OPEN MINDS, FREE MINDS

No easy prey for counterfeit medicines and similarly dangerous medicines



Psycho-pedagogical concept guide for teachers

EDQM 2015





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English version

2015

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Introduction

ounterfeiting of medical products and similar crimes involving threats to public health provides multi-billion euro profits for criminals who maintain an underground industry and criminal networks across the world. These products pose a major threat to patients who are particularly vulnerable owing to an illness or individual medical condition.

Counterfeit medical products carry intentionally false labelling as to their true composition (ingredients) and/or where they were produced and how they were distributed to the place of purchase or use. This is consistent with the connotation of "falsification". Their incorrect composition or dubious production and distribution conditions reduce or reverse the desired effect of medicines to an extent where they are either useless for therapy or harmful.

This booklet accompanies a series of practical guides on how to protect public health from counterfeit medical products and similarly dangerous crimes. It was prepared in the framework of the programme of activities carried out by the Committee of Experts on minimising public health risks posed by counterfeiting of medical products and similar crimes, co-ordinated by the European Directorate for the Quality of Medicines & HealthCare (EDQM) of the Council of Europe.

The booklet aims to inform, provide a concept based on interactive storytelling for training and education at school and encourage behaviour avoiding counterfeit medical products and similar crimes. The risk areas covered are doping, mental and physical capacity-enhancers or sedatives, illegal slimming agents, illegal medicines, medicines sold through illegal distribution channels. Target audiences include children and adolescents, teachers, carers, trainers, social workers/volunteers in youth organisations.

The concept comprises the theoretical background, methodology and impact assessment of the interactive story. The title "Open minds, free minds (OMFM)" alludes to the fact that pupils cannot be "preserved" from the risks carried by modern lifestyles and that they should participate in life with an open attitude, identify risks and avoid them proactively; pupils should be educated and encouraged constantly by their families, school and society to become free minds that have the courage to resist the temptations, even under group pressure.

Interactive storytelling is a modern and efficient approach to convey specifically adapted messages and induce desired lasting behavioural changes. Interactive storytelling is superior to lengthy frontal lectures as regards addressing approaches related to decision-making.

The chosen communication media for the interactive story are a comic book, hard copy and web link¹ hosting an interactive story and a repertoire for educational material. Using comics to convey the key messages on how to adopt risk-avoiding behaviours published in hard-copy form and

The authors of this booklet, the cartoonists and the Committee of Experts on minimising public health risks posed by counterfeiting of medical products and similar crimes wish all users and readers lots of fun and success in learning together how to recognise and avoid dubious offers of illegal medical products, often counterfeit and harmful, and how to deprive those criminals of their lucrative dealings which harm others.

1 Committees of Experts CD-P-PH/CMED: http://www.edqm.eu/en/minimising-risks-posed-by-counterfeiting-1189.html

on a website together with other information and educational materials will help to reach children and adolescents in Europe and through them the general public with information on how to contain the risks posed by counterfeit medical products and similar crimes.

To achieve these purposes, the booklet has been configured in logical steps:

- The first section will briefly present the methodology on which the OMFM interactive story is based.
- > The second section will be devoted to implementation of the key messages through interactive storytelling and a description of the required teaching methods (moderator, technical needs).
- > The third section will address the procedures and methods for assessing the impact of OMFM in awareness and behavioural changes in the target audience, children and adolescents.
- The fourth and final section will introduce the reader to the theoretical/ pedagogical framework enabling them to understand, use and modify the cartoon-based concept in a flexible way adapted to the specific teaching situation.

Appropriate partnerships with and networking among schools are encouraged for distribution in local languages, promotion and evolution of the cartoon-based teaching concept. The setting used in this booklet is intended to cater for situations familiar to young people in Council of Europe member states: feedback from the user/reader community regarding scenarios that appeal to young people in other regions of the world and any other topic they deem relevant is welcome².

² EDQM Helpdesk: http://www.edqm.eu/hd

What is a counterfeit medical product? What are similar crimes?^{3 [11][12][13]}

t is a product with a deliberately false representation of its identity and/ or source, for example on its labelling or packaging. This is consistent with the connotation of "falsification".

In the same vein, the World Health Organization (WHO) uses the following definition: "Spurious/falsely-labelled/falsified/counterfeit (SFFC) medicines are medicines that are deliberately and fraudulently mislabelled with respect to identity and/or source. SFFC medicines may include products with the correct ingredients or with the wrong ingredients, without active ingredients, with insufficient or too much active ingredient, or with fake packaging".

"Similar crimes" are understood as the production, stockpiling, trafficking or offering for sale of medical products intentionally by-passing the obligatory supervision/control of medicines authorities: these crimes are as dangerous as counterfeiting and pose a threat of a comparable dimension. Medicinal products used for doping and without a medical indication are one of the outcomes of "similar crimes", as are products offered for treatment of diseases without prior benefit risk analysis and authorisation from the competent drug regulatory authorities.

Counterfeiting and similar crimes potentially concern all kinds of medical products: medical products available without prescription and medicines for life-threatening disorders. Medicinal products for human and veterinary use, clinical trial medication for patients and healthy test persons, medical devices, active substances, excipients, components and accessories of medical devices are covered.

³ CoETreaty Office MEDICRIME Convention: http://conventions.coe.int/Treaty/Commun/QueVoulezVous.asp?NT=211&CM=8&CL=ENG

SOME REAL EXAMPLES OF COUNTERFEITING (FALSIFICATION) OF MEDICAL PRODUCTS AND SIMILAR CRIMES INVOLVING THREATS TO PUBLIC HEALTH

CASE 1

COUNTERFEITING (FALSIFICATION) OF A MEDICINAL PRODUCT

A counterfeit medicinal product for the treatment of high blood levels of cholesterol was detected on the legal market in the United Kingdom in 2005. Pharmacies were selling it to patients in good faith, believing it to be reliable. This counterfeit medicinal product presented a risk of serious side effects. It was detected by the UK regulatory authority, which identified the contaminated batch and took it off the market.

CASE 2

SALE OF AN ILLEGAL MEDICINAL PRODUCT, CONSTITUTING A "SIMILAR CRIME"

A product presented as a dietary supplement was sold on the Swiss market without official authorisation. It was claimed to be effective in the treatment of cancer. This claim placed it in the "illegal medicinal products" category. Dietary supplements cannot be claimed to be effective in the treatment of disease. The product in question did not contain any pharmaceutical substance and was offered to pharmacists, doctors and patients. It was not "counterfeit" because there was no suggestion that it was any other product, but its medical claims were false. After warning the public, the authorities closed down the company.

CASE 3

COUNTERFEITING OF A MEDICAL DEVICE

Counterfeit contact lenses were identified on the French market in 2004, on sale in opticians' shops. The lenses failed to correct short-sightedness and were also contaminated by *Pseudomonas aeruginosa* bacteria, which cause inflammation of the cornea.

