

CHRONIC NON-COMMUNICABLE DISEASES RISK PREVENTION IN CHILDREN AND YOUTH

IOANA-LUCIA VEȘTEMEAN¹, FLORIN OLIMPIU ACHIM²

¹Regional Public Health Centre Sibiu, ²Astra Clinic Sibiu

Keywords: chronic non-communicable diseases, children, youth, prevention

Abstract: The main risk factors of chronic non-communicable diseases must be controlled through targeted preventive measures, even since childhood and ideally from the prenatal period. The intervention should be multifactorial, involving specialists from different fields - cardiology, pediatrics, sports medicine, nutrition, specialists from the health insurance houses, as well as the families with a history of non-communicable diseases. The healthy lifestyle programmes should include three main therapeutic means: diet, physical activity, behaviour, given that the genetic factors cannot be influenced. A healthy diet, fighting the sedentary behaviour, avoiding smoking and stress management reduce the risk of chronic non-communicable diseases, especially if they make part of the healthy lifestyle in children and youth.

Cuvinte cheie: boli cronice netransmisibile, copii, tineri, prevenire

Rezumat: Principalii factori de risc ai bolilor cronice netransmisibile trebuie combătuți prin măsuri preventive țintite, încă din perioada copilăriei, ideal din cea prenatală. Intervenția să fie multifactorială, cu implicarea specialiștilor din diferite domenii - cardiologie, pediatrie, medicină sportivă, nutriție, ai caselor de asigurări, dar și familiile cu antecedente de boli netransmisibile. În programele de stil de viață sănătos trebuie incluse trei mijloace terapeutice principale: alimentație, mișcare, comportament, având în vedere că factorul genetic nu poate fi influențat. O dietă sănătoasă, combaterea sedentarismului, evitarea fumatului și managementul stresului reduc riscul bolilor cronice netransmisibile, mai ales dacă fac parte din stilul de viață sănătos al copiilor și tinerilor.

According to WHO statistics, in Romania, the probability of death between 30-70 years old by the major chronic non-communicable diseases (cardiovascular diseases, cancers, chronic respiratory diseases and diabetes) is of 23%. (1) In many countries, there increased the number of cases of obese children. For this reason, in the month of May 2014, the WHO has established a committee that will prepare a report regarding the most effective approaches and actions to be implemented in different countries, in order to reduce obesity among children. (2) A healthy lifestyle positively affects the evolution of some non-communicable diseases, such as obesity, diabetes, cardiovascular disease, some cancers. The greatest risks to health are unhealthy diet and physical inactivity. Healthy eating habits should start as early as possible, since infancy, even in the prenatal period. Thus, it is known that breast feeding reduces the risk of overweight in childhood and adolescence, and the optimal nutrition in the first two years of life significantly reduces the risk of non-communicable diseases. (3) Furthermore, there is scientific evidence that preferences for certain tastes and eating habits of children are taken from the mother even before their coming into this world. (4) WHO recommendations on healthy nutrition in infants and children are generally the same as in adults, with the following additions: infants benefit from exclusive breast nutrition in the first 6 months of life, with continued breastfeeding until at least 2 years. From the age of six months, breast feeding should be supplemented with age-appropriate foods and salt and sugar should be avoided as long as possible. (5) Currently, the aim is to achieve a body weight so that the person feels good (the state of "wellbeing"). Setting the body weight in some rigid limits is now obsolete. Of course,

body weight excessive overcoming brings about general health alteration. Effective treatment of obesity requires a long-term stabilization (approximately 5 years) of body weight, therefore eating behaviour and physical activity should suffer long-term changes. Chronic non-communicable diseases can and should be prevented from childhood through an appropriate lifestyle, maintaining age-corresponding body weight, avoiding trans saturated fats (e.g. margarine), reducing salt intake, avoiding smoking, stressful situations and practicing regular physical activities. Patients should be explained, according to their age-group level of understanding, the causes of the weight gain and, if necessary, to try to diminish the feeling of guilt of the patients. Therefore, therapeutic interventions purposes are to normalize the intake of fats, the increase of complex carbohydrates and intensification of physical activity on a daily basis. During this period of time, family's support is absolutely necessary. The positive example of the family members regarding healthy eating and practicing physical activity has a positive influence on children's health. It is also advisable to include parents and other caregivers (especially grandparents) in the therapeutic plan. Fat deposits on blood vessel walls begin in childhood and are associated with hypertension, impaired glucose tolerance, obesity, smoking. Therefore, the control of risk factors in adults should begin at the age of adolescent and young adult. (6) Detection of dyslipidemia is followed in a first stage, by the recommendations for a healthy lifestyle: avoiding trans fats, reducing the intake of animal fats, including those "hidden" in certain foods, reducing the consumption of refined sweets, avoiding smoking, excessive alcohol use, practicing regular physical exercise. Drug administration, particularly oral

¹Corresponding author: Ioana Lucia Vestemean, Str. Luptei, Nr. 21, 550330, Sibiu, România, E-mail: juanitalucia@yahoo.com, Tel: +40269 212812
Article received on 09.07.2014 and accepted for publication on 03.11.2014
ACTA MEDICA TRANSILVANICA December 2014;2(4):178-179

contraceptives should comply with the medical prescriptions.

