

## Principles of diet in different chronic diseases

**1. Diet in diabetes-** Diabetes is a complex disorder that affects all aspects of metabolism, evolves over time and requires an integrative therapeutic approach which involves choosing the best variant / combination from the range of pharmacological agents available and optimizing the patient's lifestyle.

### Key points:

1. Obtaining glycemic, lipid and blood pressure targets, as follows:

- - HbA1c <7%
- - BP <140/80 mmHg
- - LDLc <100 mg / dl (\* by risk group)
- - TG <150 mg / dl
- - HDLc > 40 mg / dl for men, > 50 mg / dl for women.

2. Obtaining and maintaining optimal body weight and preventing / delaying diabetes complications.

3. Meeting individual and cultural nutritional needs, taking into account the level of understanding of the disease / notions, the availability of resources and the ability to make changes.

### General considerations:

1. For patients with diabetes with a low level of education as well as for the elderly, satisfactory results can be achieved by approaching a simple system of meal planning that involves portion control and healthy eating choices.

2. In patients with overweight / obesity, it is necessary to reduce daily caloric intake in the context of healthy eating choices, in order to facilitate weight loss. A modest weight loss can bring clinical benefits, especially in the early stages of the disease. Intensive measures are required to achieve this weight loss.

3. The proportion of macronutrients is individually determined for each patient, as there is no general rule that can be applied to all.

4. It can be chosen from a variety of food patterns, combining different foods or food groups, as long as personal preferences (tradition, culture, religion, economic situation, etc.) and therapeutic goals are taken into account. Dietary models with benefits for diabetes are: Mediterranean diet, Dietary Approaches to Stop Hypertension, vegetarian or vegan diet, low fat and carbohydrate diet

### Principles of regimen composition in different chronic diseases

5. Carbohydrates:

- the decisive factor regarding the recommended carbohydrate quantity and insulin requirement is the postprandial glycemic response.
- Monitoring carbohydrate intake is the key point at which blood sugar control can be achieved, whether it is done by calculation or estimation from experience.
- for the best results it is recommended to obtain carbohydrates from vegetables, fruits, whole grains, legumes and semi-degreased dairy products at the expense of other processed foods with high fat, sugar and sodium content.
- even if the effects on the blood sugar level are similar to those of the carbohydrates above, the increased consumption of sugar and starch should be avoided in order not to replace other foods with different benefits.
- fiber consumption similar to the general population (~ 14 g 1,000 kcal / day).

- Fructose from free sources (fruits) causes a higher blood sugar control compared to that obtained from starch; also, free fructose has no negative effect on triglycerides as long as the consumption does not exceed 12% of the total energy. Calorie sweeteners should be avoided as much as possible in order to reduce the risk of weight gain and deterioration of the cardiovascular risk profile, instead the low calorie sweeteners are useful, in the context where these missing calories are not supplemented otherwise.

#### 6. Protein

- for patients with diabetes without chronic kidney disease it is recommended to individualize the proportion of protein consumed, as there is no conclusive data to indicate the benefit of glycemic control or cardiovascular risk for a particular consumption.
- in patients with diabetes known with chronic kidney disease, there is no need to reduce the amount of protein, as it does not alter the blood glucose control, cardiovascular risk or the rate of decline of the glomerular filtration rate.
- In patients with diabetes, ingested proteins increase the insulin response, without also increasing blood sugar, so when treating or preventing hypoglycaemia, sources of carbohydrates, which also contain high amounts of protein, should be avoided.

#### 7. Fats

- the optimal amount of fat in the diet of a patient with diabetes should be individualized, taking into account that the quality of fats is more important than their quantity.
- In patients with DZ2, a Mediterranean diet, rich in monounsaturated fatty acids (AGMN), can bring benefits on the control of blood sugar and cardiovascular risk factors, thus being indicated to the detriment of a diet low in fat and high in carbohydrates.
- omega-3 fatty acid supplements do not have the clinical evidence needed to be recommended for the prevention or treatment of cardiovascular disease in patients with diabetes.
- as for the general population, it is recommended to increase the consumption of foods rich in long chain omega-3 fatty acids (EPA and DHA-salmon, trout, herring) and linolenic acid (ALA), due to the beneficial effects on lipoproteins, prevention cardiac disease and its positive health effects.
- fish consumption is recommended in at least 2 portions per week.
- it is possible to modestly reduce total cholesterol and LDL by consuming 1.6-3 g / day of plant stanols / sterols (found especially in enriched foods).