These counterfeit medical devices were identified following the investigation of consumer complaints of intolerance to the lenses and failure to correct vision.

How to develop the messages/learning objectives to be conveyed through interactive storytelling

3.1 Key information and key messages conveyed

3.1.1 How widespread is the problem?

P ublic health threats related to counterfeit medical products and similar crimes have now reached truly global proportions. Counterfeiting is a multi-billion euro business that poses a major threat to patients who are already particularly vulnerable. It is often linked to organised crime and generates substantial profits with a low risk of being intercepted and relatively mild penalties in comparison to offences such as narcotic drug trafficking.

Counterfeiting of medical products and similar crimes affects all countries, whether as countries of origin, transit or marketplace. As with all clandestine criminal activities, it is impossible to gauge exactly the extent of the problem. Numerous studies have also reported large numbers of websites supplying prescription-only medicines without a prescription and people buying medicines online despite being aware of the dangers. In many countries counterfeiting of medical products and similar crimes results in enormous waste of scarce healthcare resources and fuels other illegal activities to the detriment of social security and prosperity. Combating these crimes will support sustainable development and free up resources for social welfare. All states around the world are affected by the counterfeiting of medical products and similar crimes involving threats to public health.

3.1.2 What makes a counterfeit (falsified) medical product and similar crimes dangerous?

- The quality of the product is unverifiable: unexpected toxicity may come from the active ingredients, the excipients or the packaging (unsuitable plastic or glass).
- Even if illegal products contain the same ingredients as the original product, uniform distribution of those ingredients is never guaranteed. Some batches may therefore have an excessive or insufficient dose of active ingredients.
- Inappropriate storage conditions may lead to deterioration of the product.
- > The lack of active ingredients is also a danger because the patient will be using an inactive medicine instead of a treatment appropriate to

his or her condition. A counterfeit medicinal product is a silent killer and the consequences for the patient may be fatal.

The use of counterfeit or illegally manufactured medicines deprives the legal industry of revenues.

3.1.3 Why are the counterfeiting of medical products and similar offences criminal activities?

he manufacture of genuine medical products is carried out by highly-trained professionals under strict public authority control – all to ensure that the lives of patients and users are not put at risk and the best possible medication outcome can be achieved.

In contrast, counterfeit medical products are manufactured by individuals or organisations solely seeking a quick profit, with no interest in the health of the patients and those buying their products. As a result, inactive ingredients, wrong dosages and even harmful substances are often used in the manufacturing process.

Intentionally putting the health and lives of patients and users at risk in this way – and, in the process, undermining trust in public health systems – is a very serious matter and the criminal individuals and organisations involved should be brought to justice and public health protected. Counterfeiters and their partners in crime often make use of the Internet to promote counterfeit and otherwise dangerous medical products. The World Health Organization (WHO)⁴ has found that over 50 % of medicines purchased on Internet sites that conceal their real address are counterfeit.

3.2 Drafting of key messages

he interactive story for 8-11 year-old children was intended to convey basic understanding about:

- 1. An illegal medicinal product and, more and more frequent among this type of products, counterfeit medicinal products.
- All medicinal products that have not been produced or distributed by responsible and trained professionals are dubious in terms of their healing effect (often produced and distributed "against the law"); Counterfeit medicinal products are "dressed-up", look like medicines, but they are not good and can be dangerous for health.
- 2. The story presents some consequences of the consumption of illegal medicinal products which may include counterfeit medicinal products in a non-frightening manner, providing for a "happy end", and illustrating the key messages.
- Lies have short legs, and counterfeit medicinal products bear false information to fool you!
- "Health protection is also about taking care of yourself before getting sick, and not only curing an incident damaging to your health" (Always think before you take medication).
- Trust in the advice your doctor and your pharmacist gave to your parents. Trust your parents since they have been informed by the health professionals: to avoid being sick, take some advice from Mum and Dad!

⁴ http://www.who.int/mediacentre/factsheets/fs275/en/

In a nutshell:

- Be attentive to your surroundings!
- Only "babies" are deceived by "sweets" (or illegal medicinal products...),
 Grown-ups use their brains (brainless people, do/don't...).
- Never alone.
- > Address observations that are "strange" with adults and teachers.
- > Be strong: say yes and say no at the right moment in doubtful situations.
- > Be free.
- > Help weak people to understand, to be resilient.
- > Read the story with adults and older brothers and sisters and discuss.
- > Think and use rational reasoning to control low threshold emotional reactions and impulses.
- The interactive story for 12-15 year-old adolescents was intended to convey advanced understanding on the following:
- The need to explain the nature and dangers posed by illegal medicinal products, including counterfeit medicinal products, reflecting in an age-adapted manner the complex web of root causes and consequences, built on lifestyles, challenges and competencies of the digital native generations.
- 2. Internet users should acknowledge that there is no quality-safety in buying medicinal products on the web.
- It can be unlawful and dangerous for your health to buy medicinal products from illegal Internet sites. Illegal Internet sites do not respect the law and often offer illegal medicinal products that are counterfeit and of bad quality.
- The story presents some consequences of the consumption of illegal medicinal products which may include counterfeit medicinal products, in a way that appeals to adolescents, providing age-adapted "crime and suspense", and illustrates the key messages.
- "Doping supports an objective that is unlawful and dishonest: cheating competitors and risking harm to your own body." Lies have short legs, and counterfeit medicinal products bear false information to fool you!
- Better to be aware today, than to meet the emergency medics team tomorrow! (Learning to identify risks will help avoid health problems caused by illegal medicinal products which include also counterfeit medicinal products).

In a nutshell:

- > Pay attention and never lose sight of what you really want and what is good for you.
- Brillant people use their brains and think (brainless people do/don't...).

- > Better alone than with bad company: listen to your true friends.
- > Address "strange" observations with adults and teachers.
- Be strong: say yes and say no at the right moments in doubtful situations.
- Be free.
- Think and use rational reasoning to overcome low-threshold impulses.
- A good sense of humour and positive emotions/thinking will help you and your friends.

3.3 Designing of characters

he characters, actors of the interactive stories, present attitudes that offer different perspectives for interpretation.

Key properties of characters conveying the key messages for children aged 8-11 years

t is important to consider for this interactive story that children of this age trust in adults and their knowledge and supervision.

Therefore, most children might object to the scenario where a (sports) trainer could provide illegal medicinal products to sports students. This is why the "negatively" connoted character is represented by brother "big-muscles-guy", who purchased the medicinal products online, hiding them from parents, brothers and sisters.

The fact that the trainer is aware of (and maybe supports) the use of the illegal medicinal products is not expanded upon. Therefore, adults are represented as positive, trustworthy characters, while the "negative" role is represented by the two older adolescents (brother "big-muscles-guy" and the "stylish" babysitter).