The combination of individual prevention measures with the education in schools conducted by teachers and representatives of the interdisciplinary team (e.g. doctors and nutritionists) proved an increased efficiency. Even impaired glucose tolerance should prompt the physician to guide the patient towards a programme for the prevention of diabetes, especially taking into account the fact that the number of patients with diabetes doubled in the past 20 years. Noninsulin-dependent diabetes is more often encountered at younger ages, even in children.(7) Regarding another risk factor for chronic non-communicable diseases, which is smoking, approximately 90% of those who start smoking are under 18 years old. Teenagers may present a reduction in the HDL cholesterol in less than two years after the start of smoking. Adolescents' smoking behaviour is influenced by the environment they live in, therefore, educational measures should focus on peer groups. Families and communities have an important role in strategies to prevent smoking among the youth.(8) Young children are particularly influenced by their entourage. They smoke out of curiosity, pleasure, boredom. Smoking should be banned in public places. In preschoolers, smoking messages should be addressed to parents, who must be informed about the effect of smoking on health and on the children's behaviour, subsequently. To obtain long-term effects, a joint effort of schools, media, family, community is however needed in order to reduce access, acceptability of smoking in the community. To prevent physical inactivity among children, the establishment of clubs, sports associations, especially designed places should be established. There should also be explained the disadvantages of spending the time in front of TV, computer, in bars and discos, as against the benefits of group sports activities. Sport has preventive and therapeutic effects on the body, increasing its physical strength. Children must practice physical activity that makes them feel happy; team sports are recommended. Because overweight children generally have problems with integration in a team sport, they will be directed to activities like brisk walks, cycling etc. Current recommendations require at least 60 minutes daily of moderate intensity physical activity, preferably outdoors, in the form of aerobic activity, such as walking at a fast pace. At least 3 times per week, the physical activity should be of a high-intensity, for example running.(9) The programmes to promote physical activity help the people with low incomes or disabilities. Regular walks out with family are recommended, that involve walking, swimming, cycling. Parents, educators, physicians should provide a positive example for children.

Lifestyle changes can also have specific purposes, for example using stairs instead of escalators or elevators, walking to school or getting off the bus a few stops before the destination, visiting friends instead of sending e-mail or taking on the phone or on facebook for a long period of time. It is important that the entire family to participate in these changes, as many family members should carry out joint activities - walking, cycling etc. Children with obesity and dyslipidemia should combine sports programmes with changes in diet (reducing calories and fats); these are the two keys to maintain an optimal body weight. Physical activity is particularly important for the stabilization of body weight and to increase HDL-C. No age is too young to stimulate children's desire for physical exercises. Children who succeed in changing their eating habits and be physically active are likely to become adults with a balanced metabolic profile. Measures to prevent non-communicable chronic diseases should consider another risk factor, which usually is given less importance, namely the psychosocial stress. These measures should address the various components that cause stress, such as triggering situations,

emotional reactions, physical and behavioural reactions.

Children and young people typically encounter stressful family situations - misunderstandings between different family members, separation or divorce, parents' departures to work abroad; stressful situations may also arise in the circle of friends or at school, such as conflicts with peers, teachers, exams. These stressful situations can be short or long, and the effects are also on short or long term. Children complain of abdominal pain, headache, sleep disturbances, and in severe cases, even depression can occur. Social discrimination faced by overweight people frequently can lead to depression, and the withdrawal of the obese children and young people from the social life aggravates their sense of loneliness. Repeated attempts to reduce weight, restrictive diets without being followed by the desired result are leading to diminishing the sense of self worth. In terms of stress prevention methods, one is to involve children and young people, especially those with overweight, in sports activities, to apply relaxation techniques, as well as the participation of family and friends in those sport activities. In order to do this, parents must critically analyze their own living conditions and food habits, to be able to realize the connection between their own behaviour and the peculiarities of their child. Young people need to find especially in the family, and entourage, a place where they can lead open discussions on issues that concern them, to find understanding and support, to satisfy their emotional needs. There, where the living conditions allow, it is important to have a pet. For example, a dog needs to be walked, as a result, children will increase their physical activity, with beneficial effects on their health. Taking care of an animal, especially a dog or cat has a beneficial influence on the psyche, but also on chronic non-communicable diseases - cardiovascular disease, diabetes, obesity, dyslipidemia. To prevent non-communicable chronic diseases, WHO recommends the development of policies and curricula that encourage young people to adopt a healthy lifestyle; population should be informed about the negative effects of the risk factors for chronic non-communicable diseases and specialists from the primary care system should provide proper counselling.(10)

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