#### 8. Micronutrients and herbal supplements

- the consumption of mineral and vitamin supplements does not bring
- benefits of patients with diabetes who do not have deficiencies.
- There is no routine supplementation with the vitamins Axis C as there is no evidence of efficacy; more,
- the question of safety is posed in long-term administration.
- herbal supplements / cinnamon or other herbs do not have sufficient evidence of efficiency, so it is not recommended.

## 9. Alcohol

- moderate alcohol consumption is recommended (1 serving / day for women, 2 / day for men)
- Special attention should be given to patients with diabetes who are treated with insulin or secretagogue when consuming alcohol, as they are at risk of delayed hypoglycaemia.

10. Sodium- for patients with diabetes, sodium intake <2.3 g / day is recommended, with the mention of an additional decrease in the amount of patients with hypertension (1.5 g / day).

### **Example of diet approximately 1400 kcal in a patient with type 2 DZ in treatment with oral antidiabetes medication**

#### **Breakfast:**

- 200 g raw vegetables
- 2 slices of whole bread (1 slice = 20 g) or 30 g of oatmeal
- 200 ml dairy products (sweet milk / whipped / yogurt / healthy / smoked - semi-skimmed, naturally, without sugar)
- 50 g or 100 g of cow cheese(without cream)
- 3 slices of moss or 1 boiled egg in the shell / omelette / eyes (no oil) 3-4 times a week

#### **Snack 1:**

- 200 g green fruits, hard, unripe, seasonal, local (or 1 date / week 100-150 g bananas, grapes, ripe fruits)
- 30 g nuts / hazelnuts / cashew / pistachio / raw almonds

#### **Lunch:**

- 250 ml soup / vegetable soup / 50 g rice / potato / noodles / noodles or 1 slice bread / butter
- 100 poultry meat / lean muscle / pork / beef / fish
- 100 potatoes / brown rice / whole pasta / butter / beans/grains / peas or 250 g vegetable / gravy meal
- 200 g green salad / summer / assorted / cabbage etc. or 150 g salad

#### **Snack 2:**

- 200 g green fruits, hard, unripe, seasonal, local (or 1 time / week 100-150 g bananas, grapes, ripe fruits)
- 30 g nuts / hazelnuts / cashew / pistachio / raw almonds

#### **Dinner:**

- 50 g fresh telemea cheese or 100 g cow / meat / fish cheese
- 200 g vegetable / vegetable / barbecue / soup / soup (mushroom, pumpkin, eggplant, pepper, cauliflower, broccoli, bean, bean, spinach, carrot, cabbage, etc.)
- 200 g green salad.

**Insulin therapy** - When the patient is undergoing insulin treatment, to achieve glycemic balance and avoid episodes of hypoglycemia, adjusting the fast insulin dose to the amount of carbohydrate ingested at each meal is crucial: 1 U of insulin neutralizes the effect of approx. 10 g CH (carbohydrates) ingested.

This rate can be calculated individually for each patient according to the following formula:

$$500 / TID (\text{total insulin dose}) = X \text{ g CH}$$

Ex: TID = 64 IU

$500/64 = 7.8$  g, 1 unit of insulin metabolizes 7.8 g CH. Thus, for a lunch of 50 g CH  $50 \times 7.8 = 7$  IU should be given.

It is also important to determine the correction factor, the value at which glucose 1 unit decreases after the following formula:

$1800 / \text{TID} = Y \text{ mg / dl}$

Example:  $1,800 / 64 = 28 \text{ mg / dl}$  -> 1 unit insulin lowers blood glucose by 28 mg / dl.

In conclusion, if a patient starts with a blood glucose before lunch of 200 mg / dl, to reach a postprandial blood sugar of approx. 140 mg / dl, the dose of insulin given at lunch with 50 g CH dose is 7 IU + 2UI = 9UI.

## 2. Diet in dyslipidemia

Disorders of lipid metabolism are common both in the general population and in people with diabetes, obesity and cardiovascular disease, thus worsening the prognosis, which is why measures should be taken as soon as possible to treat them. The first step is to optimize the lifestyle that involves nutritional medical therapy and physical activity.

