

HYGIENE OF ADOLESCENS

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1. Introduction to the problem

- Hygieia or Hygeia - the ancient Greek goddess of health and cleanliness
- HYGIENE in a Modern Concept - a set of rules and measures aimed at preserving health
- Hygiene of children and adolescents - follow-up on (especially) preventive and social pediatrics
- Protection and promotion of health in puberty and adolescence with regard to specific risks
- The WHO defines adolescence as a separate risk group

Introduction to the problem

- Safe, healthy and clean environment - the foundation for healthy growth and development of the child
- Environmental risks multiplied by poor social and economic conditions
- More than 3 million children die each year for both infectious and non-infectious diseases (negative impacts of the material and social environment)
- Respiratory diseases (air pollution), diarrheal diseases (water contamination, hygienic habits), malaria, HIV (maternal-child transmission)
- Malnutrition (1/3 of all child deaths)

Introduction to the problem

Prevention of **childhood obesity** - one of the main priorities

- 42 million children under 5 years of age worldwide is suffering by overweight
- **In adulthood**, chronic non-infectious diseases can also develop:
 - DM II. type
 - CVA
 - musculoskeletal disorders
 - some oncological diseases
- Medium and low income countries - the "double burden" (the threat of infectious diseases and the current rapid increase in chronic non-infectious diseases)

Introduction to the problem

- Particular attention is paid to the prevention of juvenile health problems
- Prevention of sexual and reproductive health (sexually transmitted diseases including HIV / AIDS, unwanted and premature pregnancies)
- The area of addictive substances abuse and the area of mental health

- In the Czech Republic, the Department of Hygiene of Children and Juveniles (HDM) has been established at the KHS (Public Health Protection Authorities)
- The head of the department performs a doctor - a graduate of specialized education in the field of HDM with certain/set practice
- Field supervision is performed by the assistant of the hygienic service (public health assistant - VOŠ, Bc.)

Introduction to the problem

- Department of HDM performs state health surveillance and works with other KHS departments.
- It monitors the obligations of individual entities provided by Act No. 258/2000 Coll. On Public Health Protection (all types of children's and school facilities, including school canteens and children's recovery facilities - sanatorium, outdoor playgrounds and sandboxes)
- Within the State Health Institute - the Health Support Center was established with the Department of Hygiene of Children and Juveniles.
- Monitoring health and healthy development indicators of children and young people, their living and working conditions.
- Conduct studies of the context of external conditions vs. healthy development of children and adolescents
- Results of studies - creation of preventive programs
- Programs to promote healthy lifestyles, the process of promoting health in schools, preventing child violence, child injuries and socially pathological phenomena

Introduction to the problem

Who educates children and adolescents to health lifestyle?

- Family
- school
- doctor

Factors affecting healthy growth and development of juveniles:

- environmental - environmental conditions and lifestyle (including technological and information risks)
- social
- economical

Introduction to the problem

Preventive, curative and dispensary care for children and adolescent - in the competence of general practitioners
- system of preventive health checks (Ministry of Health Decree No. 3/2010 Coll.)

Part of the preventive health check is:

- evaluation of anthropometric features
- evaluation of the somatic findings/discovery
- evaluation of psychomotor and psychosocial development

Important is **cooperation** with family and pedagogical staff and educators, staff of authorities for protection of public health

2. Prevention of child injuries

- Injury - health damage caused by a sudden external cause
- Typology of injuries
 - according to cause (circumstances of origin): eg traffic, sports, domestic, violent, ...
 - according to consequences: eg light, moderate, heavy, with permanent health consequences, fatal ...
 - according to other criteria

Prevention of child injuries

- Accident statistics:

The most common causes of accidents/injuries in individual age categories
Types and numbers of child injuries

National Register of Child Trauma/injuries:
Characteristics, reason and history of origin,
importance

