



**You have downloaded a document from  
RE-BUŚ  
repository of the University of Silesia in Katowice**

**Title:** Carrying out the Education for Safety as a Chance to Minimise Risky Behaviour of School-age Children and Youth

**Author:** Joanna Bulska

**Citation style:** Bulska Joanna. (2008). Carrying out the Education for Safety as a Chance to Minimise Risky Behaviour of School-age Children and Youth. "The New Educational Review" (Vol. 16, No 3-4 (2008), s. 261-269)



Uznanie autorstwa - Użycie niekomercyjne - Licencja ta pozwala na kopiowanie, zmienianie, remiksowanie, rozprowadzanie, przedstawienie i wykonywanie utworu jedynie w celach niekomercyjnych. Warunek ten nie obejmuje jednak utworów zależnych (mogą zostać objęte inną licencją).



UNIwersytet ŚLĄSKI  
W KATOWICACH



Biblioteka  
Uniwersytetu Śląskiego



Ministerstwo Nauki  
i Szkolnictwa Wyższego

## Carrying out the Education for Safety as a Chance to Minimise Risky Behaviour of School-age Children and Youth

### Abstract

Experiences in many countries show unequivocally that the engagement in the overall activities aiming at shaping people's health behaviours, that is, at undertaking efforts to increase competence of individuals and even groups at different levels of social life organization, yields expected effects. It has been known for a long time that preventing harmful phenomena is much more profitable than actions against negative results which have already emerged. One of the important elements of a lifestyle, often having tragic health consequences is undertaking risky actions in the everyday life of school-age children and youth.

**Key words:** *health of school-age children and youth, lifestyle, prevention, safety, trauma, accident, injury, trauma with burning.*

**Healthy life** is a basic aim of every human, determining practically every sphere of human behaviour (Z. Chromiński, 2003, p.3). One of the conditions for such a life is an awareness that health is not a permanent state, therefore in all periods of life dissemination and promotion of the healthy lifestyle is so important (E. Juśko, B. Niziołek, 2000, p. 42).

**Lifestyle and health actions** can, or even should change within the scope of human life. However, the most important period of its shaping is childhood and youth. This shaping is heavily influenced by health actions carried out by adults, most often parents and teachers, providing a child with certain life conditions and being a role model of conduct, who a child copies and often accepts uncritically. Participation of every man in searching for, creating and controlling one's own health is a **basic rule of health promotion**. Such an approach of a modern

strategy of health creation stems from a variety of the modern man's problems connected with a faulty lifestyle (K. Bożkowa, Z.J. Brzeziński, J. Kopczyńska-Sikorska, B. Woynarowska, 1989, pp. 42–43).

**Healthy lifestyle** comprises various important elements. To these elements belong physical activity, observing the rules of proper nutrition, a hygienic balance between work and leisure (including sleep), an ability to cope with stress, an abstaining attitude, refraining from conflicts and aggression in interpersonal contacts for the benefit of reliable attitudes and a tendency towards peaceful coexistence, life optimism expressed with prevalence of states of satisfaction and an art of enjoying everyday events (R. Przewęda, 1999, p. 197) but also taking risks in everyday life.

**Prophylaxis** being in close correlation with the notion of health, understood as preventive measures, helps to minimise all risks for health, preventing from illnesses and other failures and their results (B. Woynarowska; 1994, pp. 117–119).

As K. Popielski informs that in the prevention science it has been long understood that prevention of harmful phenomena is much more effective and economical than fighting with their negative results (T.B. Kulik; 1997, p. 49).

**The knowledge of sources of the most numerous traumas in a given community enables us to prepare projects of primal prevention in these directions.** Implementation of such programmes in a visible way leads to a decrease in the number of accidents on a given territory, in communities implementing such preventive measures. The examples of such preventive actions with proven efficiency are: transport seats for children, seat belts, helmets for motorcyclists and cyclists, smoke alarms in buildings, planning the evacuation routes in buildings, window protections in high buildings, producing medicines in doses smaller than the deadly dose for children, designing ways for pedestrians and cyclists, speed limits, alcohol level tests for drivers, street lighting, lowering the temperature of water available in taps, special construction of electrical sockets and teaching first aid rules to wider audiences (J. Grochowski, W. Górecki, 2000, pp. 16–17).