Patients with dyslipidemia are urged to consume a low-calorie, high-fat diet, vegetables, whole grains, fish and lean meats on a daily basis and also reduce the intake of trans fats, saturates and cholesterol while increasing the intake of plant stanols and sterols. at approx. 2 g / day and fiber at approx. 25 g / day. It is also recommended to reduce the intake of alcohol and simple carbohydrates (sweets, sweetened beverages, etc.) as they cause triglyceride levels to increase. Physical activity also plays an important role, leading to an increase in HDL values, which at  $> 60 \text{ mg / dl}$  decreases a cardiovascular risk factor from the patient's profile.

## 3. Overweight and obesity diet

The excess weight influences many aspects of the health condition negatively, thus affecting the locomotor, digestive, cardiovascular, metabolisms, nervous, respiratory, urinary, skin tissue etc. Therefore, it is necessary for a patient with overweight or obesity to be properly evaluated and guided in order to obtain and then maintain optimal body weight. In this sense, to achieve a weight loss of 0.5 kg in one week; it is necessary to reduce the daily calorie intake by 500 kcal compared to the basal consumption, and for the loss of 1 kg / week. it is necessary to reduce the caloric intake by 1,000 kcal.

It is important to note that the most effective weight loss occurs at the beginning of the program, while the metabolism will adapt to the new conditions and the success rate will decrease. In addition to the total calories consumed in a day, special attention must be paid both to the time interval in which these calories are consumed and to their quality.

The overweight or obese patient is advised to have a regular meal schedule, with 3 main meals and 2 snacks, starting as early as the day. The explanation for this aspect lies in the fact that in the first part of the day (starting at 6-7) the secretion of the counterregulatory hormones (cortisol, catecholamines) begins which facilitates the metabolic processes and the awakening, thus determining the consumption (and not the storage) of ingested foods. As the day progresses, these hormones are less and less secreted, followed by what is consumed in the second part of the day to be stored to create energy availability during the night, when the body no longer feeds.

It is also advisable that the meals have a 2.5-3 hour interval between them, in order to maintain a relatively constant influx of calories and to avoid the appearance of hunger. If the energy supply is delayed, the body enters an alarm mode because it was deprived of the

energy it was used to receiving and what it will receive on the first occasion will store instead of consume. If these general considerations are respected and breakfast is served around 7:30-8, dinner can be taken up to 18-18:30.

Regarding the quality of the macro-elements, it should be noted that not all carbohydrates serve the same functions, this being true for lipids and proteins.

**1. Carbohydrates:** for optimal functioning of the body in the context of weight loss, it is indicated the consumption of complex carbohydrates, which are digested more difficult and thus gradually released into the circulation, without further requesting the pancreas: vegetables, legumes, whole grains. When it comes to free glucose, it is recommended that you find it naturally in fruits. As a general rule, a lower overall carbohydrate intake is recommended to facilitate weight loss.

**2. Proteins:** high quality ones exist in eggs, meat and fish. Proteins also exist in cheeses and milk and some vegetables / legumes.

**3. Lipids:** It is recommended to avoid and / or reduce saturated trans lipids and cholesterol, which is naturally found in fat, red meat, solid margarines, fried foods. Healthy lipids are those from fish, nuts, seeds, avocados and other plant sources.

The correct distribution of food and macronutrients throughout the day is also important, following a pyramid model in terms of carbohydrate content and time of day: at breakfast, in the morning and lunch you can consume foods high in carbohydrates (flour, dairy, legumes, fruits), following that in the afternoon and evening snacks, especially foods with low carbohydrate content, rich in vegetables and healthy fats (vegetables, meat, fish, nuts). Apart from the specific diet, it is necessary for the person who wants to lose the excess weight to perform daily activity 30-45 min., By which to lose additional approx. 200 kcal.

In addition to the calories lost daily by this method, regular physical activity over time determines the metabolism improvement and thus increases the basal metabolic rate, allowing the person to reorganize the menu in the weight maintenance phase (after reaching the target), being able to add approx. 100-200 kcal to the daily diet, without gaining weight.

However, the process of reaching the optimum weight is complex, long and arduous, and thus it is indicated that it should be cyclic: a sedation of approx. 3-6 months of active weight loss (10% by weight), followed by a period of 9-6 months of maintenance, after which the processes are resumed until the desired weight is reached.

