



SCIENTIFIC & MEDICAL NEWSLETTER

FALL / WINTER 2011 - ISSUE 13

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SCIENTIFIC NEWS

THE LATEST NORTH-AMERICAN GUIDELINES FOCUS ON OBESITY.

In keeping with the recent report of the USDA Dietary Guidelines Advisory Committee, the five-yearly update of the «Dietary Guidelines for Americans» has just been published. After reviewing about 2,000 scientific articles and 200 questions, the expert committee responsible for this report concluded that the current obesity epidemic is "the greatest public health hazard of the Century" and that measures should concentrate on "arresting and reversing obesity through primary prevention and behavioural, environmental and food supply changes". Several priorities have been put forward by the committee:

- Reduce the incidence and prevalence of overweight and obesity by reducing overall calorie intakes and increasing physical activity. Shift food intake patterns to encourage a more plant-based diet (vegetables, cooked pulses, fruit, whole grains, nuts, and seeds) with an increased intake of seafood and low-fat dairy products, as well as a moderate intake of lean meats, poultry and eggs.
- Significantly reduce intakes of foods containing added sugars and saturated fats
- Cut down salt intake to 1.5g/day
- Reduce intakes in refined grains
- Promote physical activity

In other words, a pattern not unlike the Eurodiet food pyramid! The report can be downloaded at: <http://www.cnpp.usda.gov/DGAs2010-DGACReport.htm>

Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010

INITIAL WEIGHT LOSS IS A PREDICTIVE FACTOR OF SUCCESS IN LOW CALORIE DIETS (800-KCAL)

This trial included 932 overweight and obese subjects, distributed over eight European centres. All participants followed an 800 kcal diet, including a 35-40% protein intake, during eight weeks, after which their weight losses were compared to their initial baseline values. Results showed that the initial weight, the weight after 1 week of dieting and after 3 weeks of dieting were predictive of the weight loss after 8 weeks of dieting. In this respect, they can be used as biomarkers of the response to low-calorie diets, which confirms the significance of initial weight losses.

T Handjieva-Darlenska, S Handjiev, T M Larsen, M A van Baak, S Jebb, A Papadaki, A F H Pfeiffer, J A Martinez, M Kunesova, C Holst, W H M Saris and A Astrup. Initial weight loss on an 800-kcal diet as a predictor of weight loss success after 8 weeks: the Diogenes study. *European Journal of Clinical Nutrition* (2010) 64, 994-999; doi:10.1038/ejcn.2010.110; published online 30 June 2010.

THE MOST EFFECTIVE DIET HAS A HIGH PROTEIN CONTENT AND A LOW GLYCAEMIC INDEX

Yet another finding we owe to the DIOGENES programme, which was funded by the European commission! Based on the observation that the discrepancies noted in the findings of diet-content studies probably stemmed from a lack of power, the authors recruited 1,209 overweight adults in 8 European countries. These subjects had lost at least 8% of their initial body weight (11kg in average) by following an 800-kcal diet. Participants were then randomly affected, for 26 weeks, to one of the 5 following diets: a low-protein and low-GI diet, a low-protein and high-GI diet, a high protein value and low GI diet, a high protein value and high-GI diet, or a control diet. After 26 weeks, only the low-protein and high GI diet was associated with significant weight regain. In average, weight regain was much lower in the high-protein groups and in the low-GI groups, which led the authors to conclude that increased protein content diets with a reduced glycaemic index improved compliance? and helped sustain initial weight losses.

Larsen TM, Dalskov SM, van Baak M, Jebb SA, Papadaki A, Pfeiffer AF, Martinez JA, Handjieva-Darlenska T, Kunesová M, Pihlsgård M, Stender S, Holst C, Saris WH, Astrup A. Diets with high or low protein content and glycaemic index for weight-loss maintenance. *N Engl J Med* Nov 2010; 363(22):2102-13



MOTIVATION: AN EXCELLENT ALTERNATIVE TO THE CONVENTIONAL BEHAVIOURAL APPROACH TO WEIGHT LOSS

Motivation may contribute to weight-loss maintenance, a crucial component of the successful treatment of obesity, as indicated by the results of an American study conducted on 338 overweight women. After a six-month weight loss programme and a twelve-month stabilisation programme, the results achieved by using a motivation-focused approach were equivalent to those following a conventional behavioural approach. This motivation-focused maintenance approach does therefore seem to be a highly promising alternative, well worth developing.