Throughout the story, one of the key messages is to trust in the expertise of competent adults and to seek parents' advice in case of doubts on how to manage an unclear situation. This is particularly important when facing pupils who cannot rely on social or family support and who succumb more easily to the attraction of "negatively" connoted role models such as older adolescents (peers) who may be seen as ultimately providing the desired degree of social recognition and support they miss at school or in the family.

Key properties of characters conveying the key messages for children aged 12-15 years

5 ome characters are very clear and unambiguous; others are more ambiguous, particularly those acting in the story for the lower teens (12-15): however, the intentions are obvious for all characters as are the consequences of their behaviours.

In both interactive stories, the characters demonstrate different attitudes and views, choices and senses of responsibility as well as the development of ability to critically evaluate and the positive connotation of a process of interaction with "good" adults. In this story, some adults were deliberately

presented as weak, distant or ambiguous. This is directly linked to the specific role assigned to adults by adolescents. Firstly, adults are perceived by adolescents as individuals from whom adolescents tend to distance themselves: teenagers are seeking autonomy of thought and judgement, as a key process for building their own identity. For them, the group of peers is far more important as a reference model of behaviour. Particularly important for adolescents is learning to challenge the views of false friends, or the parents (mother), if their behaviour is not ethical ("good").

Moreover, as we will see in the following sections, critical thinking is one of the critical life skills and also promoted by the World Health Organization (WHO) as a factor in health protection. In fact, one of the most important objectives of the stories is to "encourage" independent ("free-minded") thinking based on sound and complete information.

Secondly, the author hopes that the teacher or the (youth) group leader leading the process of interactive storytelling appropriately assumes the role of a mature adult who gives and inspires confidence, with appropriate distance but with empathy. Thirdly, the more fragile adolescents can sometimes build dependence on inadequate adults who represent models for incorrect behaviours and actions. This story provides opportunities to discuss and transform it into action models. Thus, the "negligent mother" character has been assigned a "strong" role in this story, which helps to demonstrate how negative the consequences of her behaviour could be. This could also serve as a strong message for all teenagers who usually "act without thinking" in a superficial way and on the spot (spontaneously). This message will become surely more evident if the teachers invest efforts in a proper, thorough discussion, encouraging expression of and reflection on different views and choices.

The characters in the story for the 12-15 year-old adolescents are designed particularly to make the teens recognise thoughts, intentions and decisions: the story author had in mind to encourage the adolescents to develop and take their own views: at the beginning of interactive storytelling the adolescents can choose the character with whom they wish to identify. If teaching a group with many participants, the teacher can encourage the pupils to make their choice and to give the reasons for their choice. So the majority views can be identified and supplemented with other points of view on the story. In the interactive story for 12-15 year-old adolescents, the author used the "multilinear" approach: [13] to follow the acts and behaviours of the characters, a couple, a boy and a girl, who can choose to change their behaviours and attitudes during the interactive plot.

The multilinear scenario conveys the message that actively reconsidering a behaviour or an act as a result of interaction, discussion and comparison with others with a positive attitude ("who think and know"), is always helpful in making better choices.

Development and use of the interactive storytelling tool

here is evidence that interactive storytelling has a stronger impact (in terms of involvement as well as learning effects) in comparison with non-interactive methods such as frontal lectures: interactive storytelling is particularly dynamic as it is embedded in the framework of a game and less associated with arduous working tasks.

Within a training or intervention programme, interactive storytelling may serve as an alternative or a complementary tool to frontal lectures or to technical presentations. In fact, by navigating through the alternatives participants may increase their knowledge of the topic by experiencing it themselves in simulated real-life situations. They also may improve their ability to resolve dilemmas and problems. Another advantage of story-telling is its usability in distance learning, as well as in exercises (e.g. replaying the story in order to find the best solution).

In this regard, it is important to reinforce the role of the teachers, to lead a **good discussion**. The discussion is a fundamental point during the interactive story, because in those moments pupils manifest their way of thinking, their points of view. Accordingly the teacher can lead the educative processes in real time, building on the ideas developed by their pupils.

4.1 Development stages

This section summarises information on steps and milestones in the development of a cartoon-based teaching concept using interactive storytelling. The author is pleased to share experiences and lessons learnt with the target readers:

With the abundance of signals, advertising and information communicated through audiovisual channels now competing for people's attention, much care and thought need to be devoted to means of capturing the attention of children, adolescents and their teachers. It is indispensable, therefore, before embarking on a communication project, to research the field using scientific observation and proper scientific methods, in particular as regards identifying the target audience and its (communication) needs and preferences, and developing acceptable messages based on evidence. This implies the development of visual concepts for conveying the messages, as well as presentation in a layout and context that is appealing to the target audience including teachers.

Accordingly, it is vital to involve risk communication and psychology scientists in the development of teaching concepts using cartoon-based interactive storytelling, to ensure that the messages will be science-based and the results of the project can be monitored systematically using valid methods.

Children and adolescents cannot be expected to understand, accept and act upon official statements and communiqués of authorities. Messages addressing this target audience should become an integral component of the communication project: the project should be appealing to the audience as such, messages are best accepted if they are not positioned too prominently (authoritatively) but are included organically ("hidden") in the context.

All parents will agree that a visualised story such as a cartoon has a stronger and more lasting effect on children and adolescents than printed texts. [14][26] Mostly, this also holds true for the general public. Comics have been appreciated and valued ever since this communication format appeared and they directly facilitate the onset and expression of emotions and sensations and can incite actions and behaviour in their readers. Adding "gaming" elements to cartoons, as practised in "interactive stories", can even enhance the properties needed to translate the messages which can be understood and integrated through the adoption of lasting behaviours. [15][27][28][29][32]

Interactive storytelling capitalises on the work carried out by the training platform "Protecting public health from risks posed by counterfeit medical products and similar crimes" supported by the European Directorate for the Quality of Medicines & HealthCare (EDQM) and run by the Committee of Experts on Minimising the Public Health Risks Posed by Counterfeiting of Medical Products and Related Crimes (CD-P-PH/CMED) in the field of risk communication about counterfeit medical products and similar crimes. [12][13]

A further source of inspiration is the experience developed in the use of "case stories" as training tools for adults^{[14][16][17]} and published evidence concerning multilinear narrative educational projects for children.^{[15][24][26]}

In particular,^[27] case studies are a current tool used by the above training platform supported by the EDQM in the training courses. This approach is based on the discussion of real-life situations related to the training subject moderated by a teacher/trainer experienced in this method. This procedure ensures attainment of the learning goals while providing good learning experiences.

The multilinear narrative is a tool offering an alternative to the standard frontal lectures that can be expected to improve life skills^[25] in a preventive perspective.