<http://www.detskeurazy.cz/>

Prevention of child injuries

- Large differences between states in injury and mortality
- Very well developed accident prevention (Sweden, the Netherlands, Great Britain)
- In the Czech Republic there is a high accident rate, injuries are **the most frequent cause of death** among children and adolescents, the third most frequent cause in the whole population
- **43% of children's deaths** (0-14) result from traffic accidents
- 10% of child deaths by drowning
- by location - most often home, surrounding of home, sports, school
- **National Action Plan on Prevention of Child Injuries 2007-2017**
- Objective: To reduce child morbidity and mortality, frequency and severity in the Czech Republic

3. Injuries of children and adolescents

Factors

- socio-economical (alcohol and drugs, violence, family)
- physical (place of injury, weather, temperature, daytime, risk environment ...)

Socio-economic status of the family

- an important role in the incidence of injuries
- family influence (departure/deviation from multigenerational cohabitation, divorce ...)
- few safe spaces to play, lack of finances for protective aids, less supervision and interest of parents ...
- families with social pathology (child as a witness or victim of violence)

Types of injuries of children and adolescents

- Traumacentrum, Scoring Systems (PTS)
- Types of injuries by age:
 - neonatal age (up to 1 month of age): fall in transit, scalding, risk of food inhalation
 - infant age (1-12 months): scalding (pull down of cloth), burns (cooker), electrical injuries (socket), falls (pram, bed, stairs), inhalation of a foreign body
 - toddlers (1 to 3 years): most often fatal injuries and poisoning, inhalation and subsequent suffocation (beads, nuts), injuries by sharp objects (knives, scissors, crayons), falls (sharp corners, stairs, bike) poisons (medicines, plants, chemicals), drowning (swimming pools, tanks), scalds (capsize of containers)
 - pre-school age (4-6 years): accidents related to leisure and sports activities (bicycle), falls, poisoning, burns
 - school age (7-14 years): falls and crash in sports, school injuries, burns, drowning, traffic injuries (pedestrians, cyclists), violence
 - Adolescence (15-18 years of age): Risking in terms of increased self-confidence, risk behaviors, alcohol and drug abuse; traffic and sport injuries

The most common places of injury

- Home environment
 - in children under 3 years of age
 - 2/3 of accidents for children under 14 and 1/3 in adolescence
 - kitchens, garden pools
 - getting familiar with proper use and at the right time
- Transport environment
 - co-driver, bike, child as a pedestrian
- Free time activities
 - cycling (intersections, roundabouts, more often boys 4:1)
 - afternoon hours, seasonal occurrence (spring, summer)
 - bicycle transport (seats, helmets)
- Adrenalin sports
 - football, paintball, skateboard, in-line skates, scooters, trampoline, inflatable attractions, winter sports
 - children admire them and want to try them, overestimation of strength, risks
 - Fractures, head and brain injuries
 - the use of specific protective equipment for the activity in question
- Playground
- School

Accident risk according to phases of psychomotor development of children

- important for assessing risk factors and targeting preventive activities
- small children - motor skills, but insufficiently developed cognitive skills to recognize hazards
 - field of view 30% narrower than adults (retardation of fast reflexes)
 - poor estimate of the speed of moving objects
 - the ability to distinguish common sounds from dangerous little developed to pre-school age
 - the center of gravity of the body placed higher (instability, loss of balance - falling into the pool ...)
 - risk awareness based on experience (prediction of danger only from the 8th year, often suppressed by other perception, interest)

4. Lifestyle disorders - addiction and prevention options

Risky behavior

- conduct endangering life, health or social integrity of the individual, or behavior directed against the interests of the society in the standards contained and the defined laws
- behavior threatening integration of an individual into society

Risky behavior

- there is a demonstrable increase in health, social, educational and other risks to individuals or society
- Primary Prevention of Risk Behavior - is a set of any health, social, educational or other interventions and measures to prevent the occurrence of risk behaviors
- Preventing further progress, mitigating already existing forms and manifestations of risk behavior or helping to address its consequences