D S West, A A Gorin, L L Subak, G Foster, C Bragg, J Hecht, M Schembri3 and R R Wing. A motivation-focused weight loss maintenance program is an effective alternative to a skill-based approach. *International Journal of Obesity advance online publication* 3 August 2010; doi: 10.1038/ijo.2010.138.

WEIGHT LOSS IN A PREDIABETIC OBESE PATIENT? YES, BUT WITH A LOW GLYCAEMIC INDEX DIET!

Any diet can induce weight loss. However, although the weight loss induced in obese prediabetic patients does improve their insulin resistance, postprandial hyperinsulinemia only drops with low glycaemic index diets. Indeed, despite the significant weight loss they induce, high-GI diets compromise the functioning of pancreatic cells and intestinal K cells -which produce the gastric inhibitory polypeptides (GIP). The results of this study highlight the essential mediation of the gut in the reduction of type-2 diabetes risks during low-GI diets.

Solomon TP, Haus JM, Kelly KR, Cook MD, Filion J, Rocco M, Kashyap SR, Watanabe RM, Barkoukis H, Kirwan JP; A low-glycaemic index diet combined with exercise reduces insulin resistance, postprandial hyperinsulinemia, and glucose-dependent insulinotropic polypeptide responses in obese prediabetic humans. *Am J Clin Nutr* Oct 2010

SPECIAL FOCUS / THE NUTRITIONAL NEEDS OF SENIOR CITIZENS

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WHOLEGRAIN CEREALS AND PULSES FOR A SMALLER WAIST.

The reverse correlation that exists between diets encouraging the consumption of wholegrain cereal and long-term weight gain is well known. To extend this knowledge, a randomised controlled study of 113 obese New-Zealanders investigated the part played by the introduction of pulses and wholegrain cereals in a weight loss programme. The authors concluded that not only does this type of diet lead to an increased reduction of waist circumference, but it also supports the maintenance of adequate intakes in fibre, vitamins and mineral elements.

Venn BJ, Perry T, Green TJ, Skeaff CM, Aitken W, Moore NJ, Mann JI, Wallace AJ, Monro J, Bradshaw A, Brown RC, Skidmore PM, Doel K, O'Brien K, Frampton C, Williams S. The effect of increasing consumption of pulses and wholegrains in obese people: a randomized controlled trial. *J Am Coll Nutr* Aug 2010; 29(4):365-72



The nutritional needs of senior citizens

"All would live long, but none would be old."
Benjamin Franklin

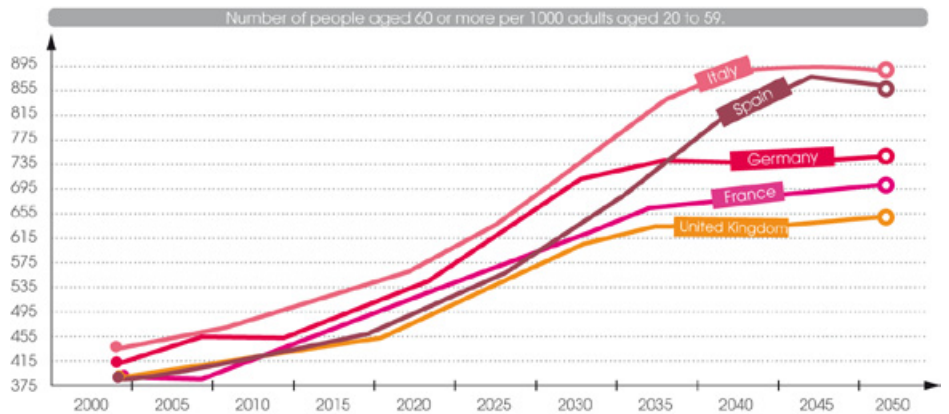
Ageing, this inescapable physiological process, has always represented a major challenge for mankind. Even more so in these days of prolonged life expectancy and chronicization of formerly fatal diseases. By 2020, **one in three European citizen** will belong to the senior age group, a very heterogeneous population where ageing is concerned. Rather than chronological age, which is just an indicator, it is the functional potential of senior citizens which truly differentiates normal ageing from pathological ageing, with its trail of diseases, handicaps and dependence. Nutrition has an impact on nearly all the factors involved in ageing and optimal nutrition remains the most accessible way of growing old successfully.