### **Example regime approx. 1000 kcal**

#### **Breakfast:**

- 200 g raw vegetables
- 2 slices of whole bread (1 slice = 20 g) or 30 g of oatmeal
- 200 ml of milk (sweet / whipped / yogurt / healthy / smoked milk, semi-degreased, naturally, without sugar)

#### **+ 1 from:**

- 50 g cheese / mozzarella
- 3 slices of fillet / pastram muscle
- 1 boiled egg / omelette / eyes (without oil) 3-4 times a week

#### **Snack 1:**

- 200 g green fruits, strong, unripe

#### **Lunch:**

- 250 ml vegetable soup / soup / sauce

- 100 poultry (poultry) / lean pork / beef / fish
- 100 whole-grain rice / whole-grain pasta / butterscotch / potatoes / beans grains / peas or 200 g vegetable / vegetable food
- 200 g green salad / summer / assorted / cabbage etc.

**Snack 2:**

- 20 g nuts / hazelnuts / cashew / pistachio / raw almonds

**Dinner:**

- 50 g cheese or 100 g meat / fish
- 200 g vegetable / vegetable / barbecue / soup / soup (mushroom, pumpkin, eggplant, pepper, cauliflower, broccoli, bean, bean, spinach, carrot, cabbage, etc.)
- 200 g green salad.

**4. Diet in hyperuricemia**

- A diet with a high content of foods rich in it can lead to the accumulation of their metabolites in the body in hyperuricemia, creating important health problems such as: affecting the joints with significant pain, deformity of the joints, functional impotence and formation and deposition of uric crystals in the kidneys below shaped like stones.
- The management of the patient with hyperuricemia is complex and involves the optimization of body weight, regular exercise, increased consumption of complex carbohydrates, proper hydration, avoidance of trans saturated fat and cholesterol and decrease of animal protein intake.
- A person with high blood uric acid should be advised to follow a poor diet of purines, which implies a low intake of alcoholic beverages (beer, strength), anchovies, sardines, herring, mackerel, mussels, tuna, sauces. steak, organs (brain, kidney, liver), yeast-containing products. An increased purine content is also found in asparagus, spinach, peas, cauliflower and mushrooms. Three elements that in some studies had evidence of lower uric acid levels are cherries, coffee and increased vitamin C.

**5 Diet in renal lithiasis**

Renal lithiasis is a very common condition in the population and can be prevented and partially treated by adopting a specific diet. Increased consumption of water / liquids (adjusted as appropriate) minimum 2 l / day, avoiding strictly vegetarian diets or excess of animal protein, salt and vitamin C and D, increased consumption of foods containing phytates (legumes, beans, whole grains, bran) and avoiding as much as possible cytotoxic substances (analgesics, pesticides, organic soaps).

Depending on its nature, the presence of a type of calculation implies certain dietary indications:

- Low Ph: decreased animal protein intake, increased consumption of citrus juices, soft drinks.
- Increased Ph: Avoid vegetarian diets, citrus juice and soft drinks.
- Calcium: Increased fluid intake, decreased sodium, animal protein and control of vitamin D intake and Ca supplements.
- Oxalate: decrease the consumption of foods rich in oxalate (spinach, beet, walnuts, sweet potatoes, rhubarb, parsley, green arpagic, chocolate, green tea) and ascorbic acid (vitamin C intake > 2 g / day).

- Citrate: increased consumption of citrus rich foods and beverages containing citric acid
- Phytate: consumption of foods containing phytate.
- Urati: decreased intake of alcohol and foods rich carbohydrates

## **6 Diet in cardiovascular diseases**

- People suffering from cardiovascular disease are directed to avoid excess sodium diet.
- International guidelines recommend for people with hypertension and heart failure a specific diet that targets all its components, not just reducing salt intake. In principle, it is the same lifestyle indicated for the general population and includes the increased consumption of fruits, raw vegetables and low-fat dairy, in addition to accepting a moderate amount of whole grains, fish, poultry and nuts. Also, it emphasizes the importance of consuming foods rich in elements that help normalize blood pressure, such as potassium calcium and magnesium.
- As regards sodium consumption, it is recommended that it should not exceed 1,500 mg / day or, in extreme cases, 1,000 mg / day. The most obvious method by which this limit can be reached is not to add salt in the food, neither during cooking nor in the dish.
- The next change is to avoid foods with a high salt content such as pickles, smoked and marinated products, olives, cheeses, but also chips, commercial and fast food products. The physiological need for sodium in the body is completely covered by sodium! content in foods naturally, the need to add taking only the acquired taste, tradition, culture etc.
- In order to facilitate the maintenance of salt consumption below the indicated limit, both the addition of spices / aromatic herbs in the dishes and the replacement of the sodium salt table salt with the increased potassium content up to 1/3 may be helpful. less sodium than usual.

