

Interpréter un repas avec un contexte de santé

Des explications facultatives,
des priorités qui peuvent varier.

**Une maladie ne définit pas
à elle seule une cible nutritionnelle.**

Profils de santé, nutrition thérapeutique et conflits de priorités : revue critique ciblée
et contrat proposé pour un contexte explicatif facultatif.

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Synthèse en français · dossier scientifique en anglais

Propulsé par MedLab

L'essentiel

Ce que cette recherche permet de retenir

01 Une composition commune, un contexte facultatif

Le rapport retient pour la conception une couche d'explication facultative et des dimensions transparentes. Cela ne constitue ni une implémentation ni une validation clinique de Nutrikom. [Dossier 1, 19-25]

02 Les bénéfices concernent des interventions

Les études de régimes ou de prise en charge soutiennent des résultats à leur échelle. Elles ne valident pas un score de santé personnel appliqué à un repas saisi. [1-13, 20-29, 34-48]

03 Moins n'est pas toujours mieux

Fragilité, cancer, dialyse ou cirrhose peuvent donner la priorité aux apports énergétiques et protéiques. La multimorbidité impose de rendre visibles les conflits plutôt que produire une note simple. [Dossier 8-14, 26]

04 Des limites cliniques et de sécurité

Comparer à une cible de soins nécessite un contexte vérifié. Allergies et maladie cœliaque exigent des données d'ingrédients et de contamination ; composition favorable ne certifie pas sécurité. Scores personnalisés et traitements autonomes restent différés. [Dossier 11, 20-28]

Portée et méthode

Revue critique ciblée, non exhaustive. Certaines sources ne sont accessibles que partiellement. La recherche documentaire et les conclusions n'ont pas été actualisées pour cette édition. Les propositions du dossier ne constituent ni une validation clinique de Nutrikom ni une recommandation personnelle.

Parcourir le rapport

Le dossier scientifique conserve sa pagination de référence : 01 à 42.
Les renvois internes désignent cette pagination, affichée en pied de page.

01-05 Périmètre, méthode et priorités

06-14 Profils et conflits de besoins

15-18 Études humaines décisives

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35-42 Bibliographie et niveaux d'accès

Édition publique

Cette édition ajoute une synthèse française et une navigation au dossier v1.0. La présentation est harmonisée ; les mentions d'outils et d'opérations internes sont retirées. Les données, références, niveaux d'accès aux sources et réserves scientifiques sont conservés. Les propositions décrivent l'état de la recherche à la date du dossier.

Executive decision

Health profiles and therapeutic nutrition

Optional context for interpreting an entered meal

Disposition: **ADOPT FOR DESIGN** an optional explanatory context layer and separate, transparent nutrient dimensions. **INVESTIGATE FURTHER** condition-specific comparisons with verified care-plan targets. **DEFER** a personalized composite score and all autonomous treatment or physiological predictions.

Question ID: NHP01 **Version:** 1.0 **Date:** 12 October 2026 (Pacific/Fiji). Searches: 11 October 2026 UTC. This is a critical, targeted evidence review and proposed design contract, not a clinical validation or implementation specification.

Decision	Reason and boundary
Investigate first: hypertension; lipid/coronary context; prediabetes and type 2 diabetes	Reliable sodium, fat, fibre and carbohydrate amounts can reveal contributors. Benefits in dietary trials concern sustained patterns or supervised interventions, not a meal health grade.
Keep glycemic context independent	A health profile does not turn a published food GI or an ingredient estimate into an individual glucose response. Never generate insulin doses.
Create a nutrition-support route	Energy and protein sufficiency may take priority over restriction in frailty, cancer, dialysis or cirrhosis. A lower amount is not universally better.
Use specialist pathways for complex disease	Renal restrictions, active gastrointestinal disease, inherited metabolic diets, pregnancy with complications and recovery states depend on more than a diagnosis.
Do not certify ingredient safety	Allergy and coeliac support needs current ingredient and cross-contact information. A favourable nutrient profile cannot offset an allergen or unknown ingredient.

What the evidence does not establish: that a disease-adjusted meal score is more understandable, safer, or clinically beneficial than nutrient amounts and short explanations. Evidence for dietary treatment does not validate Nutrikom or its proposed ledger. [1-13, 20-29, 34-48]

Reading guide: scope and method 2-4; priorities and profile map 5-14; human studies 15-18; data and interpretation contract 19-28; validation and next steps 29-32; confidence and harms register 33-34; bibliography 35-42. PDF bookmarks link to each section.

Scope and interpretation levels

The unit of observation is one entered meal. Health context may change relevance; it does not change what was observed. The boundaries supplied in DAY01, REC01, REF01, MEAL01, IDX01 and GLY01 are carried forward without revalidating their collection methods, reference tables or algorithms.

Level	Defensible meaning	Cannot establish
Meal composition	Estimated amount and contributors from entered foods, quantities and matched records. Density is explicitly per mass or energy.	Usual intake, total daily exposure, absorbed amount, personal adequacy or disease activity.
Reviewed recorded period	Estimated intake for the stated interval, with user-confirmed intake coverage and separate nutrient-data coverage.	A typical day or adherence to a long-term intervention.
Repeated sampled records	Describe these observations; sampling and within-person variation remain explicit.	A universal day-count guarantee of representativeness or clinical benefit.
Clinical profile and care plan	Supplies applicability and, sometimes, an authorized comparison target.	Permission to diagnose, prescribe or predict physiology from the meal.
Clinical outcome	Requires its own measurement and endpoint-specific study.	Cannot be inferred from a better nutrient amount, score or user satisfaction.

Outcome vocabulary

Clinical: incident diabetes, cardiovascular events, stone recurrence, fractures or hospitalization. **Symptoms:** pain, stool symptoms, reflux and food tolerance. **Surrogates:** HbA1c, blood pressure, lipids, liver fat or urinary chemistry. **Product outcomes:** comprehension, appropriate decisions, burden and perceived relevance. These must be reported separately.

Adults are the principal scope. Paediatric treatment evidence does not authorize adult meal rules; adult rules do not authorize paediatric use. Pregnancy and lactation require distinct life-stage eligibility. US, Canadian, UK, French and European sources are compared where relevant; no region or food culture is treated as the default physiological norm.

Evidence labels used throughout: EVIDENCE denotes sourced clinical or methodological findings. NORMATIVE DESIGN DECISION denotes a proposed product boundary or workflow. UNRESOLVED RESEARCH denotes an unvalidated claim or missing evidence. Confidence statements are this review's judgments unless a source's formal grade is explicitly reported.

Search method and reproducibility

Design: targeted critical review, not a systematic review. No registered protocol, exhaustive database export, independent duplicate screening or de novo meta-analysis was undertaken. Searches were iterative, including contrary results and guideline disagreements. No PRISMA counts are claimed.

Route	Executed query examples and handling
Scholarly academic index	"Food4Me personalized nutrition randomized trial phenotype genotype 2017 dietary advice"; "DASH sodium trial SODIUM HF PREDIMED CORDIOPREV cardiovascular randomized clinical outcomes"; "randomized trial dietary nutrition intervention DASH Sodium CORDIOPREV EFFORT Borghi recurrent calcium stones primary outcomes". Selected records were fetched before use.
PubMed/PMC and journal retrieval via web search	"Diabetes Prevention Program 2002 58% 95 confidence 3234 NEJM lifestyle"; "Look AHEAD cardiovascular effects intensive lifestyle type 2 diabetes 2013"; "Bohn 2015 low FODMAP traditional dietary advice 75"; "DINE CD 2021 randomized Mediterranean specific carbohydrate"; "Ben Yacov 2021 personalized postprandial targeting diet prediabetes".
Institutional/version searches	"site.diabetesjournals.org Standards of Care 2026 nutrition"; "site.kdigo.org 2024 CKD guideline"; "site.nice.org.uk NG106 sodium fluid 2025"; "site.espen.org practical guideline clinical nutrition hydration geriatrics 2022 cancer 2021"; "site.has-sante.fr diabete type 2 2024"; "site.eaaci.org guidelines management IgE mediated food allergy".
Additional profile searches	Named condition + nutrition/diet + guideline + year: IBS, coeliac, IBD, reflux, constipation, stones, MASLD, cirrhosis, gout, bariatric, pregnancy, eating disorders, osteoporosis, intestinal failure and pancreatitis. Original source links followed; guideline references used to locate decisive trials.

Inclusion: current identifiable authoritative guidance; original adult human intervention studies or relevant systematic reviews; explicit population, comparator and endpoint; information affecting a meal interpretation decision. Older landmark RCTs retained where still decision-relevant. Excluded from decisive efficacy claims: animal/in-vitro results, unsupported commercial claims, untraceable AI summaries and uncontrolled associations presented as causation. Mechanistic information informs caveats, not numerical personal effects.

Access: open institutional documents, PMC/full-text sources, publisher-indexed text and abstracts. Bibliography marks the level actually retrieved. Supplements and full individual COI statements were not uniformly accessible. Search engines may lag updates; verify versions again before product use. Sources found here do not establish that every current guideline was captured.