Participants in interactive storytelling can influence the narrative in realtime experience by developing an alternative course of events which in turn determines the further course of events. It is up to the participant to decide on the alternative course depending on his/her preference for a solution to the dilemma.

The present cartoon-based teaching concept using interactive storytelling was developed in stages:

It started with research into the psychological aspects relevant for children and adolescents, the target audience^{[7][9][10][30][31]}. The research was carried out by psychologists who were already familiar with the topic through earlier contribution to the above-mentioned development of guidelines on risk communication of counterfeit medical products and similar crimes.

- > In the following stage the key messages were defined.
- Further to that the scripts for the stories were written: it is strongly advisable that the scenarios and scripts be written by experienced writers who can suggest logical consequences of every decision made by the participant.
- Then, the cartoons were designed. It goes without saying that the cartoons need to be drawn by dedicated, skilful and innovative artists, preferably by people who combine good will and understanding for young people with a fine sense of humour.
- The pedagogical concept was prepared by an experienced scientist, involved closely in all stages of research, development and implementation. The pedagogical concept benefited from the vast theoretical background and huge practical experience of the scientist.

Considering the user's situation, it was considered helpful to have the teaching concept available as hard copy (book) and via a website. Instructions for use were geared to supporting teachers in conveying messages and behaviours to children and adolescents who are by nature critical towards "authoritative" or "institutional" information.

The authors consider the cartoon-based interactive story about counterfeit medical products a valuable tool for inciting specific risk-avoiding behaviours and is convinced that, for good and lasting outcomes, the story needs to have a genuine value as a cartoon that is appealing for its gripping story, interesting characters and high-quality design. It needs to be more than a teaching tool, otherwise the reader will lose interest.

There are many well-made examples of such cartoons, often commissioned by government institutions, which were most successful in achieving their objectives, particularly if they were of high quality. [22][23][33]

The development of an appropriate web tool was an important stage of the project: the cartoon was transposed into a "web story" in order to secure a wider distribution of the messages and make the whole project more appealing to the young "digital natives" who are very familiar with and attracted by contemporaneous cartoon formats cast on web channels. [21]

In conclusion, if prepared carefully, systematically, using multidisciplinary expertise and accompanied by a sound teaching concept, a cartoon-based interactive story about counterfeit medical products and similar crimes can be a valuable means of disseminating information on the nature and risks of those products and incite the desired risk avoidance behaviours, while being perceived as "cool" by children and adolescents and being in tune with desired attitudes and beliefs of young people.

Scripts of the cartoonbased interactive story telling tool "Free minds, open minds"

5.1 Psycho-pedagogical framework interactive story – 8-11 year-old children (see Appendix 1)

- Most children of this age are lively, curious and have good observational skills, if trained they can be careful and have a critical regard.
- > They are very curious about "big things" and the future that lies before them.
- > They know how to effectively make adults and older brothers and sisters take notice of messages.

Harry

- Harry and Jenny (10 years) are friends and classmates and are now in their study room doing homework together, sitting in front of the PC. In the next room there is Jenny's brother, Robert, 15 years old, and in the living room there is little Nicla, their younger sister, aged 5, who is playing with the doll's house. Nicla is under the supervision of the new babysitter Amanda, 16 years old, who, at the moment, is listening to music on her iPad.
- Taking advantage of Amanda's distracted state, little Nicla goes into her brother's room, attracted by objects inside
- Shortly afterwards, Nicla leaves the room with a jar of coloured pills. Back at the doll's house, she begins to feed one of her dolls with a spoonful of the pills.



Jenny



- Micla swallows a coloured pill and begins to spit, making a disgusted face. Harry and Jenny come into the room, and see Nicla spitting out the orange pills. Amanda grabs her by the feet and holds her upside down to prevent her swallowing any pills. Nicla says he has not swallowed anything.
- In come the parents. Nicla greets them, saying that her tongue is orange. The parents look at the jar of pills, are very worried and go immediately with Nicla, Harry, Jenny and Amanda to the hospital (emergency unit). The doctor checks the jar of pills and examines Nicla.
- Unfortunately, Nicla needs to have her stomach pumped. After talking to the parents, the doctor suggests having a serious discussion with the family, using information material, such as the EDQM website about illegal medicinal products including counterfeit medicinal products.

5.2 Psycho-pedagogical framework interactive story – 12-15 year-old children (see Appendix 2)

A Ithough between the ages of 12 and 15 years there is a general increase in abilities to execute intentions and actions, teenagers of this age usually show shortcomings in planning abilities and caution, so they adopt risky behaviours more easily. In general, pre-puberty and puberty form a stage in life when curiosity in situations that are new for young people and point them towards adult life is very high and they are tempted to try out anything that appears attractive. They are also more open to social/commercial/media messages promoting images of young people full of energy and high-performance, for example in sports or in social relationships and friendships.

This period of life is known for a tendency to alternate between shyness, insecurity and cockiness. This "cocktail" pushes the teenager to seek safety and reinforcement of their identity in peer groups. The story enhances the positive consequences of this emotional condition and reduces negative consequences of poor self-control and self-esteem: it fosters the development of a sense of perceived self-efficacy in group work and an entertaining atmosphere.

Start

Read the profiles and choose the one that seems most interesting to you.

a) "Strong Teen" style:

Strength and athleticism: teen boy and teen girl with muscular look, perfect body, face a bit "vacuous", gym-style clothes.

Jack & Pamela



- Jack and Pamela have been selected for and taken part in tests organised by the coach of the national athletics team with a view to choosing the squad of athletes for the upcoming season. They have a month to improve their performance, before the second series of tests, which will be crucial to selected four new athletes for the national team.
- Jack and Pamela are approached by Julius, one of their head coach's young helpers.
- Julius suggests a quiet chat outside the gym. During their chat he says he could supply some good medicines for muscle development, which could, in the short time before the next test, greatly improve physical performance and sporting prowess, ensuring inclusion in the national team.

b) "Nerd Teen" style

Strength and athleticism: teen boy and teen girl with skinny appearance (male) and chubby (girlfriend), spectacles, clothing unfashionable, even eccentric is okay.

Albert & Alice





Albert and Alice have been classmates and friends since nursery school and both have a passion for games. Albert is a champion of maths games and on-line chess. Alice is also very good at maths and a clever designer. Alice confides to her best friend Brenda that she suffers a lot because some classmates tease her about her weight (she is actually only a few pounds overweight). Alice begins to think that Albert does not understand, and her performance at school drops. Alice visits Brenda to get a box of diet pills ordered over the Internet; Brenda's mother is using them with great results, because she has lost 3 kilos in just two weeks.