### **The foods recommended for consumption and the recommended quantity are as follows:**

- whole grains: 6-8 servings / day
- Vegetables: 4-5 servings / day
- fruit: 4-5 servings / day
- dairy: 2-3 servings / day
- lean meat, poultry, fish: <6 servings / day
- nuts, seeds, legumes: 4-5 / week fat: 2-3 servings / day
- sweets: <5 servings / week
- low alcohol consumption.

## **7. Diet in chronic kidney disease**

- Patients suffering from chronic kidney disease are prone to numerous complications during the course of the disease, thus an effective medical-nutritional intervention is necessary to prevent these complications, in addition to the drug treatment.
- The three issues that these patients need to focus on are the consumption of potassium, phosphorus and fluids. These 3 elements are necessary and indispensable for the proper functioning of the body, but, as the kidneys' ability to purge metabolism products and excess water is impaired, methods of reducing their quantity are required. For this, phosphorus or potassium ligands may be prescribed, but it is also necessary for the patient to reduce their dietary intake.

**1. Potassium-** This mineral is found in almost all foods, in varying proportions. In excess, it can cause muscle cramps and weakness and heart rhythm disorders. Thus it is indicated the decrease of the consumption of foods rich in potassium, such as: bananas, melons, oranges, plums, raisins, spinach, potatoes, tomatoes, pumpkin, dried beans, wild / brown rice and bran / whole grains. Low-potassium foods that can be safely consumed are: apples, grapes, pineapple, strawberries, cauliflower, onions, peppers, radishes, pumpkin, green salad, flour products with white flour, white rice, beef, chicken.

**2. Phosphorus** - The availability of this mineral is also high, but its excess can cause bone fragility and increased risk of fractures. Foods that bring a low phosphorus intake are: corn, wheat, rice, maize, French or Italian bread, lemonade, light colored drinks. Those that should be avoided are: whole bread, whole grains, oatmeal, nuts and sunflower seeds, dark colored beverages.

**3. Fluids** - As with minerals, water balance is also affected in chronic kidney disease, so if not properly adjusted, excess can lead to increased blood pressure, edema, heart failure and hydrothorax. In this case, it is necessary to reduce the intake not only of water, but also of foods that have a high water content, like many fruits and vegetables, soups, ice cream, products containing gelatin, etc. Since water consumption is low, salt consumption is also indicated to avoid additional thirst. As a helpful measure to quench thirst when no additional water is allowed, the patient is instructed to chew gum, brush his teeth with mentholated toothpaste or to gargle with mouth water, to keep an ice cube in his mouth. or mentholated candies (possibly without sugar, if applicable).

## **8. Diet in liver diseases**

Foods to Avoid:

- The first recommendation regarding a healthy lifestyle in a patient suffering from liver disease is to avoid alcohol consumption.
- gluten products: this can cause a strong inflammatory reaction that can affect the property of the small intestine to block the absorption of toxic substances in the blood.
- fast-food foods: in the context of a chronic illness that intensely demands the body, it is preferable to be offered nutritional principles of the highest quality in exchange for poor quality calories, which only facilitate weight gain, another harmful element in the given situation.
- refined white flour: a food with low nutritional value, but high caloric value.
- refined / hydrogenated oils.
- cheeses / dairy products: these are difficult to digest and carry an additional burden on the liver.
- fruit juices / soft drinks, due to the increased sugar content of the liver.
- artificial sweeteners: they are hard to process. Processed foods: contain an increased amount of preservatives, additives and chemicals.

### **Recommended foods:**

- varieties of nuts and beans
- vegetables and vegetables (potatoes in moderation), juice from them
- cruciferous vegetables: broccoli, cauliflower, kale cabbage
- vegetable soup
- fruits: apples, avocado, lemon, lemonade
- aromatic herbs, garlic, onions
- herbal teas

- extra virgin olive oil and flax oil.