Versions and material disagreements

Area / version	Implication for the contract
Diabetes: ADA 2026; Diabetes Canada nutrition chapter 2018, still indexed; HAS strategy 2024 and care pathway 2025 [1-3]	All support individualized nutrition within care. Canadian emphasis on low-GI substitutions and ADA discussion of heterogeneous GI/GL evidence should remain attributable. A 2025 quick guide is not proof that its nutrition chapter was newly revised. No universal carbohydrate ratio or meal cap follows.
Hypertension: AHA/ACC 2025 [4]	Sodium reduction and DASH have a strong BP rationale. The guideline's daily sodium limits are not meal limits or personalized requirements. Jurisdiction and endpoint must accompany any reference.
Coronary disease: AHA/ACC 2023 [5]	Established disease is secondary prevention. Replacement of saturated fats and sustained food patterns matter; "low fat" alone does not encode the evidence.
Heart failure: AHA/ACC/HFSA 2022 versus NICE NG106, updated September 2025 [6,7]	US guidance considers avoiding excessive sodium reasonable for congestion; NICE says not to routinely restrict sodium or fluids, while reviewing high intake and particular indications. This is not support for an automatic restrictive HF target. SODIUM-HF did not reduce its primary clinical endpoint [35].
CKD: KDIGO 2024 versus KDOQI 2020 [8,9]	KDIGO suggests about 0.8 g protein/kg/day for CKD G3-G5; KDOQI uses lower ranges for selected metabolically stable, non-dialysis adults under supervision, with different recommendations in diabetes and dialysis. Do not average these, select the lowest, or apply either through diagnosis alone.
Gout: ACR 2020 versus NICE 2022 [23,24]	ACR conditionally advises limiting alcohol, purines and high-fructose corn syrup. NICE finds insufficient evidence that a particular diet prevents flares or lowers serum urate. These differ in recommendation framing, not proof that diet replaces urate-lowering treatment.
Obesity: NICE NG246 updated January 2026; frailty: ESPEN 2022 [25,26]	Weight-management interventions require context and consent. Older adults with nutritional vulnerability may need fewer restrictions, even with a higher BMI.

NORMATIVE DESIGN DECISION: references are stored as versioned, jurisdiction-specific rule records. A clinician target and a public guideline are different objects. App language never silently combines them. Review dates in this report identify the documents located, not a permanent guarantee of currency.

Priorities and admission vocabulary

Priority	Profiles and initial scope	Disposition
1: investigate first	Hypertension: sodium contributors. Dyslipidaemia/coronary disease: saturated fat, unsaturated-fat substitutions, fibre contributors. Prediabetes/T2D: carbohydrate amount/quality and explanatory context.	GENERAL EDUCATION + CONTEXTUALIZED MEAL INTERPRETATION. CONDITIONAL COMPARISON only with an applicable named reference or care-plan target.
2: limited symptom and support pilots	Constipation, known lactose intolerance, reflux; nutrition-support context showing energy/protein amounts. No symptom predictions or automatic restriction.	CONTEXTUALIZED MEAL INTERPRETATION after eligibility and data checks. Care targets are CONDITIONAL COMPARISON.
3: curated or specialist workstreams	Coeliac/allergy ingredient support; IBS low-FODMAP plans; CKD, dialysis, stones, HF, IBD, cirrhosis, cancer, bariatric and malabsorption.	GENERAL EDUCATION may be available. Target setting and therapeutic interpretation: SPECIALIST-SUPERVISED ONLY. Unknown ingredient safety: ABSTAIN / OUTSIDE SCOPE.
4: defer autonomous consumer scoring	AKI/unstable illness; inherited metabolic diets; refeeding risk; active eating disorders; treatment-dose decisions; clinical pregnancy complications.	ABSTAIN / OUTSIDE SCOPE for autonomous therapeutic scoring. A specialist may separately define an appropriate recording role.

Priority is a design judgment about evidence transfer, data availability and possible misunderstanding, not a ranking of clinical importance. Food-allergy support is highly important but technically and clinically unsuitable for a nutrient-only launch.

The five dispositions are claim-specific

GENERAL EDUCATION: diagnosis or concern can select a general explanation.

CONTEXTUALIZED MEAL INTERPRETATION: reliable meal facts are reordered or explained.

CONDITIONAL COMPARISON: explicitly applicable target, unit, exposure scope and interval are available. **SPECIALIST-SUPERVISED ONLY:** stage, treatment or competing priorities need qualification.

ABSTAIN / OUTSIDE SCOPE: the particular claim is not supported. Abstention does not erase independently valid nutrient information.

The following profile map combines clinical evidence with proposed admission rules. “Meal” means composition or ingredient information; “pattern” means day-level distribution or repeated intake over time. None of the map entries is a validated Nutrikom treatment recommendation.

Evidence map: cardiometabolic profiles

Profile	EVIDENCE: intervention, outcome, limits	Meal relevance and proposed disposition
Prediabetes	Multicomponent lifestyle intervention can reduce progression to T2D; diet cannot be separated from activity and weight change in DPP. GI/GL pattern evidence in established diabetes is indirect for prevention. [1,36,45]	Carbohydrate amount, fibre and reliable food-quality context. GENERAL EDUCATION / CONTEXTUALIZED MEAL INTERPRETATION. No diagnosis, remission or incident-risk estimate.
Type 2 diabetes	Individualized nutrition patterns and, when appropriate, supported weight loss improve glycaemic measures. Remission interventions apply to selected populations and involve medication oversight. Low-GI/GL meta-analysis mainly concerns T2D. [1,37,45]	Available-carbohydrate definition, portions, treatment context for suggestions. Conditional target comparison only; never label a meal "safe for glucose" or infer HbA1c response.
Type 1 diabetes	Carbohydrate awareness within structured insulin education has trial support; clinical education is not equivalent to an app nutrient estimate. Fat/protein and treatment modify responses. [1,47]	Display composition with uncertainty; capture insulin-treatment context before reduction suggestions. Insulin dosing, bolus timing and hypoglycaemia management are outside this contract.
Hypertension	DASH plus sodium reduction lowers BP in controlled feeding; long-term adherence and baseline BP affect transfer. [4,34]	Sodium amount and identified contributors are useful. Potassium promotion needs renal/medication caveats. No predicted BP change or arbitrary meal sodium ceiling.
Dyslipidaemia / established CAD or MI	Replace saturated fat with appropriate unsaturated-fat foods; emphasize a sustained dietary pattern. CORDIOPREV found fewer events with Mediterranean versus low-fat counselling in established CAD. [5,38]	Separate SFA amount, density and contributors; optional substitution concept. Distinguish LDL-oriented context from triglycerides, for which alcohol and glycaemic context may matter. No event-risk grade.

Data reality: energy, carbohydrate, total fat, saturated fat, fibre and sodium are often available, but exact branded foods, recipes, sauces and preparation vary. Unsaturated-fat breakdown and added/free sugars are not consistently available. Total sugars cannot stand in for free sugars. A profile cannot repair missing nutrient data. [49]

Evidence map: HF, weight and metabolic syndrome

Profile	Intervention and endpoint	Dependencies and admission
Heart failure	Avoiding excessive sodium may help congestion; trials do not establish a universally beneficial strict restriction. Fluids may be restricted in selected situations, not for every HF diagnosis. Energy/protein support can matter when intake is poor. [6,7,35,42]	Symptoms/congestion, current diuretic and other treatment, renal function, electrolytes, nutritional status and prescribed plan. Meal sodium contributors may be explained; sodium/fluid targets require CONDITIONAL COMPARISON or SPECIALIST-SUPERVISED ONLY .
Overweight / obesity	Sustained energy deficit can reduce weight, but no single meal defines energy balance. Lifestyle interventions improve several risk factors; Look AHEAD did not reduce its primary CV endpoint. [25,39]	Ask whether weight-related feedback is wanted. Consider medications, past restriction, food access and nutritional vulnerability. CONTEXTUALIZED MEAL INTERPRETATION ; personalized energy needs require more than weight/BMI.
Metabolic syndrome	Address components separately: BP, glucose, lipids, activity and, where appropriate, weight. It is not a distinct evidence-based meal scoring formula. [1,4,25,44]	Self-reported concern permits education. More detail only if it changes the explanation. Do not add separate penalties for syndrome plus diabetes plus hypertension for the same nutrient.
Severe hypertriglyceridaemia or pancreatitis risk	Nutrition can be treatment-critical, but severity, cause and medication determine the plan. Generic “healthy fats” or weight-loss advice may be inadequate.	SPECIALIST-SUPERVISED ONLY ; use a confirmed, current plan. ABSTAIN from app-defined fat or alcohol prescriptions and crisis-risk predictions.

The kind of concern matters

Hypertension primarily motivates attention to sodium exposure over time. Lipid management often involves **substitution**, not simply lower fat. Diabetes can involve **amount, quality and distribution**. HF can involve **excess and insufficiency at the same time**. Weight change concerns a sustained energy balance, not the moral value of a food.

NORMATIVE DESIGN DECISION: diagnosis alone can reorder sodium or fat facts. It cannot authorize a lower numerical target. A user-entered care-plan target remains labelled as user reported unless independently verified. A daily target can contextualize a meal contribution, but is never divided by three or displayed as what must be eaten next.

Evidence map: renal disease

Profile	Relevant dimensions and evidence	Needed before therapeutic interpretation
CKD G1-G2 with albuminuria or other kidney damage	Diet quality, sodium and treatment-specific needs; not every early CKD patient requires potassium, phosphate or protein restriction. Albuminuria conveys risk context, not a meal protein allowance. [8]	Confirmed stage/cause and albuminuria category if known; current plan. Education and composition contributors admitted; no stage inference from one lab.
CKD G3-G5, not on dialysis	Protein/energy balance; sodium; potassium and phosphorus according to labs and treatment. KDIGO and KDOQI differ on protein restriction intensity. [8,9]	Stage, stability, diabetes, nutrition risk, body-weight basis if prescribed, relevant labs/dates, medications and target source. SPECIALIST-SUPERVISED ONLY for setting limits; conditional comparisons to an existing plan.
Haemodialysis / peritoneal dialysis	Protein losses and catabolism change priorities; potassium, phosphate, sodium and fluid depend on modality, residual function and treatment. Dialysis is not just “advanced CKD with stricter protein restriction”. [9,10]	Modality, schedule, residual urine if relevant, dry-weight basis, dialysis adequacy/care plan, binders and labs. Peritoneal dialysate glucose affects energy accounting outside a food-only ledger.
Kidney transplant	Early recovery differs from stable long-term care. Nutrition, food safety and medication interactions coexist with diabetes, lipids and graft function. [9]	Time since transplant, renal status, immunosuppressive regimen and team instructions. No generic transplant score; SPECIALIST-SUPERVISED ONLY for treatment-linked interpretation.
AKI / unstable acute renal illness	Protein and energy management depend on catabolism, acute illness and kidney replacement therapy; stable outpatient CKD targets do not transfer. [10]	Hospital/specialist assessment. ABSTAIN / OUTSIDE SCOPE for consumer therapeutic comparisons. Recording may support a care team but does not determine nutrition support.