Physiological changes

The eating patterns and metabolic output of senior citizens are modified by several factors:

- Changes in appetite:** Age modifies the senses of taste and smell. The sweet tooth so often found in the elderly is probably due to their reduced perception of salt, which explains their lack of interest for meat and vegetables.
- Changes in the digestive system:** Given that digestive processes slow down with age, food intakes should at least be 3 hours apart.
- Changes in protein metabolism:** As from age 50, protein anabolism declines whereas protein catabolism is maintained, hence a minute daily loss in muscle mass which fragilizes the elderly in the long run. In average, 65-year old people suffer a 40% muscle-mass loss which they need to compensate by increasing their protein intake. The problem is that this is precisely the time in life when patients have less appetite and often falsely believe their needs to have decreased with age.

Note that, after 60, basic protein needs range from 1.2 to 1.5 g/kg/day.



Changes in postprandial insulin secretion:

The shape of the postprandial insulin secretion curve changes with age: the early peak disappears and the second peak is delayed, hence the glycaemic regulation disorders that induce prandial hyperglycaemia, peripheral insulin resistance and hypoglycaemic episodes in case of prolonged fasting. Because the glycaemic balance is easily disrupted in the elderly, they need regular meals (at least 3 hours in between two meals, nocturnal fasting should not exceed 12 hours).

Changes in desaturase and elongase activity:

These enzymes are involved in the degradation of essential fatty acids and their activity is down-regulated with age.

Changes in metabolic output:

Compared to that of a younger person, the energy expenditure for any given physical activity is increased by 20 to 30 % in the elderly, which is why their dietary intake should be increased. Unfortunately this is not always the case.

The frequent drop in food intake resulting from all these changes is liable to fragilize the elderly and may result in denutrition. In this context, any amount of stress, whether physical or psychological, is liable to have irreversible consequences.

Where do priorities lie?

Successful ageing is defined as **an absence of disease or handicap, enabling a high degree of physical, cognitive and social activity**. Not only does an adequate diet contribute to fight sarcopenia and osteoporosis, it also restricts oxidative stress and helps prevent the decline of cognitive functions.

PRESERVING AN ADEQUATE DIETARY BALANCE

Dietary needs do not decrease with age. On the opposite, given their drop in dietary energy output, the elderly should eat at least as much as before, if not more! Average needs amount to 36 kcal/kg/day, i.e. 2,000-2,400 kcal/day for men and 1,800-2,000 kcal/day for women. **The essential point is not to eat less, but better.**

High biological quality proteins are essential to preserve the muscle mass. Their intake should always be superior to 60g/day. Quantities range from 1.2g/kg/day to 1.5 g/kg/day, depending on the person's weight. Note that, given the lack of protein storage in the elderly, their protein intake should be raised to 1.5-2.5 g/kg/day in case of stress. Moreover, proteins and calcium contribute to bone mass preservation.

Due to the alteration of glycaemic responses, meals should not be skipped and priority should be given to foods with a **low glycaemic load**.