Risky behavior

- Adolescent risk behaviors – addictive substances abuse, aggressive behavior, social maladaptation, and reproductive health disorders
- Abuse of addictive substances - we are at the top of Europe (46% of our 16-year experience with marijuana)
- Recently, the methodology of individual prevention is in the form of interviews with a doctor - the CRAFFT questionnaire
- Previously the school environment domain

Sources of risk behavior:

- biological (genetics, congenital or acquired defects, psychiatric dg.)
- psychological (long-term anxiety, frustration, depression, deprivation, emotional lability, defensive reaction to traumas experienced ...)
- social (they explain risk behavior on the background of the relationship between the individual and society)

Risky behavior

- **Bullying** - "one or more pupils deliberately, usually repeatedly tortures and enslave their classmate or classmates and uses aggression and manipulation to do so" (Kolář, 2001).
- **Cyberbullying** - Dangerous communication phenomena implemented through information and communication technologies that result in harm or other damage to victim (Kopecký, Krejčí, 2010).
- **Toxicomania** - a state of addiction to a particular drug with consequent physical or mental disorders, this situation is detrimental to individuals and society as a whole.
- **Alcohol** - a psychotropic substance that acts mainly to increase mood, a legal drug.
- **Tabacism** (smoking) - "day-to-day addiction", leading to psychological and physical addiction, endangering life and health, legal drug.

Risk behaviors - educational factors

- Society is a unit and affects on teenage children through various educational elements (educators)
- These can act positively, preventively, but also negatively
- The function of educational elements is fulfilled by social groups and the various persons with whom the teenager enters into different relationships
- The main educators - **social groups in which adolescents are relatively permanently incorporated** and which therefore have the possibility of long-term influence (family, school, peer group or interest group)

Addiction of adolescents

Definition of addiction

- Recurrent drug use - addictive substance
- It is manifested by changes in experience and behavior
- The irresistibility of the urge to use the addictive substance continuously or periodically for its effects on the psyche
- **Psychological addiction** - a person thinks he/she needs to continue using the drug to cope with their lives.
- **Physical addiction**- the body becomes accustomed to the presence of the drug, and the individual has to use it (avoidance of the withdrawal syndrome)
- **Drug addiction** (according to WHO, 1969) - The mental state of periodic or chronic intoxication that damages both individuals and society caused by repeated use of the natural or synthetic drug "

Overview of the most common types of addiction

Computers and the Internet

- addictive and impulsive
- the most endangered is child population group
- individuals neglect school responsibilities
- by playing inappropriate games, the virtual world can coincide with the real world
- lower social level due to frequent playing
- dangerous encounters with a virtual person in reality

Overview of the most common types of addiction

Eating disorders

Mental bulimia

- It is a eating disorder where an individual (in most cases a woman) is suffering from repeated fits of overeating and subsequently seeking an extreme solution to reduce the effects of already-consumed foods.
- Often linked to mental anorexia
- After a seizure, they are punishing themselves by vomiting, using laxatives to reduce the effects of ingested foods as much as possible.
- Repeated vomiting causes:
 - increased muscle irritation,
 - epileptic seizures
 - heart disorders
 - muscle weakness ...

Overview of the most common types of addiction

Mental anorexia

- There is an intentional reduction in body weight
- The illness begins inconspicuously and for a long time may not be noticeable
- Thanks to the inappropriate example of the perfect body of today's world, a lot of girls feel thick and try to reduce their weight.
- much more energy is emitted than it is received
- Hair loss, nail breaking, bone thinning, osteoporosis, cold sensitivity, psychological problems and irritability
- It sometimes results in omission of menstruation and infertility, organ damage
- A large percentage of suicidal tendencies
- The treatment is very lengthy and takes place in specialized institutions and clinics.