Data reality: potassium and phosphorus may be absent on labels. Total phosphorus does not identify inorganic additives or absorbed phosphate. Ingredient lists may show an additive but rarely quantify its contribution. Cooking/leaching, discarded water, brands and food matching matter. Never derive potassium or phosphorus from protein or food name alone. [8,9,49]

Renal trade-offs and recurrent stones

EVIDENCE: renal nutrition is a strong counterexample to “less is always better.” Restrictive protein advice can conflict with frailty or inadequate energy intake. Serum potassium is influenced by kidney function, medicines, acidosis, constipation and other factors; a food potassium amount is not a serum-potassium prediction. [8-10,26]

Stone phenotype	Appropriate distinction	App boundary
Calcium oxalate / hypercalciuria	Normal dietary calcium with lower salt/animal protein performed better than low calcium in a selected male recurrent-stone trial. Calcium with meals may affect oxalate absorption. [11,41]	Do not flag all calcium as undesirable. Use confirmed stone analysis and relevant 24-hour urine results for targeted education.
Hyperoxaluria / enteric hyperoxaluria	Oxalate exposure, calcium co-ingestion and malabsorption context may matter. Foods with similar macros can differ in oxalate. [11]	Ordinary nutrient tables seldom support complete oxalate totals. Only curated analytical matches; no automatic “low oxalate” certification.
Uric acid stones	Urinary pH, uric acid handling and metabolic context matter; not equivalent to calcium stones or gout. [11]	No app-derived alkalinization, potassium-citrate dose or predicted urine pH.
Cystine / infection stones	Specific disease mechanisms and treatment differ. A generic calcium-stone diet is not transferable. [11]	SPECIALIST-SUPERVISED ONLY; ingredient recording can remain available.
Fluids across stone types	Urine-volume goals and recurrence prevention concern daily intake/output; climate and losses matter. Fluid advice conflicts with some HF/renal plans. [11]	Do not turn a urine-volume goal into an automatic drink volume or meal quota. Require clinician reconciliation of conflicting fluid instructions.

Minimum stone context: diagnosed subtype or “unknown”; recurrence history; stone-analysis source/date; relevant serum and 24-hour urine results where used; treatment; fluid constraints; plan. Unknown subtype permits general prevention education, not a subtype-specific restriction. Repeated recorded meals cannot substitute for metabolic evaluation.

NORMATIVE DESIGN DECISION: potassium, phosphate and protein comparisons remain independently gated. Missing potassium does not hide known sodium. A phosphorus subtotal must name covered foods and must not be called the total meal exposure.

Evidence map: functional GI symptoms

Profile	Intervention, outcomes and confidence	Meal information and limits
IBS-C, IBS-D, IBS-M	A limited low-FODMAP trial can improve global symptoms, with reintroduction/personalization. Soluble fibre differs from insoluble fibre. Response varies; traditional advice also helps, and subtype-specific evidence is limited. [12,13,40,46]	Food type, exact preparation and amount; diagnosed subtype, symptom pattern, current phase and tolerated foods. GENERAL EDUCATION; low-FODMAP treatment requires trained support. Total fibre or carbohydrate cannot estimate FODMAPs.
Functional constipation	Selected fibre interventions, especially psyllium, have evidence; the 2023 AGA/ACG guideline's fibre recommendation is conditional with low certainty. Obstructive symptoms and secondary causes need assessment. [14]	Describe known fibre and fluid intake in context; no guaranteed bowel response. Fibre type, tolerance, symptoms and fluid restrictions matter. Do not label all high-fibre meals beneficial.
Lactose intolerance	Tolerance varies with quantity and food context; complete dairy exclusion is not universally necessary. Calcium/vitamin D sources need attention when foods are restricted. [17]	Exact product/lactose data and personal tolerance. Distinguish lactose intolerance from milk-protein allergy. "Lactose-free" does not mean milk-allergen-free.
Reflux / GERD	Weight management where indicated, avoiding meals close to bedtime and individualized trigger management may help; evidence for blanket food exclusion is weaker. [18]	Meal size, symptoms and interval to lying down are more meaningful than a label such as "dinner at 20:00". No reflux prediction or universal forbidden-food list.

FODMAP is not a macro-based nutrient score

Laboratory FODMAP data are food- and serving-specific, with distinct carbohydrate families. Ingredient substitutions, varieties and processing may change the result. A traffic-light category for a tested serving cannot be extrapolated to an untested recipe or added across ingredients as if it were grams. Monash describes laboratory testing and portion-dependent ratings; access, licensing and regional matching require a dedicated data arrangement. [50]

NORMATIVE DESIGN DECISION: preserve optional symptom notes without claiming causality. One episode after one meal is an association; repeated symptom logging alone is not a blinded challenge. Avoid initiating restrictive elimination diets in people with nutritional vulnerability, food insecurity or eating-disorder risk. [13]

Evidence map: inflammatory and avoidance profiles

Profile	Clinical role	Admitted support and abstention
Coeliac disease	Lifelong gluten exclusion after diagnosis and follow-up are central. Gluten content is not recoverable from nutrient totals. [15]	Known ingredient presence may be identified from verified records. Unknown recipe/cross-contact means compatibility unknown. Do not advise gluten exclusion as a diagnostic test or claim mucosal healing from intake.
Food allergy	Confirmed allergen avoidance, individualized education and an action plan are core management. Thresholds and cross-contact cannot be inferred from a meal composition record. [16]	Only specific, current ingredient evidence and careful uncertainty wording. Never “safe” or “allergen-free” solely from database matching; no challenge/reintroduction advice. Safety checks cannot be compensated by a high nutrient score.
IBD in remission	A broadly Mediterranean pattern is reasonable for general health; no single diet consistently prevents all adult flares. Nutrient deficits, restrictions and tolerance need individual review. [19]	Show composition and known tolerated foods. Do not label a meal anti-inflammatory or predict a flare. Symptoms do not establish inflammatory activity.
Active Crohn’s / ulcerative colitis	Inflammation, appetite, losses, strictures and nutrition support alter priorities. Therapeutic diets/enteral nutrition have different evidence by age and phenotype; paediatric induction results are not an adult consumer rule. [19,43]	Disease activity, location/stricture, surgery, treatment and nutrition status required. SPECIALIST-SUPERVISED ONLY for therapeutic interpretation. High fibre may be inappropriate with obstructive concerns.
Malabsorption, short bowel, high-output stoma or pancreatic insufficiency	Anatomy, fluid/sodium losses, pancreatic enzyme treatment and absorption determine needs; ingested nutrients are not absorbed nutrients. [20,21]	Procedure/anatomy, stage, output, symptoms, treatment and prescribed plan. Ordinary food accounting may assist recording; fluid/electrolyte or enzyme instructions are outside autonomous use.

NORMATIVE DESIGN DECISION: separate an ingredient-avoidance view from composition feedback. A food may contain a relevant ingredient while having useful nutrients. Describe the conflict without calling food “poison”, “bad” or globally unhealthy. Nutrition usefulness and ingredient compatibility are different constructs.

Evidence map: hepatic and metabolic disease

Profile	Supported intervention / endpoint	Meal relevance and admission
MASLD without decompensated cirrhosis	Diet quality, activity and sustained weight change where appropriate can improve liver fat and metabolic health; histological and clinical endpoints differ. The 2024 European guideline does not establish a liver score for a meal. [22]	Energy and relevant contributors, reliable free/added sugars, fat quality and alcohol can be discussed. Stage/fibrosis, alcohol context, diabetes and nutrition status affect advice. No inferred fibrosis improvement.
Compensated or decompensated cirrhosis	Avoid prolonged fasting and inadequate energy/protein; multiple meals and a late-evening snack may support nutrition. Routine protein restriction for hepatic encephalopathy is inappropriate. Ascites creates sodium/palatability trade-offs. [27]	Clinical stage, ascites, encephalopathy, nutritional status and current plan. An evening snack may be purposeful. SPECIALIST-SUPERVISED ONLY for targets; clock time alone must not be penalized.
Gout / hyperuricaemia	Diet has a supportive role; alcohol and selected food exposures may matter. Effects on urate are generally smaller than pharmacological management, with low-certainty dietary recommendations. Hyperuricaemia is not a diagnosis of gout. [23,24]	Alcohol, reliable ingredient context and a confirmed concern support education. Purines cannot be computed from total protein. Do not predict a flare, prescribe a urate target or imply treatment can stop.
Inherited metabolic conditions	PKU requires phenylalanine-specific lifelong management and biochemical monitoring; total protein alone is insufficient. Other amino-acid, urea-cycle or carbohydrate-metabolism disorders have different specialist diets. [28]	Confirmed disorder, specialist prescription, validated disease-specific food data, medical foods and monitoring. SPECIALIST-SUPERVISED ONLY; ABSTAIN from autonomous restriction, fasting advice or dose computation.

Evidence transfer: weight-loss evidence in MASLD cannot be applied unchanged to sarcopenic or decompensated cirrhosis. A large-looking meal can be nutritionally appropriate in recovery; a late meal can be intentional. A consumer meal label does not identify either situation.

Data reality: total/free/added sugars are distinct; alcohol needs beverage amount and strength. Purine and amino-acid-specific data require dedicated sources. The report uses PKU as an important exemplar, not an exhaustive review of every inherited metabolic disorder. Rare-disease pathways remain explicitly outside initial admission.