- Marcus and Brenda are very good friends. Brenda hopes that Marcus will ask her soon to become his girlfriend. Brenda is considered one of the most beautiful girls in the school and considers Marcus among the most handsome boys, thus a perfect match. Brenda considers Alice a very intelligent girl and thinks that, with a few kilos less and more fashionable clothing, they could go out together as real couples: she and Marcus, Alice and some other nice guy.
- The story evolves as decisions move along and concludes "Thanks to searches on the web, using keywords such as the name of the pills received, and factual information such as on the EDQM website, you will learn that those medical products you obtained are illegal and carry a risk of being counterfeit or criminally altered and exposing you to health risks and even legal consequences. Does it really make sense to risk all this just for a more perfect body or performance? Don't forget that there is no such thing as a free lunch, easy effects are never going to be safe or lasting!"

c) "Glam Teen" style

Strength and athleticism: teen boy and teen girl looking "normal-medium", made-up face, wearing very fashionable clothes.

Marcus & Brenda



Using interactive storytelling as a teaching concept

using the interactive story in a class context requires a computer connected to a projector or an interactive blackboard. If the story is used as a practising/exercising environment, for example at home, in institutions or by students or by parents, a personal computer is needed.

It is also possible to use a hard copy of the cartoon book, often used in classrooms in conventional education. In this case, the teacher/moderator (see below) will read out the different sequences of the story and engage the pupils in discussion and brainstorming at the crossroads of story events.

If the cartoon is presented for teaching purposes, the teacher (or peer) should always use the options for solutions proposed by the story, even if the teacher (or peer) would act differently in private or professional life.

Experience and published evidence has shown that pupils and, through them, parents and family are important target groups for awareness-raising campaigns about the risks of counterfeit medical products and similar crimes. If addressed in an appropriate manner, these target groups are able to change their behaviour and adopt behaviours to avoid the above risks. Appropriate communication includes interactive education tools such as interactive storytelling, using realistic scenarios and case examples.

It can be expected, therefore, that children and adolescents act as vectors to make their families and friends health-literate as regards counterfeit medical products as a result of the teaching modules, homework and re-challenge tests at school.

The role of the teacher as a moderator

he teacher (or peer) should always bear in mind that the cartoon (game) has been set up as an exercise to achieve the learning objectives.

The cartoon can also be used as a classroom-based education tool. The teacher will read out story sequences, stop and ask the pupils to express their views on what option(s) they would chose and why.

The answers provided should be documented. It is quite possible that there is more than one answer to a question.

The cartoon game can be customised or further developed. The teacher or peer can expand the story, adding details or providing photos (media) or samples of genuine medicines/medical devices to the pupils for evaluation of the impact of decisions, education on features of medicines/medical devices including basic information on how health authorities ensure the quality, safety and efficacy of medicines and on misuse of medicines in in-depth discussion. The teacher acting as moderator will encourage the free expression of views among all pupils and at the end may direct

and inspire consensus about good choices among the decisions taken by the participants, addressing and involving everyone in the discussion of minority views in a constructive, non-shaming manner. One role of the moderator is to facilitate the presentation of the story and the discussion of individual sequences by managing the software or reading the story. He/she also has the crucial role of encouraging discussion on all sequences and options/sequels of decisions, underlining the differences between the recommended (idealistic) attitudes and behaviours suggested in the story and attitudes and behaviours we all adopt in real life.

It is crucial that the moderator obtain factual knowledge regarding the topic addressed by the story, including self-study and searches of literature and media news. The moderator should be familiar both with the fields covered by the training goals and with the cartoon-based interactive story, booklet and software: it is indispensable that the teacher has prepared him/herself carefully before the interactive discussion session.

In class, the teacher should start by explaining the concept of the training, presentation of the story, discussion of options for decision at the end of selected sequences, further consolidation and long-term evaluation of "lessons learnt". He/she will read out to the participants/students the story, stop at the end of each sequence and ask them to discuss what should be done.

Then, after a discussion and noting majority/minority opinions and rationales behind them, the teacher moves forward, pursuing the option favoured by the majority (software: "click"). He/she will read out the next chapters to the participants.

It is important that the teacher involve all participants actively in the decision-making process. Teachers need to be prepared to encourage timid participants or those uneasy in a working-group situation and find strategies to involve them in the discussion. On the other hand, some participants might monopolise the discussion. As in all group exercises, the teacher has to encourage the involvement of hesitant students, as well as restrict over-exuberant participants.

There are many approaches to discussion:

- individual participants alternate in taking a decision at the crossroads of the story sequences;
- participants are assigned at random into very small groups (3 persons per group) – for example sorted alphabetically by their names – or according to any rational criterion defined by the teacher at the beginning of the exercise;

Each group should have up to two (2) minutes to discuss the decision at the end of one story sequence. The teacher will invite one group to come up with an answer and provide an explanation. The teacher will then give the floor for comments to other participants or other groups and facilitate a short discussion; immediately after clicking on the selected link (probably the right one ...) he/she should ask the group concerned if, in a real situation, their decision would have been the same, facilitating a short discussion on the point.

Answers are requested in rotation by the teacher, in order to have all the different groups participating in the decision process.

In all cases, it is important to assign a person (second teacher) to act as rapporteur and record the decisions and explanations.

The participants should always base their decisions on the course of action described in the story, trying to choose the best option. Any differences between their usual behaviour and the behaviour suggested in the story should be part of the discussion animated by the teacher.

Role (scene) plays and essay-writing based on the cartoon-based interactive stories may be further options for classroom-based/group teaching.

The teacher should always bear in mind that the story is an exercise.

Through the cartoon-based interactive story, the participants should have gained experience about a particular situation, possibly new to them, but providing them with an opportunity to take a critical look at their thoughts, attitudes and behaviours.

Hopefully, the participants will have also developed or strengthened cognitive skills and efficacy beliefs that they will be able to activate when facing real-life situations similar or identical to those described in the story.



Testing the comic book on 8-11 year old children on the comic book festival "Pirot – city of comics", in Pirot, Serbia, on August 16th 2014.

Reception of key messages

eachers should refer to the key messages list presented previously in this document.

Teachers should also consider the level of cognitive development in their pupils. This is especially true for 8-11 year-old children. While forethought and self-reflection are not completely developed at that age, vicarious learning is a powerful capability on which the teacher may capitalise in order to convey key messages and incite their transposition into lasting behavioural changes. Taking account of these development processes, it is reasonable to include messages whose processing requires a high level of symbolisation capability and forethought (such as: "be aware today in order not to be sick tomorrow") only in the story intended for 12-15 year-old adolescents.

