What to Eat - Embracing the G.E.M.M. Principles

G.E.M.M. GUT ECOLOGY & METABOLIC MODULATION

STEP 1 FOUNDATIONS: Protein, Plants and Starches

PROTEIN Multiply your ideal body weight in kilograms by 0.8, 1.0 or 1.2*. Record the answer as your daily protein intake in grams

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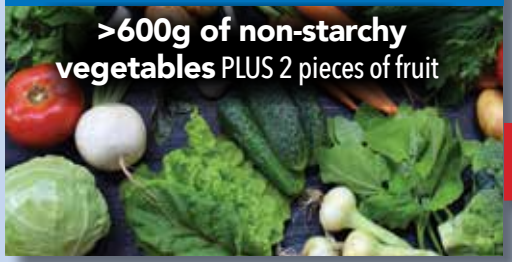
PLANTS Select a range of multi-coloured, non-starchy vegetables and weigh out 600 grams daily, varying your choices often



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Starchy vegetables - add to your meal unless advised to restrict carbohydrates

NOTE: Start Step 2 when advised by your clinician

* Include animal meats (incl. organ meats), eggs, fish or vegetarian options. Protein requirements are higher for vegetarians (1g/kg) and vegan diets to 1.2 g/kg)/day

+ Essential Extras

Cook with Extra Virgin Olive Oil

Make salad dressings with Extra Virgin Olive Oil, Macadamia Oil, Balsamic Vinegar or White Wine Vinegar plus mustard, garlic and herbs

HEALTHY FATS Include fresh avocado, (30 - 50 grams) raw nuts and seeds daily or as advised

Generously include lemon or lime juice and zest, vinegar, garlic, chilli, ginger, mustard, natural herbs and spices, vegetables and bone stock

+ Lifestyle Factors

Regular sleep routine

Black, green or or herbal tea as desired

Pleasure foods occassionally or as permitted

At least 30 minutes of brisk exercise daily

Drink fresh water, 1-2L daily

STEP 2 PREBIOTICS

Include several daily serves from the list of prebiotic foods - important in feeding your microbiota.

Legumes and whole unprocessed grains as recommended. eg. Brown Basmati rice, chia seeds, quinoa, organic oats and barley (great in soups)

STEP 3 PROBIOTICS

PROBIOTICS Add cultured foods like kimchi and kefir when advised by your clinician

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Step 1: Protein-rich Foods

Mixed Diet:
Calculate your protein requirement: My ideal body weight ____ kg x 0.8 = ____ grams of protein

Vegetarian/Vegan Diet:
Calculate your protein requirement: My ideal body weight ____ kg x 1.0 / 1.2 = ____ grams of protein

Your Protein Guide (content in grams) * Cup = 250 mL

Food type and approximate serving size (Guide to estimating approx. requirement)		per 100g	per Portion
MEAT: Serving Size approximately 100g - Lean boneless portion (red or white meat)		30	30
FISH: Serving Size approximately 140g - Fillets of fish		20	30
SHELLFISH: Serving Size approximately 100g - i.e. Prawns,Mussels, Scallops, Oysters, etc		20	20
EGGS: Chicken eggs (2 medium eggs)		12	12
LEGUMES: Serving Size approximately 150g - i.e. Beans and Pulses cooked, Raw red peanuts		8	12
SOY: Serving Size approximately 170g - i.e. Tofu or Tempeh		10	15
NUTS: Serving Size approximately 30g - i.e. Almonds, Walnuts, Hazelnuts, Cashews, etc		18	5
SEEDS: Serving Size approximately 30g - i.e. Pepitas, Sunflowers, Chia, Sesame, etc		19	6
GRAINS:	Bread (wholemeal or wholegrain) 2 average slices	8	6
	Rice, brown basmati, cooked (1/2 cup*)	3	5
	Rolled Oats, cooked (1/2 cup*) - preferably non-instant	3	6
	Pasta (1/2 cup*) (preferably wholemeal)	5	8
DAIRY:	Milk (250 ml glass) - whole or low-fat	3	8
	Hard cheese - Cheddar, Swiss, Edam, etc (30 grams or a matchbox-sized piece)	25	8
	Cottage or Ricotta cheese (100 grams)	11	11
	Feta cheese (30 grams)	14	4
	Yogurt and Kefir (1 cup*)	3	8

Plant-based proteins

Protein-containing foods must contain ALL of the essential amino acids. Where animal foods naturally contain all of these, plant foods do not. However, the problem is solved by combining the two key plant protein categories.

Complete protein = 2 parts grain, nut or seed + 1 part legume.

Step 2: Prebiotic-rich Foods

As you are selecting foods for both your own cells and those of your microbiota, you are encouraged to choose as wide a variety as possible. The table below lists 8 different families of prebiotic-rich foods. Try to include foods from as many families as possible across each day; the greater the variety, the greater the diversity of your health-promoting 'friendly' microbes.

These foods include soluble (jelly-like) and insoluble fibres as well as the brightly-coloured polyphenols, especially abundant in the skins of plant foods.

Your clinician is likely to recommend a prebiotic supplement in the initial stages of your programme but this will be gradually replaced by the foods in this table.

Generally 30 to 50 grams of dietary fibre is recommended daily. Some of this will come from your >600 grams of non-starchy vegetables.

8 prebiotic food families - typical examples

Family #1	Leeks, onions, garlic, shallots, asparagus, globe artichoke, banana, agave, chicory root.
Family #2	Legumes of all types (eg lentils, chick peas), Nuts (eg. cashews, pistachios), Dairy - (eg. kefir and it's active molecule *kefiran*).
Family #3	Citrus peel, apples (retain skin for the coloured polyphenols), stone fruits, carrots, sweet potato
Family #4	Unripe bananas, especially Lady Finger variety, cold cooked white potatoes, cooled overnight and skin retained for mineral content, cold cooked sweet potato (less prebiotic-rich than cold cooked white potatoes)
Family #5	Oats, barley, pearled barley
Family #6	Psyllium seed hulls (modest effect but useful as a thickener)
Family #7	Flaxseed (linseed), sesame seeds, whole grain cereals, legumes, berry seeds
Family #8	Cereal brans of rye, wheat, rice, corn and oats

Easy Meals using protein-rich plants

- Soups and casseroles based on 1 part lentils and 2 parts brown basmati rice.
- A vegetable stir-fry with tofu or tempeh (soy is a legume) with quinoa
- A peanut butter (legume) sandwich on wholegrain or seed bread
- Hummus on wholegrain rice cakes
- Salads with pepitas, cashews and chick peas or haricot beans

This guide forms part of the Gut Ecology & Metabolic Modulation (G.E.M.M. Protocol)