Evidence map: nutritional vulnerability

Profile	Evidence and concern	Minimum context / proposed use
Undernutrition, frailty, sarcopenia	Energy/protein support, food modification and exercise where feasible may be relevant. Undernutrition is not diagnosed from a low-energy meal or BMI alone. ESPEN discourages unnecessary restriction in vulnerable older adults. [26,29,42]	Weight trajectory, appetite/intake decline, functional concerns and care plan, rather than BMI alone. Show energy/protein sources without declaring requirements met. Screening/diagnosis needs its own validated process.
Osteoporosis / fracture risk	Adequate calcium, vitamin D and protein support management alongside activity and osteoporosis treatment. A meal cannot measure bone strength or fracture risk. [30]	Age/life-stage, treatment, diet/supplement exposure and applicable plan. Conditional intake comparison only; no supplement prescription or “bone-protective meal” assurance.
Clinically relevant deficiency	Deficiency depends on clinical assessment and cause: absorption, losses, treatment and laboratory interpretation. Low recorded intake is not diagnosis; adequate recorded intake cannot exclude deficiency. [29,31]	Confirmed condition and prescribed plan. Food contributors may support education. No laboratory interpretation, correction rate, therapeutic dose or automatic supplement recommendation.
Cancer-related nutritional problems	Symptoms, treatment and inadequate intake can justify individualized nutrition support. Restrictive anticancer diets lack a basis for autonomous meal grading; nutrition goals vary with prognosis and patient preferences. [31]	Cancer/treatment phase, symptoms, intake, swallowing and care goals. GENERAL EDUCATION or supportive logging; therapeutic interpretation SPECIALIST-SUPERVISED ONLY.
Bariatric surgery	Procedure, postoperative phase and long-term biochemical monitoring matter. Food intake alone cannot establish micronutrient sufficiency after altered absorption. [32]	Operation/date, phase/texture instructions, symptoms, prescribed supplements and current follow-up. No automatic low-calorie reward, deficiency inference or supplementation algorithm.

Direction reversal: energy-dense food may help someone with poor appetite; increasing volume or fibre could reduce tolerated intake. Protein priorities can conflict with renal restrictions. Known calcium sources may be valuable despite another dimension’s less favourable value. Resolving these is a care-plan decision, not an arithmetic compensation rule.

Life stage, eating disorders and important omissions

Context	Evidence boundary	Admission
Pregnancy / lactation	Life-stage references, food safety, supplements and existing disease matter. NICE NG247 (2025) gives pregnancy/lactation guidance; this does not authorize individualized supplement doses from meal data. [33]	Optional stage/trimester and care context. GENERAL EDUCATION; applicable reference comparisons only. Gestational diabetes, prior bariatric surgery or other complications require specialist qualification.
Eating disorders or restrictive distress	Appropriate care can require reducing numerical monitoring and restriction. Eating disorders can occur at any body weight; a normal or high BMI does not remove the concern. [25,52]	ABSTAIN / OUTSIDE SCOPE for autonomous weight-loss, deficit and evaluative meal scores. Offer a nonnumerical view or pause feedback; clinician-supported recording only where appropriate.
Refeeding risk / severe intake deprivation	Restarting nutrition may require monitored electrolyte, fluid and clinical management. A high nutrient score does not establish safety. [53]	SPECIALIST-SUPERVISED ONLY. Consumer intake advice or target escalation is outside scope.
Dysphagia / aspiration concerns	Safe texture and fluid consistency need swallowing assessment; viscosity or nutrient composition is not enough to declare swallow safety. [26,53]	Known texture-plan metadata can be recorded; ABSTAIN from texture/safety certification or “easier to swallow” inference.
Medication-food interactions	Insulin/secretagogues, SGLT2 inhibitors, renal-potassium treatments and immunosuppression may materially change advice. Interaction rules need drug-specific authoritative sources. [1,8]	Collect only treatment details that change the requested explanation; unknown treatment blocks relevant suggestions, not all composition facts. No medication changes.
Non-oral nutrition / acute care	Enteral feeds, parenteral nutrition, dialysis energy and supplements may dominate exposure and are absent from a meal-only ledger. [10,20,31]	SPECIALIST-SUPERVISED ONLY for total exposure. Mark food-only scope; never imply the ledger covers all nutrition.

NORMATIVE DESIGN DECISION: users can decline, remove or change a profile and can disable numbers without disclosing a diagnosis. A lightweight context selector should not become an unvalidated screening questionnaire. Symptom escalation and urgent care handling require separate clinical governance, not an AI-generated triage script.

Decisive human evidence: cardiovascular outcomes

DASH-Sodium: blood pressure, not a personal meal effect [34]

Sacks et al., 2001: 412 adults, randomized to DASH or a US control pattern, each with three sodium levels in randomized 30-day periods; controlled feeding. Low-sodium DASH versus high-sodium control lowered systolic BP by 8.9 mmHg overall (95% CI 6.7-11.1 lower); subgroup differences were 7.1 without hypertension and 11.5 with hypertension. This supports sustained pattern education, not a predicted BP change from a meal. Short duration and intensive food provision limit free-living transfer. Funding: NHLBI; food/equipment donations acknowledged. Access: publisher text/abstract; individual author disclosures not comprehensively re-audited.

SODIUM-HF: a restrictive target did not reduce the primary endpoint [35]

Ezekowitz et al., 2022: 806 adults with treated NYHA II-III HF, 26 sites in six countries, open-label randomized low-sodium counselling versus usual care, 12 months. Death/CV hospitalization/CV emergency visits: 60/397 versus 70/409; HR 0.89 (95% CI 0.63-1.26), $P=.53$. Achieved median sodium intake was approximately 1,658 versus 2,073 mg/day. No treatment-related safety events were reported, but this is not proof of safety for all HF phenotypes. Modest intake separation and imprecision matter. Funding: CIHR, University Hospital Foundation, Health Research Council of New Zealand; full COI list not retrieved. Access: abstract and indexed primary text, bibliographic fetched record.

CORDIOPREV: dietary patterns in secondary prevention [38]

Delgado-Lista et al., 2022: 1,002 Spanish adults with coronary disease, age 20-75, 82.5% men; Mediterranean versus low-fat dietary intervention for seven years. Major CV endpoint: 87 versus 111 events; adjusted HRs across models 0.719 (95% CI 0.541-0.957) to 0.753 (0.568-0.998). This is sustained counselling in established disease, not evidence for a saturated-fat-only or personalized meal index. Single-centre and sex distribution limit transfer; independent nutrient effects cannot be separated. Funding included Spanish/EU public bodies and olive-oil-related foundations; author industry relationships were disclosed. Access: primary abstract/indexed text and disclosure section.

Interpretation: confidence is strongest for BP effects under controlled sodium/pattern interventions; more qualified for transferring particular long-term event results across populations. Neither significant pattern results nor a null HF trial define a clinical meal threshold. Harms were not uniformly reported across trials.

Decisive human evidence: diabetes and weight

DPP: prevention through a multicomponent intervention [36]

Diabetes Prevention Program Research Group, 2002: 3,234 US adults with elevated fasting and post-load glucose randomized to intensive lifestyle, metformin or placebo. Over a mean 2.8 years, diabetes incidence was 58% lower with lifestyle versus placebo (95% CI 48%-66%). The intervention combined diet, weight-loss goals and activity; it did not test meal feedback. Funding was primarily NIH/NIDDK with other public support and donated materials/medications. Access: original publisher text and abstract; full COI audit not performed. Transfer to generally healthy users or app-only education is indirect.

DiRECT: remission in selected T2D under supervised treatment [37]

Lean et al., 2018: UK primary-care cluster RCT, 306 recruited; age 20-65, T2D duration under six years, BMI 27-45, not receiving insulin. Total diet replacement, food reintroduction and maintenance support versus usual care included clinical medication withdrawal/monitoring. At 12 months, remission was 46% versus 4%; OR 19.7 (95% CI 7.8-49.8). Open-label, selected population and intensive support limit transfer. Adverse events and medication management cannot be abstracted into an app recommendation. Diabetes UK funded the trial; complete COI details were not extracted. Access: primary abstract and trial-hosted paper. No autonomous diet replacement or drug-change advice follows.

Look AHEAD: surrogate improvement did not ensure fewer CV events [39]

2013: 5,145 US adults with T2D and overweight/obesity randomized to intensive lifestyle versus diabetes support/education. At median 9.6 years, the primary CV endpoint HR was 0.95 (95% CI 0.83-1.09; $P=.51$), despite greater weight loss and several risk-factor improvements. This does not show lifestyle is useless; it limits claims about this endpoint. Funding: NIH and other support, including industry contributions disclosed in the primary paper. Access: PMC full text; no independent re-analysis.

DAFNE: education integrated with insulin care [47]

2002: 169 UK adults with T1D and moderate/poor control randomized to immediate structured training versus a six-month waiting list. At six months HbA1c averaged 8.4% versus 9.4% ($P<.0001$), with quality-of-life benefits; severe hypoglycaemia was not increased. It tested trained self-management, not an autonomous nutrient app. Open-label and older insulin practice limit transfer. Access: primary journal text/abstract; funding and full COI not verified in this review.

Decisive human evidence: symptoms and nutrition support

IBS: low-FODMAP versus adequate traditional advice [40,46]

Böhn et al., 2015: 75 Swedish adults with Rome III IBS, four-week randomized dietary advice. A ≥ 50 -point IBS severity reduction occurred in 50% on low-FODMAP versus 46% on traditional advice ($P=.72$); 67 completed. No superiority in this small trial does not establish equivalence. Black et al.'s 2022 network meta-analysis (13 RCTs, 944 participants) found fewer failures to improve versus habitual diet: RR 0.67 (95% CI 0.48-0.91). Comparator, short follow-up and difficult blinding explain some apparent disagreement. Neither result predicts an individual food trigger. Access: primary abstracts/indexed text; trial funding reports include Swedish research support, complete COI and adverse-event detail not verified.

DINE-CD: symptom remission is not inflammatory remission [43]

Lewis et al., 2021: 194 US adults with Crohn's disease and mild/moderate symptoms, specific-carbohydrate versus Mediterranean diet. Week-six symptomatic remission: 46.5% versus 43.5% ($P=.77$). CRP response was uncommon; biomarker analyses had small eligible subgroups. Twelve-week dietary study, no usual-diet arm and no superiority do not prove either diet heals inflammation. Funding: PCORI and Crohn's & Colitis Foundation; author disclosures require full-paper review. Access: primary abstract/indexed text.