Other equally important key issues for teachers to ensure effective storytelling include the following:

- Modelling: the more similar the main character of the story is to the reader, the more effective the story will be in conveying the message, attaining the learning goals and enhancing abilities. Similarities among characters in the story and the participants can be exploited by the teacher in order to facilitate reception of the messages.
- Self-Efficacy: the achievement of the desired performance (goal) is the main source of self-efficacy. This can be incited by cartoon-based interactive storytelling in a learning process through which good performance and choices are positively reinforced and bad choices are negatively reinforced.
- Vicarious learning: a second important determinant of self-efficacy is vicarious learning. Self-efficacy is enhanced by adhering to effective models that perform effectively. Involvement with the stories does not only provide information related to the consequences of using illegal drugs, but also provides positive models for action that enhances the self-regulating capabilities of children and adolescents.
- > *Persuasion*: teachers are authoritative figures especially for 8-11 year-old kids. Teachers can choose to either act as opinion-formers in transferring knowledge as well as abilities to their pupils or support learning in 12-15 year-old adolescents through facilitators such as peers, 16-18 year-old boys and girls, who are perceived as role models with a strong persuasive impact.
- Reinforcement: teachers should emphasise the negative consequences
 of actions that can damage health, as well as the positive consequences
 of actions which promote health or which protect against behaviours
 that carry health risks.

Assessing the impact of the storytelling tool on risk awareness and the adoption of risk-avoiding behaviours

The closing section deals with assessment procedures and methodology for evaluating the impact of cartoon-based interactive storytelling as a teaching concept on specific performance indicators.

The author is aware that it is not very likely that children under 10 years of age intentionally buy or use illegal medicinal products; it is reasonable, therefore, to limit assessment of the impact of the cartoon-based interactive storytelling for children (8-11 years old) to awareness of legal outlets for medicinal products (legal healthcare providers) and the importance of taking medicines only on the advice of parents after consultation/purchase via the legal healthcare system/providers.

In addition, impact assessment in adolescents can include beliefs/attitudes and skills promoting resistance to advertising or temptation (group pressure) to use and/or buy medicinal products via obviously illegal outlets. The teacher will have to adapt the following indicators in accordance with the age and development stage of the children:

- knowledge of the risks of using illegal medicinal products for example and the types and characteristics of outlets that are highly likely to be illegal;
- attitudes towards and beliefs related to the purchase and/or use of medicinal products including counterfeit medicinal products via obviously illegal outlets;
- being prepared/desiring to buy and/or use medicinal products via obviously illegal outlets, or a history of purchase and use of medicinal products via obviously illegal outlets;
- self-efficacy in resisting the temptation to use medicinal products sourced from obviously illegal outlets, and related life skills.

Teachers should base assessment tools such as questionnaires or openended essays on the degree of implementation into behaviours/lifestyles of the key messages conveyed by the interactive stories, as summarised in the previous sections of this booklet.

Assessment of the impact of different teaching concepts for inducing risk awareness and risk-avoiding behaviours can be conducted using the methodology developed in educational, social and psychological sciences.^[20]

The teacher may deliver the training using cartoon-based interactive storytelling in one group or class while another group or class receives the training via other teaching methods (frontal lecture, conventional education). This comparative assessment entails 3 steps: pre-test, post-test, follow-up assessment.

Pre-intervention (before cartoon-based storytelling) assessment

n a target/control group approach, questionnaires can be administered to participants before the cartoon-based interactive storytelling in order to evaluate the base-line level of specific knowledge, attitudes, beliefs, and life skills in the participants (children and adolescents). Questionnaires may assess the following variables:

- knowledge of illegal medicinal products including counterfeit medicinal products (how do they differ from genuine medicinal products, how are they produced and where are they distributed, what are the risks for health?);
- ➤ attitudes related to using and/or buying medicinal products outside the healthcare system/without advice or supervision of parents (this can be done by asking how good/unethical, intelligent/stupid, useful/risky, etc. is the use/purchase of medicinal products outside the healthcare system/without advice/supervision of parents^{[2][1]}) and desire/willingness to use these medicinal products outside the healthcare system/without advice or supervision of parents (this can be done by simply asking "how strong is your will to ..." or "how probable is it that you will use/buy...", according to the guidelines developed by Ajzen and Fishbein);^{[2][1]}
- general beliefs related to the use/purchase of medicinal products outside the healthcare system/without advice or supervision of parents (e.g. moral beliefs that can be measured by means of a moral disengagement scale such the one presented at the beginning of this document);^[4]
- self-efficacy beliefs related to avoiding use or purchase of medicinal products outside the healthcare system/without advice or supervision of parents (for example, using items such those presented at the beginning of this document);^[18]
- life skills such as decision-making and problem-solving; creative thinking and critical thinking; communication and interpersonal skills; self-awareness and empathy; coping with emotions and coping with stress. The application of life skills in the context of specific risk situations and in situations where children and adolescents need to be empowered to promote and protect their rights has been stressed by WHO since the mid-1990s.^[34] Life skills contribute to the promotion of personal and social development, the prevention of health and social problems and the protection of human rights.

The setting of score values for individual answers and the weighting of the scores for individual answers need to take account of the specific learning goals and the social development/lifestyle setting of the children and adolescents.

While a questionnaire of this kind is particularly well-suited to adolescents

aged over 11, for younger children a short version of the questionnaire (focusing mainly on knowledge and life skills) may be used. Alternatively, teachers may set up focus groups and encourage children to discuss the topic of "Medicinal products – legal and illegal outlets and uses" in class in order to draw conclusions on their awareness and attitudes towards this issue. Open-ended written essays constitute another option to assess impact of the teaching concept in children.

To ensure that participants' answers are spontaneous and true, questionnaire replies must be treated confidentially and remain anonymous. Teachers should ensure that it is impossible to determine which participant filled in which questionnaire and that results will remain completely confidential and will not be communicated to parents or head teachers, etc.). Therefore, participants must pass on the completed questionnaire to the teacher in a blank, sealed envelope.

Owing to the anonymous nature of the comparative assessment, the evaluation of the results (see below) can be conducted only for group/ class level, not at individual levels: therefore, only class-based data will be available.

Post-intervention (after cartoon-based interactive storytelling) assessment

A questionnaire including the same questions as those used in the pre-intervention "test" can be used after the storytelling sessions to quantify the short-term impact of the cartoon-based interactive storytelling on the level of specific knowledge, attitudes, beliefs and life skills of the participants (children and adolescents). Scores of performance on the various parameters measured can be compared using descriptive statistics or hypothesis-testing.

In principle, the impact of a teaching concept using cartoon-based storytelling can also be assessed in parallel, in a two-group design: the questionnaire-based evaluation is carried out in a class/group with conventional teaching methods and in parallel a class/group enrolled in cartoon-based storytelling. When discussing the results, major differences in the knowledge, attitudes, beliefs and life skills of the participants (children and adolescents) which may have an influence and could bias the outcomes need to be identified and controlled in the two-group design. Therefore, pre-tests may be carried out to determine the baseline levels of the participants' knowledge, attitudes, beliefs and life skills before the intervention (cartoon-based interactive storytelling and conventional teaching).