Essential fatty acids are not restricted to linoleic acid and alpha-linoleic acid any more. They now include their derivatives, normally produced under the influence of certain enzymes, the secretion of which is down-regulated in the elderly:

- o Arachidonic acid (red meat, liver, eggs)
- o Eicosapentanoic acid, or EPA (fatty fish)
- o Docosahexanoic acid, or DHA, (fatty fish)

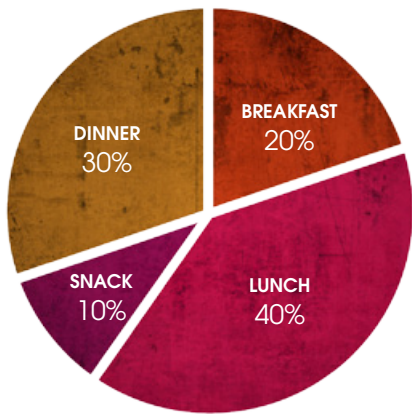
Several studies have demonstrated that the risk of suffering from senile dementia varied with certain dietary factors. It is now a well known fact that **omega-3 fatty acids and vitamins** play a major part in cognitive function preservation. Eating fish, virgin oils, fruit and vegetables is therefore highly recommended.

Adequate dietary intakes in **antioxidant vitamins and mineral elements** also contribute to restrict the main accelerator of ageing: oxidative stress.



The nutritional needs of senior citizens

It is important to maintain regular meal patterns (three meals a day with the possible addition of a teatime snack).



Adequate hydration is essential which implies drinking throughout the day, even in the absence of thirst given that this sensation decreases with age.

Lastly, all should be done to **preserve taste and appetite** in the elderly. This can be achieved by using aromatics and preparing more attractive and palatable foods so as to preserve the pleasure of eating. However, this does depend on the person's psychological, social and economic situation. Another important way of preserving taste and appetite is to encourage socializing as much as possible.

ENCOURAGE DAILY PHYSICAL ACTIVITY!

All studies show that daily physical activity is an essential element of successful ageing and has a positive impact on longevity. Moving plays a major part in the prevention of muscle loss and bone matrix degradation by maintaining muscle function and traction on the bones. It also stimulates the appetite, which means a higher protein intake. Current recommendations are well known: the amount of daily physical activity should be equivalent to a **brisk 30-minute walk**. For fragile elderly people, the objective is to move as much as possible each day.

MAINTAIN AN OPTIMAL WEIGHT

Weight gain is most often due to a reduction in physical activity, either sudden, or gradual and unnoticed. Major weight gain triggers the emergence of a metabolic syndrome, which includes peripheral insulin resistance and paves the way for severe diseases such as cardiovascular disorders, diabetes or gonarthrosis... Moreover, the mobilisation of stored lipids becomes increasingly difficult with age. In order to achieve the same weight loss as a young adult, older subjects need to exercise for a longer period of time, all the more when they are overweight and/or experience various problems on exertion. **This is why the prevention of obesity before subjects reach the age of 70 is so important.** Indeed, in older subjects, weight loss management can be quite challenging in view of the need for lean mass preservation.

The risk/benefit ratio of weight loss should therefore be carefully assessed in the elderly; it will vary according to the patient's age:

Until age 70, the cardiovascular benefits of weight loss are the same as for younger adults.

In the 70-75 age range, weight loss will still improve mobility, quality of life and lung capacity.

After 75, if the subject is fragile, the main nutritional risk is usually denutrition rather than excess weight. Restrictive dieting should be considered with caution in fragile elderly patients. When a diet is prescribed, the protein ration should be increased and caloric intakes should be superior to 1,500 kcal/day (phase 3C). Regular nutritional monitoring of ingesta and biological monitoring of plasma protein are here essential.

PREVENT, DETECT AND LIMIT DENUTRITION

Protein and caloric denutrition affects up to **30% of institutionalized elderly people**, 50% of which in hospitals. The origin most often lies with decreased dietary intakes, whether progressive or sudden, on the occasion of an intercurrent disease. Each hypercatabolic episode thus induces a muscle mass reduction which, in the long run, leads to further fragilization. **Denutrition is the main predictive marker of poor quality ageing.** It is associated with a 2 to 6-fold increase in morbidity risks and a 4-fold increase in mortality risks.

The process of weight loss draws on stored protein and therefore on the muscle mass. This sarcopenia compromises the immune system which increases infection risks. It also results in a reduction in muscle strength and is associated with a 6-fold increase in falls, with all their disastrous consequences, including fractures and loss of autonomy. Sarcopenia is also a major cause of fatigue, which impacts the individual's mood and degree of activity and may generate gradual isolation, or even depression, which, there again, affects the subject's appetite... Early detection and treatment of denutrition is therefore essential. In other words, the patient's nutritional status should be paid as much attention as the treatment of his/her pathologies.