Stone recurrence: calcium restriction can be the wrong direction [41]

Borghi et al., 2002: 120 men with recurrent calcium oxalate stones and hypercalciuria; five-year randomized normal-calcium/lower-animal-protein/lower-salt diet versus low-calcium diet. Recurrence: 12/60 versus 23/60; RR 0.49 (95% CI 0.24-0.98). Multicomponent intervention, men only, one phenotype and relatively imprecise estimate; not evidence for every stone type. Funding: University of Parma and Italian Ministry for Universities/Research; full COI not located. Access: primary text/abstract.

EFFORT: individualized nutritional support can improve outcomes [42]

Schuetz et al., 2019: 2,088 at-risk Swiss medical inpatients randomized to individualized support versus standard hospital food. In 2,028 analysed, 30-day adverse clinical outcome: 23% versus 27%; adjusted OR 0.79 (95% CI 0.64-0.97). An open-label care bundle, not proof that protein alone or an app improves survival. Funding: Swiss National Science Foundation and Kantonsspital Aarau; investigators' institutions disclosed nutrition-industry grants/honoraria outside the trial. Access: institutional full paper. Hospital results are indirect for healthy consumers.

Personalization evidence and its transfer limits

Food4Me: useful precedent for tailored advice, not a disease score [48]

Celis-Morales et al., 2017: 1,607 adults recruited across seven European countries, 1,269 completing a six-month internet RCT. Personalized diet advice versus conventional advice reduced saturated fat by 1.14 percentage points of energy (95% CI 0.67-1.60 lower) and salt by 0.65 g/day (0.25-1.10 lower); Healthy Eating Index increased 1.27 points (0.30-2.25). Adding phenotype/genotype did not improve overall intervention effectiveness in the main report. Outcomes were dietary behaviours, substantially self-reported; digital volunteers and attrition limit transfer. Funding: EU FP7 Food4Me; full COI not extracted. Access: abstract, author repository and bibliographic record. Secondary endpoint analyses should not be confused with the overall result.

Personalized/precision nutrition in prediabetes or metabolic syndrome [44,54]

Robertson et al., 2024 reviewed seven RCTs (873 adults; 3-24 months), with heterogeneous nutrition and medical-nutrition interventions. HbA1c, postprandial glucose and waist outcomes were encouraging; other outcomes were inconsistent. This is not one validated personalization method. The Ben-Yacov 2021 trial randomized 225 adults with prediabetes to a clinical/microbiome-based postprandial-targeting diet or Mediterranean diet, using CGM and an app. It is an endpoint-specific research precedent, not validation of diagnosis-selected nutrient weights. Full model transportability and commercial/conflict details were not audited here; no effect estimate from that trial is used to justify admission.

Low-GI/GL dietary patterns: relevant but separate [45]

Chiavaroli et al., 2021: 29 trial comparisons, 1,617 participants with diabetes, mainly T2D. For HbA1c, 22 comparisons (1,502 participants) gave a mean difference of -0.31 percentage points (95% CI -0.42 to -0.19; $I^2=75\%$). Median follow-up was about 12 weeks. This supports a pattern-level option, not reliable personal glucose prediction from a mixed meal; T1D evidence was smaller. The review reported high certainty for HbA1c, with heterogeneity and mixed secondary endpoints. Access: open primary SR. Funding/author disclosures include public and food-industry relationships; not all trial-level conflicts or harms were independently assessed.

UNRESOLVED RESEARCH: no directly applicable head-to-head validation of a Nutrikom disease-adjusted single-meal composite versus equally informative transparent feedback was identified. This is a search limitation, not proof that no such study exists or that personalization cannot help. [44,48,51]

Minimum optional profile contract

NORMATIVE DESIGN DECISION: collect progressively. The first layer asks what the user wants explained, not for a complete medical history. A profile is optional; “not supplied”, “unsure” and “no known diagnosis” are distinct states. Generic composition remains useful without any profile.

Field / status	Requirement and permitted use
Context selection - optional	User-selected concern or diagnosis; separate intention such as “understand sodium” from “I have hypertension”. Multiple selections allowed; easy removal; no diagnosis inferred from meals, body size or selection.
Evidence status - required if profile used	self_reported / clinician_reported_by_user / verified_document / unknown. Record source and date, not an unsupported “confirmed” badge. A user’s report of a clinician diagnosis remains user-reported provenance.
Subtype, stage, activity - conditional	Request only when it affects an admitted claim: diabetes type; CKD stage/dialysis; IBD active/remission/stricture; cirrhosis complications; operation and phase; IBS subtype; allergen; stone phenotype.
Clinical measurements - conditional	Analyte, value, unit, sample date, source, relevant trend and care-team interpretation when needed. Lab presence alone does not authorize interpretation. No unvalidated automatic diagnosis or stage assignment.
Treatment context - conditional	Relevant medication class/regimen, dialysis, enzyme/binder use or prescribed nutrition. “Unknown” remains possible. Do not demand unrelated medication lists for general education.
Target record - required for care-plan comparison	Nutrient/form; amount or range; unit; period; food-only versus total exposure; weight basis where applicable; prescriber/source; issue date; review conditions; priority/conflicts; verification state.
Preferences and constraints - optional	Foods tolerated, cultural preferences, budget, food access, cooking capacity, accessibility and preferred language. These guide optional ideas without asserting therapeutic equivalence.
Numerical feedback preference - optional	Show/hide numbers and evaluative language. No penalty for declining a profile. Review whether weight-focused prompts are wanted before presenting them.

Useful extra data test: ask “Which proposed output changes if this is known?” If none changes, do not collect it. Microbiome, genotype or extensive laboratory panels are not required to explain known sodium contributors. Food4Me does not justify collecting them by default. [48]

Profile-specific dependencies and freshness

Claim	Minimum additional context	If missing or no longer applicable
Hypertension: explain sodium contributors	Self-selected sodium/BP concern; reliable meal sodium. No BP value is needed for a general relationship.	Keep the amount and general explanation; omit individualized threshold or predicted effect.
Lipid/CAD: discuss replacement	Selected concern; relevant fats and verified ingredients; known food preferences. Established CAD versus prevention must remain distinct.	Use a general replacement concept without fabricated nutrient savings or event benefit.
Diabetes: treatment-sensitive food idea	Type and relevant therapy/meal plan; carbohydrate definition and portions; no unmet clinical conflict.	Keep descriptive carbohydrate/fibre facts. Do not suggest abrupt carbohydrate reduction or timing changes where treatment is unknown.
Renal K/phosphate/protein or HF fluid comparison	Stage/treatment and current team target; relevant laboratory context and its clinical review if the target depends on it.	Abstain from the affected comparison. State why; do not default to the strictest guideline.
IBS/FODMAP or IBD modification	Diagnosis/activity, diet phase, tolerance, nutrition risk and trained support; tested data appropriate to portions.	No symptom-prevention claim, recipe classification or restrictive instruction.
Allergy/coeliac ingredient check	Specific condition/ingredient, exact current product/recipe, ingredient provenance and cross-contact limitations.	Compatibility unknown. Known presence may still be identified; absence in a nutrient row is not absence in food.
Nutrition-support comparison	Current prescribed energy/protein or other plan, interval and exposure scope; relevant weight basis, losses and clinical phase.	Show meal amounts and contributors; no “met needs”, “deficient” or reduction prompt.

Freshness is clinical and claim-dependent

Store `measured_at`, `recorded_at` and `reviewed_at` separately. A laboratory value is historical; its relevance changes with acute illness, dialysis, medication changes, pregnancy, surgery or treatment. There is no universal safe “lab age” for every nutrient comparison. A care team may specify a review date or event that suspends applicability. If a material event invalidates the target, stop the comparison until clarified.

For educational displays, no lab upload is necessary. For a specialized interpretation, an apparently recent result without units, provenance or clinical context is insufficient. Do not silently infer normal potassium, stable eGFR, absent albuminuria or no hypoglycaemia risk from missing fields.

Nutrient and ingredient data contract

Data object	Required content and verification
Meal fact	Fact ID, meal revision, entered foods and edible amounts, units, preparation when relevant, recipe yields, matched composition records, estimated value/unit, uncertainty state, calculated_at and algorithm version.
Composition record	Source publisher/dataset and release; row ID; country/brand/date; analytical, calculated, label or borrowed status; per-100-g or serving basis; edible/raw/cooked form; nutrient definition; missing/trace/zero distinction. [49]
Carbohydrate and sugars	Total carbohydrate and available carbohydrate are not interchangeable. Record fibre/polyol treatment and the definition used. Added/free sugars require their own source or auditable recipe calculation; never infer from total sugars.
Sodium / salt / fluids	Preserve native unit. Salt equivalent in grams = sodium in grams $\times$ 2.5, labelled as equivalent. Track drinks versus food water and any non-oral sources separately. A beverage subtotal is not total fluid exposure.
Special properties	GI method/population/scale and exact food matching; FODMAP analytes/portion; allergen ingredient and advisory-label evidence; phosphate additive presence; disease-specific amino acids/oxalate/purines only when sourced.
Comparison record	Link to fact IDs and target ID; numerator scope; denominator unit and interval; eligibility decision/reason; coverage; visible source/version. A daily target is not a meal allowance.
Idea / alternative	Known food identity, realistic serving context and preferences. Quantified differences require a fully specified substitution with sourced values and recalculation, not an AI guess.

Availability must be audited, not assumed

Common food databases can often support macronutrients and selected minerals; branded rows may be label-based and incomplete. Total fibre does not encode viscosity, fermentability or tolerance. Food structure, ripeness, cooking/cooling and meal sequence may be unknown. Standard composition data cannot identify allergenic cross-contact or quantify FODMAPs, additive phosphate, purines or oxalate reliably across all foods. [49,50]

NORMATIVE DESIGN DECISION: Nutrikom’s actual database coverage was not audited for NHP01. These are requirements for a future audit, not claims that any nutrient or ingredient capability already exists. No production formula or repository code was changed.