Overeating

- Associated with other mental disorders, they usually follow a traumatic situation (loss of a close relative, operations, accidents, injuries and other stressful situations).
- It leads to obesity with its health consequences

Overview of the most commonly used addictive substances

Alcohol addiction

- Due to the simplicity of the chemical structure of alcohol, the penetration into the tissues is very fast and simple. It passes through the mucous membrane of the digestive tract and into the bloodstream.
- Liver cirrhosis, mucosal damage, nerve inflammation, and alcoholic stress
- Together with cigarette smoking, it affects the cancer of the tongue, the oral cavity, the larynx, the pharynx and the esophagus.
- Psychological consequences, the so-called delirium of tremens (hallucinations), psychoses - the worsening of social as well as family ties.

Overview of the most commonly used addictive substances



Opioids

- Made from dried sap of immature poppy, but they are also semi-synthetic and synthetic.
- Effects may be euphoria, but it mainly has suppressive effects - somnolence, feelings of vomiting and confusion
- Dependence on opiates is also threatening people who use them for health reasons
- They cause psychic and somatic addiction
- Heroin, codeine, morphine, opium, hydromorphone, buprenorphine and methadone

Kanabinoids

- Marijuana
- One of the most commonly used addictive substances in the Czech Republic
- It is a natural substance that comes from Indian cannabis
- Euphoria, deterioration in coordination, distorted perception of time and space, increased sensitivity to some stimuli, accelerated or slowed thinking, groundless laughter
- Health risks are: respiratory tract inflammation (bronchitis), lung cancer, impaired attention and memory, psychotic symptoms



Overview of the most commonly used addictive substances



Hallucinogenic fungi and LSD

- psilocybe mushroom - used in raw, but also in heat-treated form
- LSD is lysergic diethylamide
- Hallucinogens are abused to induce altered sensory perception, hallucinations, another view of time and space, another view on the person's own.
- enlargement of the pupils, flushing in the face, increased sweating, tremor, dizziness, dry mouth, nausea, perception disorders, euphoria, sometimes anxiety and depression, over-estimation of self-abilities, faults of judgment, delusions
- due to anxiety aggression to yourself and surrounding may occur
- There is overheating of the body, irresistible thirst, restlessness

Overview of the most commonly used addictive substances

Organic solvents

- A group of addictive substances, which are also referred to as volatile substances or inhalation drugs.
- solvents, adhesives, diluents, gaseous substances
- The individual volatile substances are: toluene - methylbenzene ($C_6H_5 - CH_3$), trichlorethylene ($Cl_2CH - CCl_2$), used in industrial workplaces, the most dependent are employees of this branch
- Toluene is freely available in drugstores and is relatively inexpensive
- It can be inhaled directly from the bottle, but more commonly the inhalation (sniffing) of toluene vapors from the impregnated fabric
- The effect occurs within a few minutes and is short-term - it disappears within a few tens of minutes if inhalation does not proceed or is not repeated
- Volatile substances induce feelings of euphoria, hallucinations, depression/sedation and sleep
- Longer use results in emotional and behavioral disorders, aggressiveness and a large brain cell loss.
- There is a very rapid psychological dependence

Overview of the most commonly used addictive substances

Pervitin and amphetamines

- Previously used as antidepressants, nowadays they are used in cases of bulimia and narcolepsy (sudden falling asleep without cause)
- Pervitin is used intravenously or by taking snuff
- The main effects are euphoria, hyperactivity, insomnia, anorexia, accelerated thinking and speech
- Health risks is aggressiveness when the effect disappears (after three to four hours), followed by somnolence and depression
- Neurological and cardiac disorders, CNS disorders; worsening of concentration and memory, and the development of psychotic symptoms.