#### **Recommendations for liver cirrhosis:**

- daily caloric intake increased 35-40 kcal / kgc / day to prevent malnutrition
- slight decrease of the total protein intake, but also of the proportion of animal proteins based on the growth of plant proteins and that of complex carbohydrates.
- steamed vegetables (instead of raw vegetables) or vegetable juice: carrots, cucumbers, beets, spinach, parsley, celery.
- Avoid cold, fried spices with a lot of fat and salt (they increase the edema).
- beneficial foods: broccoli, Brussels sprouts, cauliflower, onions, garlic, dried beans, lentils, cabbage, bell peppers, whole grains, artichokes, beets, green salad.
- supplementing the diet with branched-chain amino acid preparations, antioxidants (N-acetyl cysteine), hydra- (especially group B) and lipo-soluble (A, D, K), prebiotics and probiotics.

In terms of eating habits, it is advisable that meals should be small in quantity, but more often, and last at least 5 hours before bedtime; In order to facilitate the digestion process, the patient can help with digestive supplements at each meal, in addition to the habit of chewing often to ensure homogenization of foods with salivary enzymes.

#### **9. Diet in biliary lithiasis**

Of the multiple causes that lead to biliary lithiasis, some are modifiable (nutrition, body weight), and others unchangeable (sex, family history of biliary lithiasis). As far as nutrition is concerned, to reduce the risk of gallstones, it is important to note that the intake of cholesterol and trans and saturated fats must be decreased and that of fiber increased.

Particular care is needed for patients undergoing a weight loss program, as a rapid decrease may result in excess accumulation of hepatic metabolism products in the gallbladder, at a slower rate than it can process and eliminate, leading to formation of calculations.

**Recommended foods:** vegetable proteins (beans, lentils, nuts), nuts, foods high in calcium and vitamin C, moderate amounts of coffee and alcohol.

**Prohibited foods:** fries, processed foods (donuts, pies, cakes), whole milk, fatty red meat.

#### **10. Diet in gastrointestinal ulcer and gastritis**

The main cause of gastrointestinal ulcer is the presence of the *Helicobacter pylori* bacterium and to a very small extent the hyperacidity present at this level. However, the only aspect that can be acted upon by feeding is the limitation of hydrochloric acid hypersecretion. The distribution of nutritional principles does not differ from that of a healthy person, with the mention that the protein intake can be of maximum 1.2 g / kgc / day in the acute phase and up to 1.5 g / kgc / day in the recovery phase.

Regarding carbohydrates, it is recommended that the intake of disaccharides be slightly reduced to reduce fermentation processes, and in the case of lipids, avoid saturated ones. Studies show that a diet rich in soluble and insoluble fiber decreases the risk of developed ulcer and, although at one time it was believed that milk helps to cure ulcer, subsequent studies did not find evidence to this effect. Increased intake of foods containing vitamin A and green tea also has the role of lowering a person's risk of ulceration.

**Prohibited foods:** fries, lemon, pepper, hot peppers, mustard, chocolate, black tea, carbonated drinks.

**Precautionary foods allowed:** fatty cheeses, orange, pineapple, passion fruit, beans, fatty meat, organs, concentrated sweets, citrus juice, mayonnaise, ketchup, flavor additives for foods, spices.

**Allowed foods:** dairy, yogurt, nuts, vegetable oils, apples, melons, bananas, papaya, carrots, beets, beans, spinach, radishes, pumpkin, leeks, dried beans, lentils, soybeans, lamb, lean beef and pork, chicken, fish, natural juices.

**Risk behaviors:** Alcohol consumption and smoking support ulcer and gastritis and should be avoided.

### 11. Diet in diarrhea syndrome

Diarrheal episodes can have extremely varied causes and durations and occur at a given time in most people, which is why their management is particularly important, starting with nutrition, as it is permanently needed and its content may improve or worsen symptoms, leading to further dehydration and hideoelectrolyte imbalance; For this reason, the fluid / water intake should be sufficient (8-10 glasses / day). In addition to the general recommendations is the one for moderate consumption of yogurt, as it contains probiotics that regulate the bacterial flora of the intestine, which can shorten the period of illness.