Missing data, coverage and abstention

State	Meaning	Display consequence
Confirmed non-consumption	User says a food or exposure was not consumed.	Can record non-consumption for that item; not evidence that all other intake is reported.
Unreported / interval incomplete	Some intake may be missing or recording interrupted.	Amounts describe entered items only; no complete-day claim.
Unknown quantity	Food identified but edible amount uncertain or absent.	Use a user-supported range if available; otherwise no whole-meal numerical total for affected nutrients.
Missing composition	Amount known but a nutrient/property is absent from the matched record.	Unknown, not zero. Retain valid independent nutrients; show a covered subtotal only as a subtotal.
Unmatched food / preparation	No justified equivalent exists.	Request clarification or leave unresolved. No model-memory substitution.
Conflict or ineligible profile	Target applicability uncertain, stale, contradictory or outside scope.	Abstain from personal comparison while preserving supported composition facts.

Three separate coverage statements: (1) intake coverage is user confirmation of the recorded interval; (2) nutrient-data coverage is analyte-specific completeness for entered foods and amounts; (3) sampling representativeness concerns how observed records relate to usual intake. None can be substituted for another.

Proposed metric: list “sodium data available for 4 of 5 entered items”, with the missing item named. A mass-based or energy-based percentage can supplement this only when the denominator is known and explicitly named. It is not a percentage of true sodium captured: a small sauce could dominate missing sodium. Unknown amounts prevent a reliable mass denominator.

Comparison admission: full numerical comparison requires complete relevant entered-food quantities and nutrient fields, known numerator scope, compatible target scope and interval, and no unresolved clinical applicability conflict. This is a conservative design gate, not a clinically validated completeness threshold. A subtotal may be reported without concluding the whole meal is below a limit; even an apparent crossing must be described as an uncertain estimate, not toxicity or treatment failure.

Later edits invalidate downstream facts, contributor rankings and comparisons linked to the old revision. Duplicate foods, supplements or nested recipe ingredients must not be counted twice. Missing or uncertain nutrient data never become reassurance that an exposure is absent.

AI: evidence acquisition and explanation boundaries

Operation	Permitted role	Admission gate
Retrieval from a traceable source	Locate guideline, composition table, GI record or ingredient document.	Source URL/DOI, edition, access date, relevant passage/table and rights retained. Retrieval is not endorsement.
Extraction of a published value	Propose a structured record from a table or label.	Human/curated verification of food, unit, scale, preparation, portion basis, population and source location before clinical use. OCR errors, column shifts and decimals require checks.
Curated equivalence	Propose a match to a known food/preparation.	Document specific attributes supporting equivalence, exceptions, reviewer and confidence. Brand, regional recipe and raw/cooked differences may require abstention.
Model-generated estimate	Research-only estimate from an explicit model.	Keep separate from measured/published data; validation and error characterization in intended foods/populations required. Not admitted to therapeutic decisions by default.
Model memory / unsupported number	No traceable source or auditable derivation.	Reject; never silently fill a GI, FODMAP, potassium, phosphorus, allergen or target field.
Explanatory generation	Select an approved explanation and optional idea using admitted facts.	Server controls numbers, sources, eligibility and constraints. AI may not invent targets, doses, predicted glucose, absorbed nutrients or treatment changes.

Minimum fact-linked output proposal

Fields: brief title; one or two explanatory sentences; optional food idea; fact_ids; claim_id; profile_rule_id; source_ids; conditionality; no new numerical fields. An explanation cannot assert a food contribution unless that contribution exists in the supplied facts. If support is insufficient, return an abstention reason rather than a plausible story.

GI retrieval must preserve measured food GI versus measured recipe GI versus an ingredient-weighted estimate; a health profile does not upgrade an estimate. FODMAP categories need tested portions; additive presence is not additive quantity; allergen label absence is not verified absence of cross-contact. These limits apply equally to AI and local templates.

UNRESOLVED RESEARCH: AI wording's incremental benefit over a good local explanation is unproven here. A local, source-linked explanation must remain complete and useful without AI. Evaluate factual consistency, conditionality and comprehension, not fluency alone.

Comparing the three personalization approaches

Criterion	A: common composition + explanation	B: separate profile dimensions	C: personalized composite
Construct	Estimated physical composition; context explains relevance.	Several named exposures or comparisons, each with its own scope.	A normative combination of exposure, preference and disease priorities unless an explicit clinical endpoint is defined.
Evidence / precedent	Tailored counselling has behavioural evidence; transfer to meal explanations needs testing. [48]	Clinical guidelines support considering different dimensions; the presentation itself is a design proposal.	Whole-diet indices and endpoint-specific predictive models exist, but do not validate disease-specific meal weights. [51,54]
Weights and thresholds	No disease weighting required. Any common score still needs its own validation.	No collapse; target applicability is explicit.	Guideline mentions cannot provide numerical weights, caps or exchange rates. No justified coefficients identified.
Comparability	Same meal composition is invariant to selected profile.	Comparable only within the same dimension, unit and applicable reference.	Scores across profiles, rule versions or stages are not comparable without explicit linking/measurement evidence.
Multimorbidity	Add relevant explanations; suppress conflicting ideas.	Show conflict and clinically agreed priority without compensation.	Potential double counting, incompatible targets and false compensation; combining disease scores is not a solution.
Potential harm	Too much text or perceived medical authority; test.	Overload, selective attention and target chasing; test.	False reassurance, stigma, restriction and concealed uncertainty; profile changes can masquerade as health improvement.
Disposition	ADOPT FOR DESIGN as the initial research prototype.	ADOPT FOR DESIGN selectively, paired with A.	DEFER; first establish a construct and benefit beyond A/B.

Boundary: A does not endorse the current experimental Nutrikom Index. “Common composition assessment” can consist of amounts, density and contributors alone. NHP01 introduces no replacement index and does not revalidate existing processing/timing coefficients.

What a score would need to demonstrate

EVIDENCE: the Healthy Eating Index is a measure of alignment with national dietary guidance. NCI explicitly cautions that an individual day's score need not represent usual intake and is not a comparison with personal requirements. Such indices offer methodological precedents, not a validated cross-disease single-meal clinical score. [51]

Validity question	Minimum research requirement before a claim
Content validity	Specify the intended construct and audience. Map each component to an endpoint or explicit normative aim; include patients, dietitians and relevant specialists. Identify omitted dimensions and reasons.
Construct validity	Prespecify expected and unexpected relations to independent measures. Expert agreement is useful but not a clinical gold standard. Correlation with an index built from the same nutrients is partly circular.
Weights / compensation	Justify trade-offs explicitly; test whether compensation is meaningful. Ingredient allergy cannot be offset by fibre, and low sodium cannot automatically offset inadequate energy. Disease count must not multiply the same exposure.
Robustness	Perturb portion estimates, matches, recipes, incomplete fields, stage and target versions; examine rank reversals, threshold instability and abstention. No invented acceptance cut-offs.
Incremental usefulness	Compare C with an equally informative A/B view using the same facts and explanation quality. Measure comprehension, appropriate decisions and burden; separate engagement from benefit.
Clinical claim	Define disease, treatment context, endpoint and time horizon; use an appropriate prospective study and independent measurements. A comprehension study cannot validate symptoms, glucose, BP or event-risk claims.

NORMATIVE DESIGN DECISION: no cross-profile leaderboards or “your meal improved by 20 points” after a profile edit. If a future experimental score is explored, expose components, rule version, applicability and missingness; do not show a precise score where inputs are incomplete. Do not reward lower energy or carbohydrate universally.

UNRESOLVED RESEARCH: whether any composite adds enough understanding to justify information loss. Initial research should be willing to conclude that a score is unnecessary. Statistical association with an outcome would not, alone, show that using the score improves that outcome.

Multimorbidity: conflicting priorities

Realistic scenario	Why a simple rule fails	Proposed response
CKD G4 + frailty + poor appetite	Protein reduction and energy support can conflict. A lower protein score is not automatically better.	Show energy/protein amounts; identify a plan conflict. Suspend personalized protein comparison until the renal/nutrition team sets a coherent target.
Hypertension + CKD + potassium-raising treatment	A plant-rich suggestion or potassium salt substitute may be inappropriate without clinical context.	Sodium contributors remain useful. Avoid automatic potassium promotion or salt-substitute suggestion; use a current care plan.
HF + recurrent stones	A stone urine-volume goal and HF fluid instructions may conflict; urine output is not equivalent to drinks.	Do not choose the larger or smaller number. Show recorded drinks separately; request care-plan reconciliation.
IBS-C + lipid concern	Higher fibre may be helpful, but type, dose and tolerance matter. A pulse-heavy idea can aggravate symptoms.	Explain the known fibre amount; offer a tolerated option only if relevant data/preferences exist. No automatic low-FODMAP label.
T1D + coeliac disease	Gluten avoidance and carbohydrate/insulin management are independent; a gluten-free food may have different carbohydrate content.	Check current ingredient evidence separately; recalculate known carbohydrate for the actual product. Never infer a bolus or predict glucose.
Cirrhosis + diabetes + late snack	A generic timing penalty or carbohydrate-minimization rule can conflict with prevention of prolonged fasting.	Remove automatic timing judgment. Show facts and refer to the agreed distribution plan.
Obesity + active cancer or eating disorder	Weight-loss framing can worsen inadequate intake or restrictive distress.	Offer support/non-numerical view; suppress calorie-deficit and “lighter is better” prompts. BMI does not resolve the priority.
Calcium stones + osteoporosis	Avoiding calcium indiscriminately may undermine both bone care and stone prevention.	Identify the stone phenotype and care plan. Do not declare a calcium-containing meal unsuitable.

NORMATIVE DESIGN DECISION: conflict resolution belongs to an explicit care plan and user goals, not an automatic “most restrictive rule wins” policy. Keep non-conflicting facts visible. Explain exactly which comparison is withheld and why.

EN/FR wording: short, factual explanations

Proposed UX language below is not validated. Bracketed fields must be populated only from admitted, server-controlled facts. Numeric examples are illustrative placeholders, not analysed meals.

