pearl:** Non-compliance in chronic metabolic disease is a miscalibrated biological thermostat, not a moral defect. Stabilize HPA stress load before escalating behavioral demands.

2. Neuro-Behavioral Calibration: Dopamine & Hedonic "Food Noise" (PMID: 25071023)

Incretin mimetics act on central reward circuitry alongside peripheral endocrine pathways. Functional neuroimaging (fMRI) shows that GLP-1 receptor agonism reduces reactivity to hyper-palatable food cues in reward-related brain areas (PMID: 25071023); VTA and Nucleus Accumbens effects come from animal studies (PMID: 22492036).

- **Homeostatic vs. Hedonic Taxonomy:** Distinguish homeostatic fuel signals (the metabolic engine) from hedonic dopamine-driven cravings (the neurological noise).
- **Restoring Cognitive Sovereignty:** Dampening excessive mesolimbic reactivity lowers hedonic noise volume, allowing the Prefrontal Cortex to resume executive coordination.
- **Clinical Metric (Signal Volume 1 to 10):** Replace subjective dietary policing with longitudinal tracking of **Hedonic Signal Volume (1 to 10 scale)** across the 7-day injection half-life cycle.

3. Homeostatic Defense: The Adipostat & Set Point Adaptation (PMID: 22029981)

The hypothalamus actively defends its highest sustained weight threshold as an evolutionary survival mechanism. Unassisted caloric restriction triggers a coordinated counter-regulatory surge that persists for at least 12 months post-weight loss (Sumithran et al., N Engl J Med 2011; PMID: 22029981).

- **The Rebound Equation:** Persistent elevation in circulating ghrelin combined with disproportionate suppression of non-exercise activity thermogenesis (NEAT) and resting metabolic rate drives weight

regain when biological signaling is left unaddressed.

- **Hypothalamic Recalibration:** GLP-1 and dual GIP/GLP-1 receptor agonists restore hypothalamic satiety sensitivity, lowering the defended adipostat baseline without triggering acute starvation alarms.

4. Physiological Mechanics: Enteric Motility & Lean Mass Defense (PMID: 17928588 | PMID: 28534027)

Protecting gastrointestinal comfort and skeletal muscle mass determines whether metabolic restoration remains durable over multi-year care horizons.

- **The Ileal Brake & Vagal Signaling:** Endogenous GLP-1 participates in the ileal brake reflex, and pharmacologic GLP-1 receptor agonists slow gastric emptying (strongest during initial titration, attenuating over time via tachyphylaxis). Excessive gastric distension shifts vagal afferent signaling from satiety to nausea defense.
- **The Leucine Anchor & Protein Floor:** In rapid weight reduction, 25% to 39% of total weight lost can come from lean mass (Wilding et al., STEP 1 DEXA substudy, PMID: 33567185). Establish a starting daily target of **1.2 g/kg of reference/adjusted body weight** (with renal screening in CKD) and **2.5g to 3.0g leucine per meal** (~25g to 35g intact high-quality protein) plus 2 weekly resistance-loading sessions (PMID: 23867520).

5. The 3-Phase PFCM Intervention Protocol & Clinical Language Shifts

PFCM Phase	Primary Clinical Action	Legacy Compliance Framing (Retire)	Shared Agency Framework Shift (Adopt)
Phase I: Stabilize	Screen for chronic stress, trauma history, and diet-cycling burnout; remove weight-stigma language in the encounter.	"You need more discipline and stricter calorie counting."	"Your HPA axis is in survival mode. Let us stabilize biological safety and sleep first."
Phase II: Recalibrate	Deploy incretin therapy as a neurological calibrator alongside protein-first sequencing and leucine thresholds.	"Nausea is just a side effect you have to push through."	"Nausea is a vagal defense alert. Let us recalibrate meal volume, fat density, and titration pace."
Phase III: Consolidate	Audit body composition, bowel transit (Bristol Stool Form Scale), and protein intake before escalating dose during plateaus.	"You have stalled; you must be under-reporting intake."	"Your body is in a consolidation phase defending its new baseline. Let us run the 4-step stall audit."

6. Essential Peer-Reviewed Evidence Base & Same-Day Red-Flag Protocol

Clinical Domain	Landmark Citation & Identifier	Key Clinical Finding for Shared Agency Care
HPA Stress Remodeling	McEwen BS, <i>Physiol Rev</i> 2007 (PMID: 23849196)	Chronic stress remodels prefrontal-amygdala circuitry, impairing top-down executive impulse regulation.
Hormonal Persistence	Sumithran P et al., <i>NEJM</i> 2011 (PMID: 22029981)	Compensatory ghrelin elevation and satiety hormone suppression persist 1 year after diet-induced weight loss.
Ileal Brake & Motility	Maljaars PW et al., <i>Physiol Behav</i> 2008 (PMID: 18692080)	Distal ileal nutrient sensing activates neuro-endocrine feedback that slows gastric emptying and promotes satiety.
Mesolimbic Dopamine	van Bloemendaal L et al., <i>Diabetes</i> 2014 (PMID: 25071023)	GLP-1 receptor activation dampens fMRI reward-system reactivity to visual food cues in humans.
Muscle & Leucine Floor	Bauer J et al., <i>JAMDA</i> 2013 (PMID: 23867520) / Phillips 2017 (PMID: 28534027)	1.2 g/kg/day protein and 2.5g to 3.0g leucine per meal with resistance loading defend lean tissue during deficit.
Incretin Outcomes	Wilding <i>NEJM</i> 2021 (PMID: 33567185) / Jastreboff <i>NEJM</i> 2022 (PMID: 35658024)	Semaglutide 2.4mg (-14.9%) and tirzepatide 15mg (-20.9%) establish durable neuro-endocrine weight reduction.

Same-Day Clinical Red Flags: Instruct patients to contact their prescriber the same day for persistent vomiting (>24 hours), severe upper abdominal pain radiating to the back (pancreatitis/biliary screen), absence of bowel movements with vomiting, signs of acute dehydration/orthostasis, or new/worsening depression or self-harm thoughts (FDA Jan 13, 2026 safety communication; 988 Suicide & Crisis Lifeline).

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