In pro-preventive legislation changes in Polish traffic regulations the legislator introduced a rule of giving way to a cyclist who is on a cycle lane crossing, enforced driving children in protective seats, overruled the regulation which permitted children to the age of 7 to go on a motorcycle or moped without helmet and introduced the duty to mark children under 15 with reflective elements while walking in the beyond built-up area in the dark (J. Grochowski, W. Górecki, 2000, pp. 16–17).

All these changes demand, obviously, support from social as well as individual actions. Constrained by education and stimulated by social and organisational changes, but also encouraged to these actions by legislation, social and introductory policies can bring expected results. Thus, we can mention three types of strategies of

trauma prevention (J. Karski, 1999, p. 136): (1) Education and change of behaviours; (2) Engineering and technology; (3) Legislation and implementation.

The three mentioned types of intervention in the scope of trauma prevention differ in the directions of their influence;

- **Behavioural intervention**, also called education is an influence on social level to change the individual behaviour connected with the trauma risk. It is an influence to change the behaviour of a high risk in a surveyed group, the so-called target group, at which the programme is aimed.
- **Technological intervention** is the use of development and inventions in designing products and tools which may cause trauma. It is elimination or reduction of the risk of danger in human environment.
- **Legislative intervention** is an introduction and administrative execution of legal regulations enforcing changes in behaviour or technological changes in production, through introducing severe standards, norms, regulations, etc. (M. Malinowska-Cieślak, 2001, p. 403)

Combination of these strategies should be a choice based on a situational analysis, including the estimation of needs of the population for which it is to serve. Joining strategies should take into account local standards and public acceptability of various behaviour changes, whether environmental, engineering or infrastructural, which are needed to reduce the number of traumas (J. Karski, 1999, p. 136).

To propagate and implement education for safety among school-age children and youth it is worth having a closer look at the issue of traumas and accidents in this age group.

The notions of **trauma** and **accident** are often used interchangeably (M. Malinowska-Cieślak, 2001, p. 398). In public health **trauma** is defined as “unintentional or intentional bodily injury as a result of sudden operation of heat, mechanical, electrical or chemical energy or lack of such factors as warmth or oxygen” (J. Karski, 1999, p. 134). Trauma can be active for a short or a long period of time. Sometimes in an organism we can observe an injury as a result of an accumulation of micro-traumas. Trauma can be active in the place where an injury takes place (direct trauma) or in a certain distance from the place (indirect trauma) and then its force is transmitted by the bones, joints, tendons, muscles. The notion of **injury** is used while referring to a result of the operation of trauma on the organism. Its size and character depend on the kind and force of trauma and tissues’ resistance. Mechanical injuries to a locomotor system can be divided into: closed injuries to soft tissues (e.g. bruises), wounds, fractures, sprains, dislocations. Sometimes various injuries happen simultaneously (T. S. Gaździk, 1998, p. 32). The term **accident** suggests that it is usually a fortuitous event resulting in trauma. The causes of traumas are known and often fast and specialist medical help is needed. In trauma control it

is specified that trauma occurs as a result of, the so-called, “risk exposure”. By risk exposure we understand such an environment or individual or group behaviour which generates high probability of causing an accident (M. Malinowska-Cieślak, 2001, p. 398).

The issue of trauma control includes various concerns, such as: road accidents, professional trauma, home trauma, traumas in places of holiday rest, intentional accidents, i.e., murders and suicides, rapes and sexual violence, accidents among children, systems of temporary help and rehabilitation; safety systems in local communities, or finally programs of trauma prevention realised at the local, regional or national level (M. Malinowska-Cieślak, 2001, p. 397).

Physiological and psychological **reactions of a child** to a trauma are **different** from the reactions of an adult. Frequent causes of deaths and sicknesses are traumas of children under 1 year of age. Understanding anatomical and physiological differences is, therefore, of key importance for effective and competent help to children. Due to the smaller total mass of the child’s body kinetic energy resolves on a smaller area, and as a result its effect is proportionally greater. The musculoskeletal system of the child is more susceptible to trauma, besides that children have a smaller amount of the muscular and hypodermic tissue dampening trauma energy. Therefore, even in a lack of external signs of trauma a possibility of internal injuries must be always taken into account (M. J. Gerardi, 2003, pp. 61–63).