Addiction - Preventive intervention

Primary prevention

- The goal is to prevent the use of addictive substances, including alcohol and tobacco
- Restrict or stop experimenting with addictive substances
- Education for "healthy behavior"
- Primary prevention needs to be started so early that children learn in various forms to reject the addictive substances they are offered and resist to addictions
- They should learn to build a ranking of their own values and positive motivation

Addiction - Preventive intervention

- **Effective primary prevention must include a system of follow-up activities:**
 - primary prevention programs
 - information and advisory services
 - coordination activity
 - educational activities for school prevention, pedagogues and parents
- **Main points of primary prevention:**
 - to get into the minds of children and youth and to inform them about addictive substances and addictions
 - to inform about their health risks and social impacts
 - promote healthy attitudes and standards that a child has acquired against addictive substances and addictions
 - offering leisure activities and lifestyle without having to use addictive substances

Addiction - Preventive intervention

Nonspecific primary prevention programs

- activities that are not directly related to addictive substances but are **focused on a healthy lifestyle**
- Sport activities and interest groups
- Created by independent organizations and pedagogical-psychological councils, where organizers go directly to schools

Addiction - Preventive intervention

Selective primary prevention programs

- For groups, where the possibility of addiction and substance abuse is increased
- Efficiency criteria: strategies used, increased intensity, school collaboration with parents and other organizations

Programs of indicated primary prevention

- Oriented on groups and individuals, where risk factors and undesirable social phenomena are already present

Low-threshold facilities for children and youth:

- for children and youth, who spend their free time on streets or in a party
- their free time is not organized in any way
- Free of charge, there is no exact time schedule for arrivals and departures
- the choice of activities depends entirely on visitors (listening to your own music, watching own movies, table games, sports equipment, musical instruments ...)
- counseling and prevention services, where children and young people can confide in their problems or feelings or just talk to workers to help them deal with their situations

Hazardous sexual behavior

- A set of behavioral manifestations accompanying sexual activities and showing a demonstrable increase in health, social and other types of risks
- Relatively **frequent forms of sexual behavior** (unprotected sexual intercourse, promiscuous behavior, risky sexual practices, etc.)
- These include **forms combining multiple types of risky phenomena** (substance abuse, sexual abuse, sexual violence, public humiliation in connection with inappropriate presentation of personal videos and photographs on the Internet).

Hazardous sexual behavior

- Among **sexual risk behaviors with high potential impacts on reproductive health** we include:
 - an early beginning of sexual life
 - promiscuity
 - prostitution
 - high frequency of sexual intercourse and unprotected sex despite the awareness of possible infection
- Consequences:
 - sexually transmitted diseases, inflammatory diseases,
 - early pregnancy and abortions
 - the ultimate consequence is sterility and serious to fatal health problems.

Sexually Transmitted Diseases (STD)

- Most infections are easy to treat and virtually harmless to reproductive health
- Sexual, urinary tract, oral and rectal mucosa. The course is inflammatory with the presence of symptoms
- Sometimes asymptomatic, so the infected will carry the disease to the partners without the knowledge of their own infectivity
- On the territory of the Czech Republic, 1,452 cases of infectious diseases were reported in the Register of Sexual Diseases, of which 737 cases of syphilis and 709 gonococcal gonorrhoea infections (IHIS 2012)
- Among the diseases with a negative impact on reproductive health are: gonorrhoea, syphilis, chlamydia infections, acute condylomas, herpes labialis and candidiasis

Sexually Transmitted Diseases (STD)