In case of illness, it is important to maintain sufficient dietary intakes **as the need for protein rises from 1.5 to 2.5g/kg/day compared to healthy subjects.** During the acute stage and convalescence, a high-protein diet with the possible prescription of dietary supplements are recommended.

NUTRITIONAL STATUS ASSESSMENT

Caloric and protein denutrition screening and diagnosis are not difficult and rely on simple tools. In order to implement early treatment strategies, you will need to identify at risk situations and closely monitor the patient's body weight. However, one can not always rely on body-weight as a marker given that, in case of sarcopenic obesity, the lean mass is replaced by fat.

Weight monitoring

Stable body weight results from the satisfactory balance between dietary intakes and energy expenditure, **hence the importance of its monthly monitoring.** Apart from weight losses due to obvious reasons such as oedema, heart failure, ascites or dehydration, **any weight loss exceeding 2 kg over the previous month, or exceeding 4 kg over the past 6 months, is as telltale sign of denutrition.**

As soon as the nutritional status is threatened by a high-risk situation, the frequency of follow-up appointments should be increased. These should include an assessment of appetite and dietary intake, BMI calculation, and weighing so as to detect possible weight loss. This enhanced follow-up will enable you to provide your patient with early counselling and adapted nutritional advice. The best parameter for monitoring the efficacy of your treatment strategy is the body weight, the aim being for the patient to recover his/her usual weight, or at least achieve stabilisation.

Calculating the Body Mass Index (BMI)

In elderly patients, a **BMI ≤21** might be a marker of denutrition, unless this has been the patient's lifelong BMI value. In cases where height is not easily measurable, Chumlea's formula, which is based on the distance from heel to knee, can be used to calculate the BMI. Note that standard values vary with age:

AGE	BMI
19-25 years old	19 to 24
25-34 years old	20 to 25
35-44 years old	21 to 26
45-54 years old	22 to 27
55-65 years old	23 to 28
> 65 years old	24 to 29

Mental Profiler

The Mental Profiler questionnaire enables you to assess your patient's quality of life and detect possible underlying depression. If you wish to use it, just log into the website at this address:
<https://doc.euodiet.com/register.aspx>



The nutritional needs of senior citizens

The dietary investigation



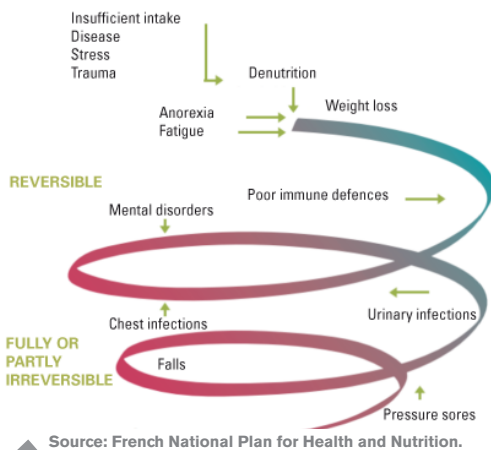
By plainly running through the past 24 hours with patients, you can get a pretty clear picture of their appetite and pinpoint “nutritional mistakes” (skipped meals, misconceptions concerning needs, lack of daily protein intake, lack of fruit and vegetable consumption...) as well as the occasional eating disorder.

A caloric intake of less than 25 kcal/kg bw/day (or <1,500 kcal/day), or a protein intake inferior to 0.8 g/kg bw/day, indicate a high risk of denutrition.

In case of confirmed denutrition, the RDI (recommended daily intake) should not be inferior to 1.5g protein per kg of body weight.

MNA & plasma protein assays

The spiral of denutrition



The nutritional assessment questionnaire developed by Nestlé®, the **Mini Nutritional Assessment®**, is downloadable on internet. Plasma protein assays are particularly useful when the MNA score reveals a probable state of denutrition (< 17/30), in case of weight loss, or to investigate possible denutrition in an overweight patient.