Special attention should be paid to possible cases of gluten or lactase intolerance which can cause very frequent and diarrhea episodes, however, the treatment is very simple, removing foods containing these elements.

**Recommended foods:** bananas, plain rice, baked apples, boiled potatoes, toast, pasta, grill, corn flakes, simple biscuits, sausages, boiled / baked chicken, light chicken soup, cooked vegetables (carrots, green beans, asparagus mushrooms, beets, pumpkin).

**Prohibited foods:** fats, fries, sauces, milk, butter, ice cream, cheese, alcohol, coffee and caffeinated beverages, artificial sweeteners (candy, gum, soft drinks), cabbage, beans, broccoli, seasonings, peppers, .

### 12. Diet in constipation

Constipation affects an increased number of people, creating, in addition to discomfort, bloating, abdominal pain and serious health problems such as internal and external hemorrhoids and anal cracks. In order to have a normal intestinal transit it is necessary to intervene on three aspects: diet, fluids and physical activity.

The daily fiber requirement is 25 g for women and 38 g for men. The daily diet should contain many fruits (kiwifruit, pears, plums, berries) and raw vegetables, whole grains (whole wheat pasta and bread, rice whole, whole oatmeal). Other foods high in fiber are: beans, broccoli, nuts and raw seeds. You can also add flaxseed powder, which is very high in fiber.

It is important that the increased amount of fiber in the diet be done gradually to avoid bloating as far as possible from their consumption.

- The fiber intake without adequate liquid intake will not lead to the expected results, which is why the importance of optimum hydration approx. 2 l / day.
- Physical activity also has the role of stimulating the motility of the intestinal tract, thus being recommended at least 30 minutes daily.

## **Palliative care in family medicine**

- Definition - **Caring for the person nearing the end of life, most often as a result of the evolution of a known disease, often with a long evolution.**

### **Components**

- communication with the patient
  - home visits
  - identifying the main charges of the patient and trying to improve them, to ensure a certain comfort to the patient
  - achieving a climate of patient confidence and providing support until the end of life
- family education on the main care maneuvers:
  - frequent change of position of the patient to prevent the appearance of injuries of decubitus, the use of special coats
  - lifting the patient to sit during the day and taping the chest to prevent the onset of pneumonia
  - massage of the lower limbs to improve the hypotony and muscle hypotrophy that can be installed and to prevent thrombophlebitis
  - oral cavity hygiene by wiping with wet compresses or borax glycerine
  - proper hydration of the patient
  - ensuring proper nutrition (details on permitted foods, preparation mode, table spacing)
  - use of absorbent panties for urinary incontinence
  - the care of the urinary tract which will be changed periodically by a medical professional
  - care of the colostome, tracheostome, etc.
  - psychic preparation of the family
  - moral support for the family in the death of the patient.

### **Why is the family doctor most able to provide terminal care?**

- knows the patient, the evolution of the disease, the associated diseases
- it takes into account the patient's religion, level of education and beliefs
- knows the psychology of the patient and the family and can find the best way to communicate with them
- over time, the patient and family trust gain
- can appreciate the possibilities of caring for and supporting the patient in the family.

### **The main signs and symptoms of patients in the terminal phase**

#### **Pain:**

- start with regular painkillers (NSAIDs)
- progressive doses are used, increasing the dose only if necessary
- the analgesic treatment is modulated according to the Analog-Visual Scale (VAS)
- proceed to the next stage of analgesia when pain no longer responds to treatment
- opioid analgesics are prescribed (preferably) with the specialist
- in pain therapy, which will determine the dose and rate of administration so that pain control is maintained.

**Nausea and vomiting**

- antiemetic medication administered by bone, parenterally or intrarectally as appropriate
- the treatment is chosen according to the determining cause: chemotherapy, gastric irritation through NSAIDs, gastroesophageal reflux.

**Hiccup**

- administration of metoclopramide, haloperidol etc.

**Dyspnoea**

- bronchodilators, mucolytics, expectorants - in bronchial obstruction
- pleural drainage - in restrictive dysfunction through pleurisy
- oxygen therapy.

**Depression** - cautious use of antidepressants

**Psychomotor agitation, sleep disorders** - haloperidol, anxiolytics.

**Decubitus injuries** - avoiding the use of powders in envelopes, antiseptic solutions

**Constipation** - high fiber diet, proper hydration, volume laxatives, enema when needed.