

Example Discussion on current **dietary** intake - for Jane Starbright

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- Discussion on current **dietary** intake and possible problem areas

Main problem areas in this clients diet include:-

First overall food variety is good at greater than 45 in this clients diet.

Macronutrient intakes for this clients diet are **14% Protein: 31% Fat : 50% Carbs and 4.6% alcohol.**

The RDI's for MacroNutrient Ratios as follows: Protein between 15% - 30%, Carbohydrate between 45% - 65% and Fat between 20% -35% and obviously the more energy consumed as Alcohol the less is available for the other Macronutrients . Alcohol intake is recommended at no greater than 2 standard drinks/day or 20gr Alcohol and no more than 4 standard drinks in one sitting or 80 gr alcohol

REF: <http://www.nhmrc.gov.au/media/media/re109/090306-alcohol-guidelines.htm> and http://en.wikipedia.org/wiki/Recommended_maximum_intake_of_alcoholic_beverages#cite_note-ozPress-14

Within these ratios we see that protein intake is minimal and carbs form nearly half of the energy intake. Even though this is almost within the RDI guidelines, this client with genetic and other predispositions to CVD, insulin resistance and hypertension is better suited to lower carbohydrate and increased protein. Also saturated **fat intake is just above the recommended intake levels** (11% of total energy). A Mediterranean diet is high in mono-unsaturated fat and many studies have shown its benefits towards cardiovascular health and the client would be better off with increasing **mono-unsaturated fats**. More importantly **sugar intake is VERY high at 43% of total carbohydrate** intake (RDI recommends LESS than 25%)

Total sugars is the term used for the sum of the individual monosaccharides (galactose, glucose, and fructose) and disaccharides (sucrose, lactose, and maltose) The Australian RDI requires that the intake of simple sugars (mono and di-saccharides like glucose and sucrose) comprise a minimal amount of the total carbohydrate intake, while the US RDI's limit them to <25% of total Carbohydrate.

The preferred protein intake for this client is about 93 gr/day based on body weight and prevailing disease states and exercise levels. However actual intake is only 70gr/day about **23gr LESS than desired**. As we have seen in this client a catabolic state protein requirements

are not adequate especially if we take into account digestion and absorption. (these may be compromised due to the corticosteroid effects on the gastro intestinal tract). A better mix would be **Protein 20-25%:FAT 30-45%:Carbs 30-40%** with the carbohydrate principally from vegetables and non gluten grains like quinoa and rice.

Note that Daily protein requirement is calculated as Ideal Body Weight (Kg) x 0.9 and is expressed in grams. Adjusted daily protein requirement takes into account an Extra Factor (EF) as follows: if BMI is 19 or below OR if exercise level is high OR if MSQ digestive score is 7 or above OR if chronic low grade infection, inflammation or allergy present, OR if overall MSQ score is high OR if Trauma/Surgery/Injury/Chronic Illness or Stress is present or just happened or about to happen, OR if lean body mass is below minimum recommended lean body mass, OR if mal-absorption or Mal-digestion is indicated (as in Celiac or SIBO) or acute or chronic protein deficiency or Mal-nutrition signs are present in the physical exam, OR if age for the man or women is over 70yrs, then the Daily Protein Requirement is further multiplied by this EF of 1.2 or 20%. If more than one condition is present at the same time, then the EF increases accumulatively i.e. if the person has a chronic illness, has a lean body mass deficit and has a high digestive MSQ score, then their EF would be 1.6 This EF can also be used when wanting to build lean muscle mass. Pregnancy (20%) and Lactation (30%) also significantly increase Daily Protein requirements and Infants under 12 months of age have huge protein requirements of approx 1.55 gr protein per kg of their body weight per day. (REF: [1] USDA SR21 Foods and Nutrient database at

<http://www.ars.usda.gov/Services/docs.htm?docid=17478>, [2]Australian Government, NH&MRC, Nutrient Reference Values for Australia and New Zealand at <http://www.nhmrc.gov.au/publications/synopses/n35syn.htm> and [3] Groff and Gropper, Advanced Nutrition and Metabolism, Fourth Edition, page 541 using Harris - Benedict Equations)

It is almost certain that the balance of $\Omega 3:\Omega 6$ strongly favors $\Omega 6$ as nearly 13grams of polyunsaturated fats are eaten/day. While some $\Omega 3$ is supplemented as 2gr flaxseed oil, it will not be enough to maintain an optimal level of $\Omega 3:\Omega 6$ ratio of at least 1:1. Ratios favouring $\Omega 6$ would promote inflammation in this client. Also the body has to work harder via extra enzymatic pathways to convert the linolenic acid found in flaxseed oil into needed EPA and DHA while simple supplementing with high quality molecular distilled and concentrated fish oil will provide large quantities of $\Omega 3$ as both DHA and EPA.

Probiotic intake in the client is minimal. Because of the clients possible dysbiosis and very high and frequent antibiotic intake, a strong dose of both prebiotics (fresh vegies and salads, dried figs and soluble fibre) and variable strains of probiotics is highly essential. Note that **fibre intake** for this clients diet is only 80% of the recommended. With this clients potential gut dysbiosis problem, satisfactory fibre both insoluble and soluble like psyllium (from health food store), dried figs, sweet potato and other fruits and vegies, nuts and seeds and WHOLE non gluten grains (avoiding refined/supermarket foods) is **essential**.

Food colouring, preservative and other detrimental additive exposure may also be moderate to high as these occur in nearly ALL processed foods and their effects will influence gut dysbiosis (preservatives) and other hypersensitivity reactions. Nitrites in sausage meats and

vasoactive amines in wines and cheeses may be interacting in this client in a negative way through food intolerance mechanisms. Takeaway / restaurant foods may also contain hidden crustacean traces that this client needs to be aware of as much energy is already going into repairing and maintaining the immunological imbalance present.

Both minerals and vitamins are seen to be below the RDI in this diet. It MUST be understood that the levels of intake established by an RDI (recommended daily intake) are the **minimum** needed to sustain the individuals daily needs. In time of disease, infection, stress, chronic illness (meaning long term) the persons nutrient and protein and essential fatty acid requirements **significantly increase**. Minerals shown to be BELOW the RDI include **Calcium, iron, potassium, and manganese** while **sodium is high**. Note that **iodine** is not measured but looking at the foods consumed we can deduce that this clients iodine intake and subsequent body repletion state, may be compromised (Order 24 hr urinary iodine pathology test). Vitamins below the RDI in this diet include **Vit A, (very Low) Vit C, Choline, Vit E (very Low), folic acid**

Hence key nutrients that are showing signs of possible insufficient Dietary intake include:-

Ω3 Fatty Acids, Probiotics, Mono-unsaturated fats, Protein and Fibre and the Vitamins Vit A (very low), Vit C, Choline, Vit E (very Low), folic acid and the minerals Calcium, iron, potassium, and manganese and possibly iodine. Anti-oxidants and other essential phyto-nutrients could be increased.

Interesting to note that both Vitamin A and vitamin E along with protein and EFA's were all seen to be low in the physical exam.

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It is a sample of the work carried out on a real client during a full Nutrition Medicine Health Assessment and treatment. It is designed to highlight the attention to detail and individualised care given to each client during an assessment. It is not intended to help in any form of self diagnoses or self treatment.

Practitioner: Hartmut Günther B.Sc. Hons Biochemistry, Grad. Cert. Nutrition Medicine; Phone 0439 54 7788, 07 5545 2153.

Email: hart@healthysecondopinion.com.au

www.healthysecondopinion.com.au