Use	English	Français
Optional selector	"Would you like an explanation related to a health concern? This is optional."	« Souhaitez-vous une explication liée à un problème de santé ? C'est facultatif. »
Sodium context	"Sodium in this meal: [amount]. [Food] is the largest identified contributor. Reducing sodium over time can help manage blood pressure."	« Sodium de ce repas : [quantité]. [Aliment] est le principal contributeur identifié. Réduire le sodium au fil du temps peut aider à contrôler la tension. »
Fat substitution	"This meal contains [amount] of saturated fat. Replacing some saturated-fat sources with unsaturated-fat foods can support LDL cholesterol management."	« Ce repas contient [quantité] de graisses saturées. Remplacer certaines sources par des aliments riches en graisses insaturées peut aider à contrôler le LDL-cholestérol. »
Diabetes context	"Estimated available carbohydrate: [amount]. This describes the entered foods; it does not predict your glucose response."	« Glucides disponibles estimés : [quantité]. Cette valeur décrit les aliments saisis ; elle ne prédit pas votre réponse glycémique. »
Nutrition support	"This meal provides an estimated [amount] of protein. Your needs depend on your health and care plan; this meal alone cannot show whether they are met."	« Ce repas apporte environ [quantité] de protéines. Vos besoins dépendent de votre santé et de votre suivi ; ce repas seul ne permet pas de savoir s'ils sont couverts. »
Partial data	"Potassium data are missing for [food]. The amount shown covers the other entered foods only."	« Les données de potassium manquent pour [aliment]. La quantité affichée concerne uniquement les autres aliments saisis. »
Unknown ingredient safety	"We cannot confirm compatibility with your allergy from this record. Check the current ingredients and your allergy plan."	« Cette fiche ne permet pas de confirmer la compatibilité avec votre allergie. Vérifiez les ingrédients actuels et les consignes de votre suivi. »

Display the relevant fact first, then at most one or two explanations. Condition names should not imply medical endorsement. Translate meaning and nutrient definitions, not only words; "salt" and "sodium", and "sugars" and "free sugars", must remain distinct.

Comparisons, ideas and prohibited claims

Situation	Allowed proposal	Do not display
Meal vs daily care-plan target	"The entered meal contains an estimated [x] mg sodium. This is [y]% of the daily target you recorded from your care plan. It is not a per-meal limit."	"You have [x] mg left to eat"; "too much for lunch" from daily target $\div 3$; "safe for your heart".
Inapplicable/uncertain target	"Your kidney and nutrition plans may have different protein priorities. We are showing the amount without a personal comparison."	"Your CKD means this meal must be low protein"; "current potassium is normal" from missing labs.
Food idea	"If this fits your preferences and care plan, you could consider a lower-sodium version of [food]. Check the product's sodium amount."	A fixed gram substitution without complete recipe facts; fabricated nutrient savings; "prevents a spike" or "prevents a flare".
GI context	"This published value describes a tested food under a standard protocol. Your response to the mixed meal may differ."	"Immediate insulin spike"; a personal glucose curve, hypo/hyperglycaemia warning or insulin dose from composition alone.
Symptoms	"You recorded symptoms after this meal. That timing alone does not identify the cause."	"This ingredient caused your IBS"; "this meal heals inflammation".
Clinical status	"These intake estimates can help you discuss food patterns with your care team."	Deficiency, toxicity, remission, absence of deficiency, renal safety, disease progression or treatment success inferred from the record.

Additional French comparison wording

« Ce repas saisi contient environ [x] mg de sodium, soit [y] % de l'objectif quotidien que vous avez renseigné à partir de votre suivi. Ce n'est pas une limite par repas. »

« Les priorités concernant les protéines peuvent différer entre votre suivi rénal et votre suivi nutritionnel. Nous affichons la quantité sans comparaison personnelle. »

An optional idea remains optional

Offer it only when the user wants ideas, data support the relation, and there is no unresolved clinical or ingredient conflict. Cultural familiarity, price, availability, sensory needs and tolerability affect usefulness. A modestly different food can have a different purpose; do not label it universally superior. Numeric contribution changes require explicit sourced recalculation.

Proportionate research and validation roadmap

Stage	Work and independent comparators	Decision supported
1. Clinical content review	Dietitians and relevant clinicians plus patient contributors review claim cards, eligibility, competing priorities and jurisdictions. Compare to current source recommendations, not an LLM answer.	Content suitability and identified gaps, not clinical effectiveness.
2. Data audit and offline verification	Audit exact foods, recipes, nutrient definitions and missing states. Test unit conversions and contributor math against independent calculation; perturb portions and matches. Audit ingredient evidence separately.	Software/data correctness and robustness. Complete data do not establish scientific validity.
3. Formative comprehension study	Compare adequate local A, A+B and optional AI wording with identical facts. Include low numeracy, mobile users, screen-reader users and EN/FR groups. Use realistic missingness/conflict vignettes and teach-back.	Can users distinguish amount from target, day from usual intake, and composition from clinical response?
4. Prespecified comparative evaluation	Randomize presentations if formative results justify it. Primary outcome: objective interpretation/appropriate action; also error severity, burden, stigma, restrictive intention and accessibility. Satisfaction/engagement are secondary.	Incremental educational value; whether personalization helps enough to retain.
5. Endpoint-specific clinical research	Only if clinical claims are pursued: define population, stage/treatment, intervention, comparator, duration and endpoint. Glucose needs validated measured response; symptoms need disease-appropriate measures; BP needs standardized repeated readings.	Claims limited to the validated endpoint and population. Hard outcomes need suitable long-term studies.
6. Release governance	Version sources, rules and data; document corrections, overrides, review triggers, drift and adverse interpretations. Repeat targeted validation when claim meaning or population changes.	Controlled extension of scope, not perpetual validity.

No sample sizes or acceptance thresholds are invented here. Choose them after specifying the primary endpoint, meaningful effect/error tolerance, expected variability and harm consequences. Prespecify analysis, uncertainty intervals and subgroup assessment before the evaluation. A small usability pilot cannot establish absence of harm.

For clinical endpoints, measurements and outcome adjudication should be independent of the score where feasible. A model cannot be validated against another model's predictions; an index built from the same inputs is not an independent clinical comparator.

Proposed verification cases: admission and uncertainty

Design cases only. These are not executed tests. Expected behaviour is a proposed contract and needs implementation-specific verification.

Case	Expected behaviour / failure to detect
V01: no health profile	Show composition normally. No claim of absence of disease or personalized adequacy.
V02: hypertension selected, no BP value	Permit general sodium explanation and known contributors. Do not request BP merely to display sodium or predict a BP reduction.
V03: kidney disease selected, stage unknown	Allow general education; block automatic protein, potassium or phosphate limits. Preserve independent sodium facts.
V04: lab recorded six months ago, medication changed yesterday	Historical value remains visible with date; do not assume current relevance. Suspend lab-dependent target comparison until the care plan is reviewed.
V05: four foods with sodium, one sauce missing	Show covered subtotal and identify sauce. Do not call the whole meal low sodium or assign 100% nutrient coverage based on item count.
V06: food known, portion unknown	No complete total. A user-supported portion interval can produce an explicitly conditional estimate; AI must not invent a serving.
V07: US total carbohydrate and EU available carbohydrate records mixed	Detect incompatible definitions before aggregation/GI-related use; no silent fibre subtraction or double subtraction.
V08: user enters 2 g salt as 2 g sodium	Unit/type validation distinguishes salt from sodium; any conversion is labelled. Do not apply a silent factor twice.
V09: clinician daily target entered without exposure scope	Ask whether food only or all sources and confirm interval. Do not present a personal percentage until scope is compatible.
V10: saved meal edited to add a supplement or ingredient	Invalidate/recompute affected facts and explanations; retain version trace. No stale contributor or target percentage.

Include numerical edge cases close to a target: plausible portion or composition uncertainty can change which side of the target the estimate falls on. Report the estimate and uncertainty without turning an arbitrary rounding difference into a new medical interpretation.

Proposed verification cases: clinical conflicts and AI

Case	Expected behaviour / failure to detect
V11: CKD + frailty with conflicting protein plans	Do not average targets or choose the lower. Explain unresolved priorities; preserve known intake.
V12: dialysis added to a pre-existing CKD profile	Reassess eligibility; invalidate inappropriate non-dialysis protein rules. Check non-food exposure scope.
V13: T1D user changes carbohydrate amount	Update composition, not an insulin dose or bolus-time suggestion. No “safer glucose” claim.
V14: milk allergy + lactose-free yoghurt	Do not confuse lactose removal with milk-protein avoidance. Ingredient safety remains separately assessed.
V15: coeliac user enters generic restaurant soup	Nutrient match may support some estimates; gluten/cross-contact compatibility remains unknown.
V16: IBS user doubles a tested food serving	Do not retain the tested-serving FODMAP category automatically or infer a numeric total from colours.
V17: HF + stones + competing fluid instructions	No automatic hydration target. Separate beverage intake, food water and clinical fluid plan.
V18: cirrhosis user records snack at 23:00	No timing penalty; explain only when care-plan distribution context is known.
V19: cancer/poor appetite + weight-loss preference	Avoid unqualified calorie-reduction ideas; identify need to reconcile goals. No BMI-only prioritization.
V20: AI proposes GI from a similar food name	Reject until exact source, protocol, preparation, carbohydrate definition and match are verified. Published value and model estimate stay distinct.
V21: profile changed but meal unchanged	Composition facts stay identical. Any change in explanation records the profile/rule revision; no apparent biological improvement.
V22: screen reader / French view / numbers hidden	All caveats and unknown states remain perceivable. Meaning survives without colour, icons or numeric grades; EN/FR units and claims agree.

Comprehension checks: ask users whether a missing nutrient means zero; whether 40% of a daily target means 60% must be eaten; whether a favourable display certifies allergy safety; and whether a profile-adjusted score proves a better personal response. Record reasoning, not only a multiple-choice guess.