Assays usually determine the levels of two plasma proteins, **albumin and transthyretin (prealbumin)**. Neither is truly specific of the nutritional status, as their plasma levels can drop in the absence of any dietary deficiency (notably in case of inflammatory syndromes or salt-and-water overloads). Conversely, their levels can rise in case of dehydration. Plasma protein assays are however useful as they can help pinpoint the type of denutrition:

▶ When denutrition results from a dietary insufficiency, in the absence of any added stress and outside any inflammatory condition, weight loss usually precedes the fall in plasma albumin levels.

▶ When denutrition is associated with stress and a major inflammatory syndrome (CRP>50mg/L), plasma protein levels drop rapidly whereas weight loss might be quite modest. CRP levels reflect the intensity of hypercatabolic processes; raised levels therefore indicate increased nutritional needs. CRP levels should always be determined in parallel, if only to rule out possible underlying pathologies.

▶ The elderly often present with a mixed form of denutrition.

If weighing is not possible, plasma protein assays may provide you with useful information on your patient’s progress.

Diagnostic threshold values in cases of denutrition:

- Weight loss > 5%
- BMI < 21
- MNA Score < 17/30
- Plasma albumin level < 35g/L and/or transthyretin levels < 200mg/L.

PATIENT MANAGEMENT

Once the nutritional status has been investigated, caring strategies will depend on which factors are responsible for the denutrition. These may be medical, social or psychological and should be clearly identified.

Nutritional strategy

Independent subjects can sometimes be improved with “standard” recommendations. If this is not enough, a **“supplemented” diet** can often achieve an increased caloric and protein intake without affecting portion size:

▶ add products with a high protein and/or a high calorie content to the usual dishes (powdered milk, ham, eggs...)

▶ prescribe high protein-content oral supplementation, at least one or two products a day. This dietary supplementation complements

rather than replaces the “normal” diet, which should be maintained and encouraged. These supplements should be taken 2 hours before or after eating when they are not included in the meal.

The diet should be supplemented in situations of acute illness and during convalescence, the latter usually lasting three or four times longer than the acute stage. Another way to enhance nutritional intakes is to encourage the patient to eat one or two extra snacks in between his usual meals. This is generally well accepted. Reasonably adapted physical activity should also be encouraged as it will stimulate the appetite and help preserve the muscle mass.

Monitoring

▶ Bioassays will enable you to check that the inflammatory syndrome has disappeared and that albumin levels have returned to normal. With its short half-life, transthyretin will give you a good idea of the nutritional impact of the measures you prescribed.

▶ If dietary supplements have been prescribed, monthly monitoring for observance and efficacy are necessary until both weight and diet stabilisation have been achieved.

Eurodiet : Eurodiet: a range of foods designed to fit into the diet of senior citizens

– Excellent nutritional quality dietary supplements, covering all the main dietary needs.

– In average, each product contains 18g of protein:

- 1 product a day contributes to maintain an adequate daily protein intake
- 2 products a day at least in case of stress, as a supplement to the normal diet

– High in vitamins, mineral elements and unsaturated fatty acids, low in saturated fats and carbohydrates; low glycaemic load.

– Products that meet the need for greater nutritional value meals and higher protein-content snacks

- EURODIET breakfast products: instead of the usual drink for breakfast or elevenses
- Soups: to mix into the evening soup for extra protein intake without increasing the number of dishes.
- Desserts: low calorie, sweet tasting desserts for each main meal
- Drinks: to be taken throughout the day.

Ferry M, Alix E, Brocker P, Constans T, Lesourd B, Mischlich D, et al. Nutrition de la personne âgée : aspects fondamentaux cliniques et sociaux. Masson, 2e édition, Paris, 2002.

Haute autorité de santé. Évaluation diagnostique de la dénutrition protéino-énergétique des adultes hospitalisés. Consensus formalisé d’experts. HAS. Septembre 2003. [En ligne] <http://www.anaes.fr>, rubrique “Publications” puis “Nutrition-Diététique”.

Milne AC, Potter J, Avenell A. Protein and energy supplementation in elderly people at risk from malnutrition. Cochrane Database Syst Rev. 2005; (2) : CD003288.