The following results can support the success of the intervention:

Differences in the variables of interest between pre-intervention (before cartoon-based interactive storytelling) and post-intervention assessments in terms of an increase of knowledge about the risks of using illegal medicinal products (for example counterfeit medicinal products) and the types and characteristics of outlets that are highly likely to be illegal; self-efficacy in resisting the temptation to use medicinal products sourced via obviously illegal outlets, and related life skills, etc. and a decrease in positive attitudes related to the purchase and/or the use of medicinal products including counterfeit medicinal products via obviously illegal outlets. (Less desire and better resistance to temptation to buy and use those products via obviously illegal outlets.)

> Differences in the variables of interest between the two classrooms/ groups (no storytelling, and the classroom where the storytelling was used) in the post-intervention assessment, with higher scores in knowledge, self-efficacy, etc., and lower scores in positive attitudes towards issues related to the purchase and/or the use of medicinal products including counterfeit medicinal products via obviously illegal outlets; towards illicit substances (less desire and stronger resistance to temptation to buy and use those products via obviously illegal outlets) in the class where the intervention was conducted.

Long-term follow-up

n order to assess retention of the message as well as the intended behavioural changes, follow-up after 2-3 months can be considered by the teacher: this can be done via focus groups or questionnaires.

The follow-up assessment can be carried out in line with the procedure presented above.

Another possibility for conducting follow-up is to repeat the storytelling session 2-3 months after the initial training. This may be particularly suitable for children in whom the use of standardised assessment tools such as questionnaires is more difficult. Again, the teacher can present the situations where decision-taking is required (dilemmas) and document all decisions proposed by the children and discuss their views related to the decision-making process. To facilitate assessment of retention and comparison with the initial storytelling session, it is strongly recommended that the teacher be supported by a person (e.g. another teacher) who will document the answers and debates in class.

The desirable side-effect of the repeat storytelling session could be a reinforcement of the key messages in the story through repetition, thus facilitating acceptation and retention and consolidating learning effect and implementation in risk-avoiding behaviour.



Testing the comic book on pupils of elementary school "Danilo Kis" during the visit to the Medicines and Medical Devices Agency of Serbia on December 3rd 2014.

Scientific and theoretical framework for interactive storytelling for pedagogical purposes

nteractive storytelling is a modern and efficient approach to convey specifically adapted messages and induce desired lasting behavioural changes. Interactive storytelling is superior to lengthy frontal lectures as regards addressing approaches related to decision-making.

Education through interactive storytelling is no longer an approach merely at the development stage: interactive stories are currently used for distance learning (for example through websites). The trainee can open the game several times like a videogame and try to identify the best solution for the story "exercise" in order to "win the prize". The New York Presbyterian Hospital (NYPH) has replaced traditional classroom-based learning with a story-based approach for training staff in fire safety. [28]

Interactive stories should be designed with forethought and the scenarios chosen carefully to achieve the learning objectives.

The theoretical framework for interactive storytelling using cartoon games in a pedagogical setting is based on the Social-Cognitive Theory (SCT).[3][4][5][6][8] It has been developed into a specific teaching concept covered in this booklet. The approach adopted by SCT is to involve/ empower teachers and pupils and through them, families, to become agents of their own well-being and health protection ("agentic perspective"): individuals develop to become self-organising, proactive, self-reflecting and self-regulating individuals, instead of remaining reactive. This concept and framework underline the importance of understanding behaviour of individuals as consequences of cognitive and affective processes that are common to most individuals with a specific social environment: particularities of social settings trigger the development of specific cognitive and affective processes. Social cognitive units of analysis are individual competencies, goals, standards for performance and expectations, and appraisal/evaluations of one's own abilities provide cognitive units for analysis that are socially determined, of one's needs and expectations.

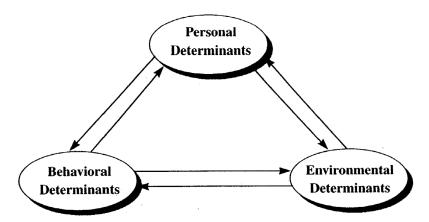
So-called **triadic reciprocal determinism**,^{[3][4]} is one of the fundamental principles of the SCT developed by Bandura. According to this principle (see Figure 1), the acts of individuals are determined by interaction between the following three factors:

- the physical and social environment (E);
- > the individual cognitive and affective proprietary to an individual (P);

> the individual's behaviour (B).

Each of these factors is inseparably and causally interlinked, meaning that the three elements reciprocally determine one another.

Figure 1: Triadic reciprocal determinism (adapted according to A. Bandura^[4])



The basic abilities of individuals constitute the key elements of SCT. These capabilities enable individuals to obtain insight into the outside world and themselves, and to balance both behaviours and individual experiences. These basic individual abilities include:

- > Symbolisation: Giving meaning, form and continuity to their experience, requires individuals to be able to use symbols to present what they have learnt. Symbolisation gives people the capacity to generate solutions to problems, evaluate possible outcomes and make choices without having to go through lengthy behavioural trial and error processes.
- > **Self-regulation** is the capacity to set goals and evaluate one's own behaviours, comparing them to internal standards of performance. Self-regulation provides the motivation for individuals to decide in which activities they can engage and to react positively and negatively to their own performance. Self-regulation is particularly important with respect to transgressive behaviour, a competence dealt with in greater detail in the following sections.
- Forethought, the ability to anticipate the future and build contingency strategies, adds to self-regulation the dimension of temporality. This temporal perspective is particularly relevant since opportunities in the future can become sources of motivation and regulation of one's own current behaviour, if anticipated.
- > Self-reflection is the capacity to reflect about oneself. Among the various aspects of this capacity, vicarious self-reflection is particularly relevant for interactive storytelling. Vicarious self-reflection refers to the capacity of observing other people's interactions with their environment. Self-reflecting individuals are able to refer to the results of interaction by other individuals in order to assess whether their own views/approaches are correct.
- Vicarious capability is the capacity to acquire knowledge, skills and affective skills through observation or modelling. Individuals with

abilities for observational learning are able to rapidly develop their knowledge and skills using information derived from many different models. Almost any behavioural, cognitive and affective learning taking account of individuals' direct experiences can be achieved vicariously through observing an individual's actions and consequences of those actions. Moreover, in observational learning one model can be used to pass on new patterns of thought and behaviours simultaneously to many different individuals. The following processes govern observational learning: attention (which determines what is observed and selected among other observations); retention (which concerns the construction of cognitive traces (representations)); behavioural production (which translates symbolic concepts into appropriate actions); motivation (which determines which behaviour will be selected from the learnt behaviours and adopted practically).

Vicarious motivators. Modelled behaviours more likely to be adopted by individuals are those that give rise to valued outcomes instead of those resulting in non-rewarding outcomes or even punishment. The observation of negative and positive outcomes for other persons influences the implementation of learnt patterns of behaviours in a way similar to one's own experiences. It is motivating to see the success of other individuals considered as being similar to oneself, whereas the observation of negative consequences of behaviours in others discourages the adoption of those behaviours. Seeing others obtain desired outcomes from their actions can incite expectations of outcomes that act as positive incentives; observed punishment can provoke negative expectations that act as disincentives.