Evidence gaps and recommended next step

EVIDENCE

Nutrition interventions can contribute to prevention, symptom management and clinical care, but their effects vary by condition, treatment and endpoint. Many recommendations address sustained dietary patterns, not the interpretation of one meal. Some strong clinical precedents involve intensive counselling, controlled feeding, laboratory monitoring or multidisciplinary treatment. Their effect sizes cannot be assigned to a Nutrikom explanation.

UNRESOLVED RESEARCH

Direct evidence for digital, disease-contextualized single-meal explanations is limited in the studies retrieved. Comparative comprehension and safety of A versus B versus C remain untested for Nutrikom. Major gaps include multimorbidity, restrictive distress, food insecurity, low numeracy, cross-language meaning, regional recipe matching, current branded ingredients, clinical target provenance and long-term effects of repeated evaluative feedback.

This review did not independently audit Nutrikom's food records, source code, existing score, GI data, legal classification or data-protection implementation. It did not retrieve every trial supplement or comprehensively re-grade every guideline. Some profiles rely mainly on specialist consensus or symptom studies rather than hard-outcome trials. Absence of an identified study is not proof of safety, ineffectiveness or impossibility.

Adverse-event ascertainment in dietary trials is inconsistent. "No harm reported" is not "no harm possible". Product-specific risks in the confidence register are plausible design concerns requiring evaluation, not quantified adverse-event rates for Nutrikom.

NORMATIVE DESIGN DECISION

Most defensible next step: prototype an optional context selector with a common composition view and one or two source-linked explanations. Investigate sodium/BP, fat quality/lipid or coronary context, and prediabetes/T2D carbohydrate context first. Include a nutrition-support option so the product does not universally reward restriction. Compare the prototype against a good generic explanation before adding AI or a score.

Keep renal targets, dialysis/transplant, active GI disease, therapeutic FODMAP restriction, cirrhosis, malabsorption, bariatric recovery and cancer nutrition within qualified workstreams. Treat allergy/coeliac compatibility as a separate ingredient-data problem. Inherited metabolic diets, refeeding risk and acute disease require specialist management; autonomous scoring should abstain. Eating-disorder contexts need a suitable non-evaluative alternative.

A personalized numerical score does not currently offer enough demonstrated incremental benefit to justify proceeding ahead of these transparent approaches. Defer it until a precise construct, defensible trade-offs and a useful advantage over amounts/explanations are established. No formula, weights, treatment thresholds or product implementation are proposed in NHP01.

The bibliography that follows is the traceability register for the numbered claims. Links identify original authorities or original research records; access notes distinguish full-text availability from the text actually retrieved.

Confidence and harms register: cardiometabolic and renal

These are qualitative review judgments about the intervention evidence, not new GRADE assessments. No profile has demonstrated Nutrikom-specific clinical benefit. Numerical estimates and follow-up are given in sections 15-18 where directly extracted; no common effect size can be assigned to an entire diagnosis.

Profile	Confidence / endpoint and effect scope	Harms and transfer checks
Prediabetes	Strong trial support for multicomponent prevention in selected high-risk adults [36]. No isolated meal-feedback effect. Precision-nutrition results heterogeneous [44].	Restriction and weight goals require suitability; baseline risk and treatment differ. DPP follow-up cannot validate acute glucose prediction.
T2D / obesity / metabolic syndrome	Established effects on weight and some glycaemic surrogates; long-term CV benefit depends on intervention. DiRECT and Look AHEAD answer different questions [37,39]. No pooled effect for a generic profile.	Medication-related hypoglycaemia and overly restrictive intake must be considered; very-low-carbohydrate diets with SGLT2 therapy require clinical caution [1].
T1D	Clinical education can improve HbA1c/quality of life [47]; GI pattern evidence smaller than T2D [45]. No validated meal-level insulin or safety inference.	Dose errors and hypoglycaemia risks make treatment decisions outside this contract. Historical education trial is not current device validation.
Hypertension	Strong short-term BP effect in controlled feeding [34]; individual response varies. Sustained meal-app effects and long-term events are not estimated.	Potassium advice and restriction need renal/medication and nutritional context. No BP reduction assigned to grams of sodium in a meal.
Dyslipidaemia / CAD	Guideline support for substitution and patterns; long-term secondary-prevention RCT supports a Mediterranean intervention [5,38]. No single-nutrient meal event effect.	Replacement matters: reducing fat without specifying replacement changes the intervention. Severe triglyceride disorders need a separate plan.
Heart failure	Primary clinical outcome benefit of intensive sodium restriction remains uncertain; SODIUM-HF CI includes benefit and harm [35]. Symptoms and events differ.	Overrestriction can impair palatability/intake; fluid and electrolyte priorities vary. Do not infer no risk from lack of reported trial safety events.
Stable CKD / dialysis / transplant	Guidance combines limited trials and consensus. KDIGO protein recommendation is 2C; targets disagree with KDOQI for some stable patients [8,9]. No universal effect estimate.	Inadequate energy/protein, electrolyte imbalance and inappropriate restrictions; dialysis and transplant alter priorities. Acute illness requires requalification.
AKI / recurrent stones	AKI nutrition is specialist, context-dependent [10]. Stone recurrence trial supports one phenotype and a combined diet, with imprecise RR [41].	Do not extrapolate to every stone, sex or acute setting. Calcium restriction and incompatible fluid advice can be counterproductive.

Confidence and harms register: GI and vulnerability

Profile	Confidence / endpoint and effect scope	Harms and transfer checks
IBS / constipation / lactose / reflux	IBS symptom RCT/SR evidence is positive but comparator-dependent and generally short term [40,46]. CIC fibre evidence is low certainty [14]. Lactose tolerance and reflux triggers are individual; no common effect estimate [17,18].	Bloating, unnecessary exclusions, nutritional imbalance and restrictive distress; symptoms do not confirm causal food intolerance.
Coeliac / food allergy	Ingredient avoidance is established disease management [15,16]. The absence of deliberate harmful-exposure RCTs does not make avoidance optional. No meal-app safety benefit demonstrated.	False-negative ingredients/cross-contact, excessive unnecessary avoidance, and confusion between allergy and intolerance. No “safe” certification from macros.
IBD / malabsorption / postoperative GI	Adult diet effects vary by phenotype and endpoint; DINE-CD did not establish superiority or consistent inflammatory remission [43]. Intestinal failure/pancreatic management relies on specialist evidence and consensus [20,21].	Malabsorption, strictures, fluid losses and inadequate intake can invalidate generic fibre/energy advice. One meal cannot reveal absorption or disease activity.
MASLD / cirrhosis	Pattern/weight interventions have evidence for liver fat and some histological measures; clinical-outcome certainty differs [22]. Cirrhosis nutrition priorities use physiological and clinical support, with no single meal effect estimate [27].	Weight-loss advice may conflict with sarcopenia or decompensation; long fasting or protein restriction may be inappropriate.
Gout / inherited metabolic disease	Gout dietary evidence is limited and recommendations differ [23,24]; no reliable meal-specific flare estimate. PKU management has strong disease-specific rationale, but is outside generic nutrient scoring [28].	Stigma, unnecessary exclusions, treatment abandonment or inappropriate fasting/protein changes. Different inherited disorders cannot share one rule.
Undernutrition / frailty / sarcopenia / cancer	Supportive nutrition is guideline-based; EFFORT provides clinical-outcome evidence in at-risk inpatients [42]. Outpatient, cancer-specific and component effects vary; no single common estimate [26,31].	Refeeding, swallowing issues, treatment intolerance and burdensome restriction. No automatic inference of nutritional recovery from intake.
Osteoporosis / deficiency / bariatric	Adequate intake and monitoring support care; disease correction and fractures are not interchangeable endpoints [29,30,32]. Therapeutic effects depend on cause/treatment; no meal effect estimated.	Excess or omitted supplementation, malabsorption and false reassurance from food totals; prescribed therapy remains separate.
Pregnancy / lactation / eating disorders	Life-stage and specialist guidance apply [33,52]. No validated consumer therapeutic meal score; evidence for its benefit was not identified.	Inappropriate restriction, anxiety and nutritional compromise. Non-evaluative support may be preferable; clinical complications require care.

Bibliography and access register 1

Numbered references connect the evidence map, effect estimates and design rationale. “Open” describes source accessibility; “indexed text” means relevant passages were retrieved without a full document audit. Primary studies’ funding and transfer limits appear in sections 15-18. Unverified disclosures are not treated as “no conflict”.

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[has-sante.fr/jcms/p_3636176/fr/parcours-de-soins-du-patient-adulte-vivant-avec-un-diabete-de-type-2-guide](https://www.has-sante.fr/jcms/p_3636176/fr/parcours-de-soins-du-patient-adulte-vivant-avec-un-diabete-de-type-2-guide).

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[51] US National Cancer Institute. ASA24 resources related to the Healthy Eating Index; research uses of the HEI. Retrieved 11 October 2026.

<https://epi.grants.cancer.gov/asa24/resources/hei.html>

Open official methodological resource. HEI aligns diet with national guidance; an individual day does not establish usual intake or personalized requirements.

[52] NICE. Eating disorders: recognition and treatment. NG69 (2017, updated 2020).

<https://www.nice.org.uk/guidance/ng69>

Official guideline/indexed text. Adult and paediatric clinical care; no claim that numerical meal scoring is a treatment. Product abstention is a normative safety design proposal.

[53] NICE. Nutrition support for adults: oral nutrition support, enteral tube feeding and parenteral nutrition. CG32 (2006, updated August 2017).

<https://www.nice.org.uk/guidance/CG32/chapter/recommendations>

Official indexed recommendations retrieved after direct-access error. Refeeding, swallowing and multidisciplinary support; older guidance retained for foundational scope boundaries.

[54] Ben-Yacov O et al. Personalized Postprandial Glucose Response-Targeting Diet Versus Mediterranean Diet for Glycemic Control in Prediabetes. *Diabetes Care* 44 (2021):1980-1991.

<https://pubmed.ncbi.nlm.nih.gov/34301736/>

PMID 34301736. Primary abstract/protocol description retrieved; full model, effect extraction and commercial/COI audit incomplete. Cited only as an endpoint-specific research precedent, not evidence validating a Nutrikom score.