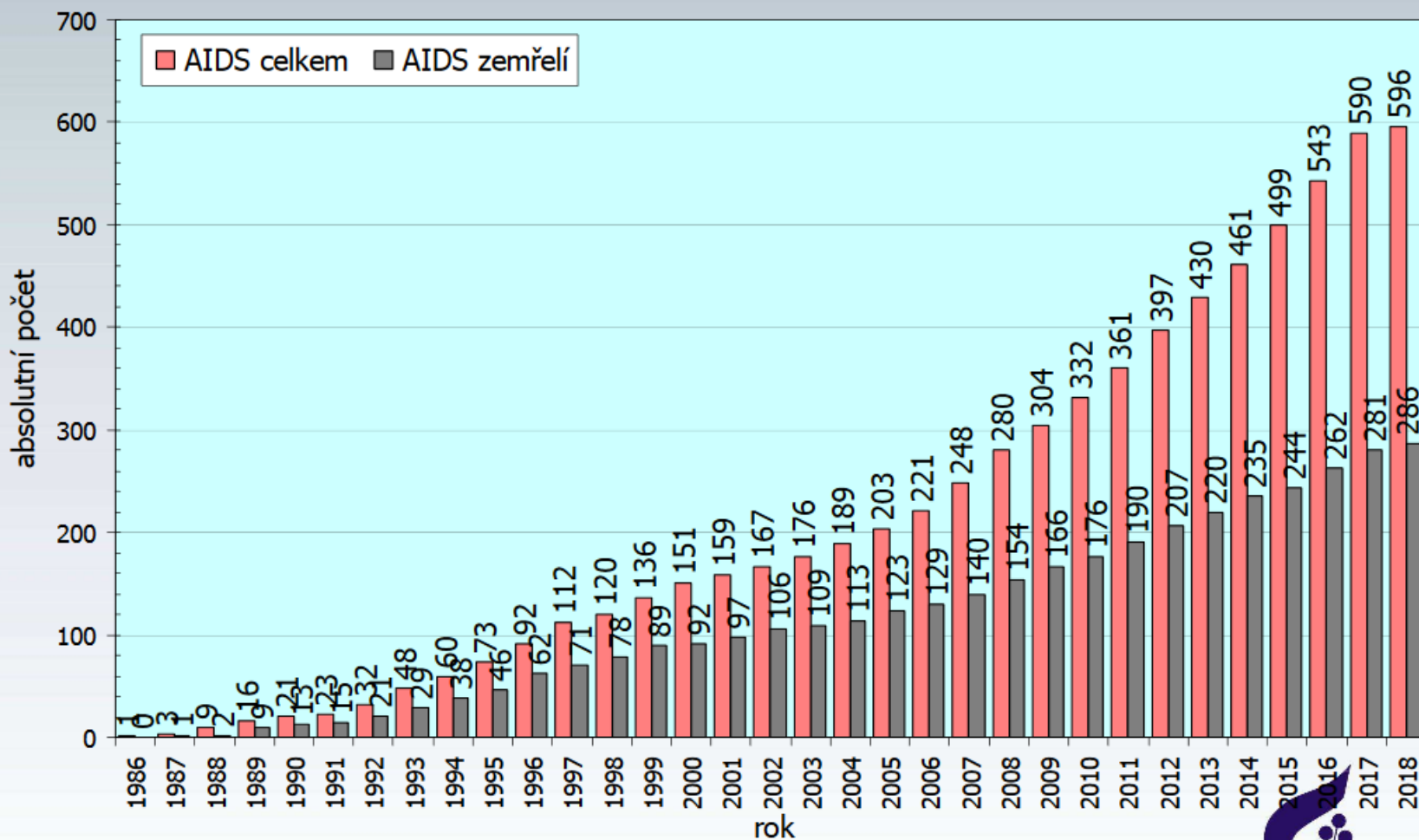
- The epidemiology of sexually transmitted diseases is closely related to social behavior and the status of an individual in society
- The main factors influencing the likelihood of infection include:
 - sexual risk behavior
 - sexual orientation
- More than 28% of reported diseases concerned homosexual men and 7% bisexual
- Women stated in 90% heterosexuality
- Transmission occurred at 80% after unprotected contact, 5% of whom were drug users
- Education belongs into socio-economic factors related to the occurrence of diseases
- Unprotected heterosexual and homosexual contact can also lead to HIV transmission
- In 2011, 167 new cases of HIV were diagnosed, with 26 infected persons suffering from AIDS status (IHIS, 2012)

AIDS V ČESKÉ REPUBLICĚ

(občané ČR a cizinci s trvalým pobytem)

Kumulativní údaje za období

1.1.1986 - 31.3.2018



- <https://zpravy.aktualne.cz/domaci/syfilis-kapavka-i-hiv-pocty-nakazenych-v-cesku-rostou-nejvic/r~ba9891e85bed11e7a0580025900fea04/?redirected=1527021340>