Beck AM, Ovesen L. At which body mass index and degree of weight loss should hospitalised elderly patients be considered at nutritional risk? Clin Nutr. 1998; 17: 195-8.

Cederholm T, Jägers Ch, Hellström K. Outcome of protein-energy malnutrition in elderly medical patients. Am J Med. 1995; 98: 67-74.

DIET PROFILER

Your weight-loss & diagnosis & management tool

Which Phase should I select? How many products does this patient need? Is my patient suffering from lean-mass deficit? From fluid overload? How much did he weigh when I first saw him? How much weight has this patient lost? Is the quality of this patient's weight-loss satisfactory? Is there any contraindication for this patient to start a Phase-1 programme?

The ultimate update of our SpiOpen software, will answer all these questions and many more. It will enable you to monitor your patient's slimming and stabilization process by giving you the means of optimising his/her nutritional care.

Now available on Internet, the Diet Profiler software is multi-platform and can be accessed from any computer. Patient data are ultra protected :

- Secure website with user certificate
- Encrypted data
- Data saved and replicated so as to guarantee smooth functioning

After entering a few anthropometric data, DIET PROFILER will help you monitor index changes and, more importantly, provide you with a diagnostic aid enabling truly individualized care. Weight-loss quality shows up well on the DIET PROFILER graphs and these can be printed out for the patient to take home.

Coupled with the Mental Profiler, its psychobehavioural counterpart, the Diet Profiler makes nutritional follow-up easier, thus saving your time for the most essential part of your care, namely quality relationships.

Please connect to <https://doc.eurodiet.com/> or to the « professional section » of the www.eurodiet.com website, and select « Not registered yet? ». See you there!

Recently, the French Health & Safety agency, the ANSES (*Agence Nationale de Sécurité Sanitaire de l'Alimentation, de l'Environnement et du Travail*) published a report called « **Evaluation of risks entailed by slimming-related dietary practices** » (*Evaluation des risques liés aux pratiques alimentaires d'amaigrissement*) » alerting the general public on the health risks connected with **unsupervised slimming diets** (*Dr Atkins' diet, Californian diet, Chrononutrition diet, Dr Cohen's diet, Dr Dukan's diet, Weight Watchers diet, Dr Sears' zone diet, ...*)

We welcome the publication of this report as it confirms what we have always said, i.e., **that unsupervised slimming can damage people's health**. Of this, we are firmly convinced, as you probably are also, given that we have now been working together for over 20 years. The first parts of this report confirm Eurodiet's position by highlighting the problems connected with unsupervised dieting which may have deleterious consequences on health.

These include:

- excessive protein intakes (notably animal-based proteins), potentially hazardous for the renal function, as from a **threshold value of 2.2g protein/kg/day**, hence the importance of renal function tests in subjects at risk of renal failure.
- deficiencies in **fibre, vitamins and mineral elements**

■ behavioural disorders

- **post dieting weight regain**, to an unprecedented level in 95% of cases, and to the detriment of the lean mass.

Well aware of these pitfalls, we anticipated them right from the start.

Thus, the Eurodiet method:

- Ensures an **adequate daily protein intake**, both in quality and quantity, of **1.2 to 1.5 g per kg of optimal body weight (i.e. BMI = ±22.5)**. This encourages lean mass preservation and is **harmless for the kidneys, as confirmed by the French health authorities (AFSSA)** in 2007 .
- Includes **products containing added vitamins, mineral elements and essential fatty acids**. Our programmes also include, as from Phase 1, **vegetables, vegetable oils and dietary supplements**, aimed at maintaining satisfactory potassium, calcium and magnesium intakes (Laktolight Donat Mg).

- In order to avoid behavioural disorders and the well known "yo-yo" patterns associated with unsupervised dieting, the Eurodiet method offers:

- o an **adapted nutritional programme** with **individual support**
- o a **behavioural follow-up** with our Mental Profiler

One should also bear in mind that **the ANSES report focused on assessing the risks of unsupervised dieting in the general population, but failed to mention the broadly demonstrated benefits of weight loss in obese subjects**.