The analysis of the issue of accidents and traumas of children at the age of 1–4 shows that, despite a decreasing tendency, the death rate is still higher in Poland than in highly-developed countries. Moreover, the main reason for deaths caused by accidents among children aged 1–4 are traffic accidents and drownings and the main traumatic reason for hospitalizations among children aged 1–4 are falls, poisonings and burns. The structure of traumatic causes of deaths shows a large participation of accidents resulting from care negligence and ignoring dangers in the child’s environment (J. Mazur, 2001, pp. 76–79).

A special issue is the **accident rate among children** at home. The important part of these accidents is not reported, especially when it does not demand, in a victim or caretakers’ opinion, a physician’s direct help. While giving help healthcare staff does not often record in files the place of the accidents. These are falls from heights, crashing into hard objects, injuries caused by a falling hard object, skin or mucous laceration with sharp objects, thermal and chemical burns, electric and other shocks leading to superficial or deep wounds, joint dislocations, bone fractures, eye injuries, reaching even concussion and other bodily injuries. The risk factors of the accidents at home and its surroundings are: **stairs, pavement unevenness, slippery surfaces, improper lighting, unexpected objects, low chairs, improper floor surfacing** (J. Karski, 1999, pp. 130–131). Another question worth attention is

the use of a walker. Part of accidents at home, as the research in Canada shows, take place due to the use of walkers. As a result in Canada their use was limited no later than in 1989. As paediatricians and orthopaedists contend, children, before they learn how to walk on their own, “run” in a walker too fast and too much. Hospitals admit many children who run with a walker into the stairs and fall down from them. Repeated accidents – also casualties – lead to making stricter regulations (E. Mikołajewska, 2005, p. 42).

The issue of accidents and traumas of children at the age of 5–14 looks similar to the age group discussed above and we can see that the level of after-accident death rate in this age group is still higher in Poland than in highly-developed countries. And the decreasing tendency of death rate refers only to younger children (5–9 years old), at the age of 10–14, in a longer perspective death rate fluctuates without any clear tendency. The main reason for deaths caused by accidents among 5–14 year old children are traffic accidents and drownings and the main traumatic reasons for hospitalizations among children aged 5–14 are falls and traffic accidents. School-age children are particularly endangered by being hit by a car and bicycle accidents. Falls, being a half of the reasons for hospitalizations due to trauma take place during games and sport events. Thus, proper conditions for play and doing sport must be ensured (J. Mazur, 2001, pp. 94–97).

**Burn trauma** which often endangers children is a sudden and traumatic experience. The same accident can influence many people at the same time and cause burns of a different level of seriousness. Even **small burns** are painful and can have **long-lasting consequences**; large burns can be life-endangering due to the very nature of the burn, accompanying injuries to the breathing apparatus and later multi-organ failure. There is large differentiation of the reasons for burn trauma and its seriousness. The prevalent number of burns are thermal burns, among which, particularly for children, the **biggest part comprises steam burns and boiling liquid burns**. At home they most often take place in the kitchen and in the bathroom (S. Azad, S. Fader, D. Wilkinson, I. James, K. Graham, 2005, pp. 212–217).

The places where the biggest dangers to health occur are **sport classes, physical education classes, trainings**; in certain cases (swimming pool classes or rock climbing trainings) they even endanger participants’ lives. It stems from the very nature of these activities where participants must prove fit, having proper technical skills and proper psychical features, e.g. discipline. Movement, competition, emotions make the probability of a sudden, unexpected event caused by an external factor, i.e., an “accident”, far greater than during, for example, Polish literature or art classes. In physical education and sport at school accidents of various kinds take place, most often they are individual traumas causing temporary inability to



train or study, among which the most popular are fractures of the upper and lower limbs, joint dislocations (ankle, knee, elbow, shoulder, wrist), bruises and cuts. The majority of accidents take place in **sports halls** during classes of gymnastics and at stadiums during athletics classes or team games. There are also accidents on **skating rinks** and **swimming pools** (K. Kamieniak, 2004, p. 26). Actually, complete trauma prevention in sport is an unreal assumption. However, with the application of proper rules, the total number of traumas may be substantially decreased. Many sports traumas can be avoided applying conscious supervision, following the rules, protective clothes and equipment and proper training (M. Dziejwski, 2004, pp. 105–106).

It must be pinpointed that in the population of developmental age, **the youth of 15–19** run the biggest risk of death caused by trauma. Apparently, the main reasons for deaths caused by accidents in this age group are traffic accidents, suicides and drownings and the main reasons for hospitalization are falls and traffic accidents (J. Mazur, 2001, pp. 76–79)

**Traffic accidents** are also the most frequent cause of deaths, diseases and disability worldwide and cause an enormous, yet underestimated problem, demanding urgent action from various institutions and organisations responsible for the increase in traffic safety (A. Nogalski, M. Goniewicz, J. Karski, 2005, pp. 431–433). The biological results of traffic accidents include various and variedly intense bodily injuries. Its complex depends on the crash mechanism, and in case of pedestrians hit by a vehicle – it depends on the vehicle type, collision speed and the pedestrian's position while hit. **With the increase in collision speed above the limit of 70–80 km/h, the risk of amputation of a body part increases**, among which particularly often partial or complete amputation of lower limbs, notably shins, take place (M. Rydzewska-Dudek, A. Niemcunowicz-Janica, 2005, pp. 168–170). This type of accidents accounts for about 40% of all traumas. In Poland the number of traffic accidents in relation to the number of vehicles is similar to the figures in other countries of Europe, the USA or Canada but the percentage of casualties is much greater. Over 20% of victims die or suffer permanent health deterioration. In Poland, similarly to the rest of the world, the number of the disabled in traffic accidents gradually increases. According to WHO, within the last 30 years the number of the disabled has risen from 12 to 18%. According to GUS data, in Poland it reaches 13% in the group of people over 15. In 2000 in Poland there were almost 3.5 million disabled people, mostly due to traumas to the locomotor system. They accounted for half of the disabled (A. Kowalska, E. Dziańkowska-Zaborszczyk, 2005, pp. 485–489). There is also a problem of the so-called **pre-medical help**, because a victim's life depends on it, and to underline the importance of the period from an accident to reaching a hospital it was called the "golden hour". It must be

pinpointed that many people could have been saved if the witnesses to the accident had given first-aid, as the further life of the victim of an accident depends on it (W. Szczęsny, 2002, pp.22–23).

In last decade there can be seen an increase in the number of accidents **involving cyclists**. These are most often multi-organ and multiple traumas. Bicycle accidents take place mostly during summer months, i.e., in the period of the most intensive practising of this sport. The most common cause of traumas are falls off the bicycle which were caused by sudden braking, hitting an obstacle on the road and crashing into a car, other bicycle or a pedestrian. Recent research proved the **increase in the number of trauma to the facial part of the cranium as a result of bicycle accidents**. They are most often multiple injuries. To protect a cyclist from the danger to their life and health there must be imposed an obligation to wear helmets and pads for any age group and more cycle lanes must be built (M. Sikora, M. Szuta, J. Zapała, 2006, pp. 36–39).

A chance to lower the activities connected with risk taking by school-age children and youth is the realisation of the key aim of the **modern health education** relying mostly on support in creating the conditions for change, in other words undertaking efforts to increase competence of individuals and groups in the sphere of independent actions for the sake of health, at different levels of social life organisation, located in specific institutional contexts, such as a nursery school or school (A. Płotka, 2003, pp. 125–126).

Due to **preventing and safety promoting measures**, the risk factors can be greatly limited or even eliminated. Theoretical models used in health promotion and health education show an important influence of the psycho-social conditions on the change of children's behaviour and undertaking preventive actions by them. (M. Malinowska-Cieślak, A. Czupryna, 2002, pp. 505–510).

## **Bibliography**

- Azad, S. & Falder, S. & Wilkinson, D. & James, I. & Graham, K. (2005). Przewodnik lekarza rodzinnego w leczeniu oparzeń. *Lekarz Rodzinny*, 2(90).
- Bożkowska, K. & Brzeziński, Z. J. & Kopczyńska-Sikorska, J. & Woynarowska, B. (1989). *Zdrowie dzieci i młodzieży a edukacja*. Warszawa-Kraków: PWN.
- Chromiński, Z. (2003). Podstawowy miernik zachowań zdrowotnych dzieci i młodzieży. *Lider*, 11.
- Dziewulski, M. (2004). Zagrożenia zdrowotne u młodzieży uprawiającej sport, *Medycyna Rodzinna*, 3(29).
- Gaździk, T. S. (1998). *Ortopedia i traumatologia*, Warszawa: PZWL.