The EURODIET team remains at your disposal to answer any additional query you may have.



NEW PRODUCTS

EURODIET'S READY-TO-EAT



CRISPY TOASTS

At last some toasts to go with your authorised vegetables during phase 1! Start eating your own creative sandwiches as from phase 2. Light and crispy, with a high protein content (2.2g per 4.5-g toast) but low in carbohydrates and fats (respectively 1.8g and 0.05g. per 4.5-g toast), they will enable you to put your creativity to work and diversify your Eurodiet programme.

Come in packs containing one tray holding twenty 4.5-g toasts – Shelf life: 24 months



MUSHROOM PASTA

One of the keys to the success of our method lies with the variety of Eurodiet dishes. This is why we have put a lot of work in the creation of a newcomer to our pasta range: ready-to-eat mushroom pasta. This real meal can be taken as from phase 2. It will provide 22g protein, 13.2g carbohydrates and 5g lipids per serving.

Come in single 200-g packs (Doypacks™) – Shelf life: 12 months



FIG & CEREAL BISCUITS

Top of the nutritional range, these new biscuits are made from six cereals (wheat, millet, corn, buckwheat, oats and linseed) which grant them incomparable advantages over ordinary biscuits. Each portion contains 14.3g protein, only 8.5g carbohydrates (3 times less than ordinary biscuits) including 2.5g sugar (5 times less than ordinary biscuits) and 6.9g fibre. Moreover, 75% of included fats are mono- and poly-unsaturated fatty acids. A generous amount of fig pieces brings the finishing touch to these very nice... but not naughty biscuits! To include in your programme as from phase 3.

Come in packets of six portions, each containing 6 biscuits – Shelf life: 12 months



PEAR & SPICE CRUMBLE

Brighten up your Phases 1 and 2 with this new fruity dessert (17g protein, 3.3g carbs and 2.3g lipids per serving). This crumble-style pear & spice dessert should astonish you with its small bits of crunchy biscuit and morsels of pear, spiced up with cinnamon, coriander, green aniseed, ginger and star anise.

Comes in packets of 5 sachets (30g per sachet) – Shelf life: 18 months



LEMON FLAVOURED SNACK BAR WITH GREEN TEA EXTRACT AND ACEROLA

A tangy coolness tempered by the mellowness of chocolate for this natural antioxidant cocktail: the green tea polyphenols and the natural vitamin C provided by the acerola fortify your body in its battle against the oxidative stress induced by the environment and certain pathological conditions (obesity, atherosclerosis). You can start enjoying this new mini snack bar as from phase 3. It provides a substantial protein intake (14g for two mini bars) whilst remaining reasonable on the carbohydrate front (16.2g for two mini bars).

Come in packets of 10 mini bars – Shelf life: 15 months



BREAD

The innovation of the year! This bread mix is not a protein-based preparation like our other products. It is a special blend of different flours for you to bake your own home-made loaf, in your conventional oven or bread-machine. The extremely high quality of its ingredients (which include rye flour, spelt wheat bran and wheat germ) grant it considerable nutritional value and make it compatible with a phase 1. 42g of our bread mix make one 65 g loaf.

The recommended serving (65g) provides 17.5g protein, 6g carbs (including only 1.8g sugar), 6.2g fibre and 6.3g lipids (including 2.3g monounsaturated fatty acids and 2.9g of polyunsaturated fatty acids). Try it on your friends and relatives, they'll love it !!!

Comes in packets of 5 sachets (42g per sachet + 1 g of yeast) – Shelf life: 12 months



COCOA SPREAD/COULIS

Now you have bread and toast, it would have been a pity not to have something to put on them! This is why we created a cocoa spread with such an insignificant content in carbohydrates and fats that it won't tax your energy supply allowance. Depending on the amount of water you add, you can make up a coulis or a spread to go with your toast, bread or, why not, pancakes! Moreover, you can start enjoying our chocolate spread as from phase 1!

Come in packets of 10 stick-packs – Shelf life: 18 months

Finally, in our range of products to reconstitute, discover our 3 new vanilla, chocolate and coffee drinks, as well as a scrumptious "Pear & spice crumble".