- Gerardi, M. J. (2003). Leczenie urazów. In J. Jakubaszko. (ed.), *Medycyna ratunkowa wieku dziecięcego*. Wrocław: Wyd. Medyczne Urban & Partner.
- Grochowski, J. & Górecki, W. (2000). Zagadnienia ogólne. In J. Grochowski. (ed.), *Urazy u dzieci*. Warszawa: PZWL.
- Juśko, E. & Niziołek, B. (2000). Zachowania zdrowotne uczniów szkół ponadgimnazjalnych. *Problemy opiekuńczo-wychowawcze*, 5.
- Kamieniak, K. (2004). Rodzaje wypadków i urazów na zajęciach sportowych – sposoby ich zapobiegania. *Lider*, 156(2).
- Karski, J. (1999). Promocja zdrowia a wypadki, urazy i zatrucia. In J. Karski. (ed.), *Promocja zdrowia*. Warszawa: Wydawnictwo IGNIS A.J. Pruszyński.
- Kowalska, A. & Dziańkowska-Zaborszczyk, E. (2005). Wypadki drogowe jako problem zdrowotny i społeczny w Polsce i Unii Europejskiej. *Zdrowie Publiczne*, 115(4).
- Kulik, T. B. (1997). *Edukacja zdrowotna w rodzinie i w szkole*. Stalowa Wola: Oficyna Wydawnicza Fundacji Uniwersyteckiej.
- Malinowska-Cieślak, M. (2001). Kontrola i prewencja urazów. In A. Czupryna, & S. Poździech, & A. Ryś, & W.C. Włodarczyk. (eds.), *Zdrowie publiczne*. Kraków: Uniwersyteckie Wydawnictwo Medyczne VESALIUS.
- Malinowska-Cieślak, M. & Czupryna, A. (2002). Wypadki i urazy dzieci w wieku szkolnym w Polsce. *Zdrowie Publiczne*, 112(4).
- Mazur, J. (2001). Wypadki, urazy i zatrucia u dzieci i młodzieży w Polsce. In J. Mazur, & J. Szymborski. (eds.), *Zdrowie naszych dzieci*. Warszawa: Instytut Matki i Dziecka.
- Mikołajewska, E. (2005). Bezpiecznie i wygodnie, *Magazyn Pielęgniarki i Położnej*, 6.
- Nogalski, A. & Goniewicz, M. & Karski, J. (2005). Uczestnictwo Polski w działaniach Światowej Organizacji Zdrowia na rzecz poprawy bezpieczeństwa ruchu drogowego. *Zdrowie Publiczne*, 115(3).
- Płotka, A. (2003). *Zdrowy styl życia psychicznego*, Lublin: Wyd. „NeuroCentrum”.
- Przewęda, R. (1999). Promocja zdrowia przez wychowanie fizyczne. In J. Karski (ed.), *Promocja zdrowia*. Warszawa: IGNIS.
- Rydzewska-Dudek, M. & Niemcunowicz-Janica, A. (2005). Wypadek komunikacyjny czy zabójstwo – analiza przypadku. *Archiwum Medycyny Sądowej i Kryminologii*, LV.
- Sikora, M. & Szuta, M. & Zapała, J. (2006). Wypadki rowerowe jako przyczyna urazów u chorych w materiale Kliniki Chirurgii Szcękowo-Twarzowej CM UJ w Krakowie w latach 1998–2005. *Magazyn Stomatologiczny*, 6.
- Szczęsny, W. (2002). Wypadki na drogach i przy pracy. *Diabetyk*, 5(79).

---

Woynarowska, B. (1994). Zdrowie, edukacja do zdrowia, promocja zdrowia. In A. Jaczewski (ed.), *Biologiczne i medyczne podstawy rozwoju i wychowania*. Warszawa: Wyd. Szkolne i Pedagogiczne.