Social Cognitive Conception of Transgressive Behaviours. Vicarious motivators have been studied in the context of the possible inhibitory effects they may have on transgressive behaviours. Transgressive behaviour is regulated by social sanctions and by internalised self-sanctions. In the case of social sanctions, people avoid behaving transgressively because they anticipate that such conduct will be socially censored and give rise to other negative consequences. In the case of self-sanctions, individuals avoid behaving transgressively because such behaviour will generate self-blame. An individual's conduct is thus guided by internalised moral standards: these standards act as a deterrent with regard to one's own transgressive conduct. However, these standards can be deactivated by so-called moral disengagement beliefs. This deactivation process makes it possible to adopt transgressive behaviour while avoiding one's own moral standards being altered, thus preventing the activation of self-sanctions. Moral disengagement, therefore, refers to social cognitive processes by which transgressive behaviour is transformed through a mechanism identified in psychology in such a way that it no longer has the negative properties that may deter the actor from adopting this behaviour. The following are examples of questionnaire items developed to operationalise and quantify moral disengagement mechanisms adopted by consumers of illicit drugs.[18]

- > In contrast to the damaging effects of alcohol and tobacco, the use of illicit drugs is not so damaging.
- It is not correct to condemn those who use illicit drugs in order to improve their physical performance, since many people do the same.

- The use of illicit drugs is one option to "maximise one's potential abilities".
- There is no reason to sanction those who use illicit drugs in order to improve their physical appearance; after all, they do not hurt anyone.
- Those who use illicit drugs in sport are not to be blamed, but those who expect too much from them should be blamed.
- > It is okay to use illicit drugs if this can help overcome one's own limitations.

The self-system and self-efficacy

The capacities described above work in concert: in particular the following abilities, forethought, self-regulation and self-reflection, are merged into the so-called self-system, which represents the core element of an individual's personality. As mentioned above, agentship of a human being is one key principle in the Social Cognitive Theory: see p. 33, "individuals are self-organising, proactive and self-regulating agents". Individual perceived self-efficacy (SE) is the most important mechanism of agentship in humans.

Individuals' incentive to act in a certain way or adhere to behavioural patterns in case of obstacles is their conviction that their behaviour will give rise to desired results: all other triggers inspiring and guiding behaviours are rooted in the conviction that we can bring forward effects by our own action. Perceived **self-efficacy** (**SE**) is therefore a crucial factor in the behaviour of human beings. Particularly, SE is trust in one's own abilities to set up and carry out the activities required to achieve objectives. Individuals who perceive themselves as being efficient expend more effort to obtain the outcomes they desire and persevere longer in their efforts when encountering challenges than others who perceive themselves to be less efficient.

The following are examples of questionnaire items developed to operationalise and quantify perception of self-efficacy as regards abstaining from consumption of illicit drugs.^[18]

- I am capable of avoiding using illicit substances before a competition even when I know I can get away with it.
- I am capable of avoiding using illicit substances in sport even when I feel down physically.
- I am capable of resisting the temptation to use illicit substances to improve my performance.
- > I am capable of resisting the temptation to use illicit substances in order to have a body that others would admire, even when no one would ever know.
- > I am capable of resisting the temptation to use illicit substances in order to have a great appearance.
- I am capable of avoiding using illicit substances in order to have my body look as I would like.

- > I am capable of avoiding using illicit substances to get results more quickly, even when no one would ever know.
- > I am capable of not using illicit substances, despite the pressure to do so from others.
- > I am capable of avoiding using illicit substances to improve my performance in the sport I practise, even though I know that it will not have side-effects.
- > I am capable of avoiding using illicit substances, even though most of those who practise my sport use them.

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This concert of knowledge, science and art devoted to children, adolescents and those who share the responsibility for empowering them for a healthy life, their teachers, was conducted in exemplary fashion by Mr Pavle Zelić, "Creative Director" by spirit, talent and conviction.

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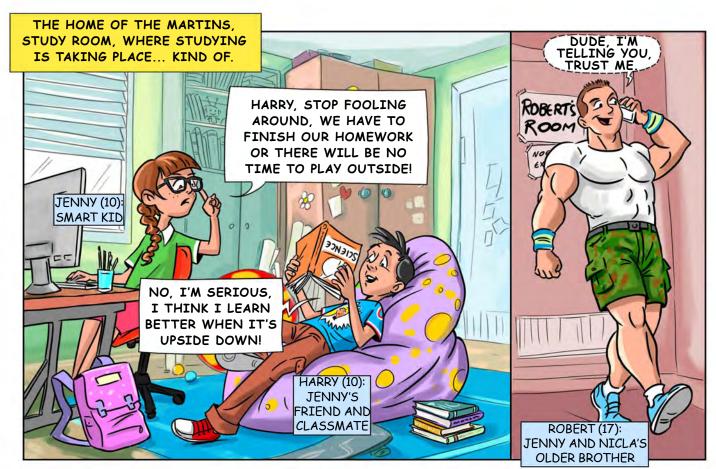
Appendix 1

Nicla's narrow escape

Interactive story for 8-11 year-old children

Concept: Domenico Di Giorgio Story: Luisa Salmaso Comic book script adaptation: Pavle Zelić

Art: Boris Nenezić





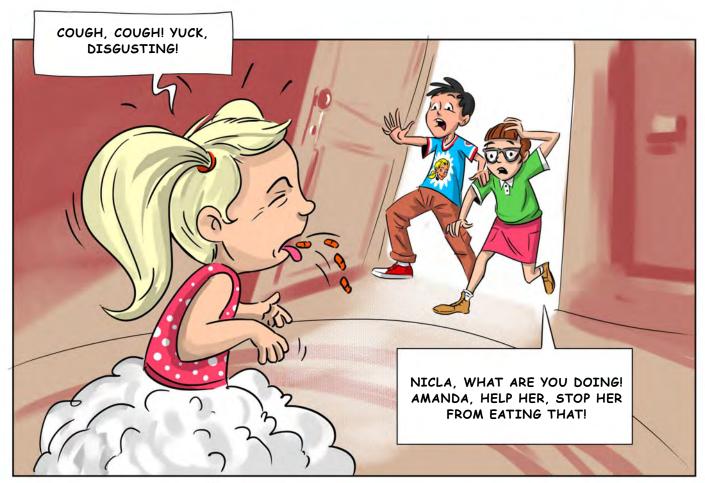




CLICK ON THE FOLLOWING LINKS TO CHOOSE WHICH WAY THE STORY GOES:

YOU WANT NICLA TO TASTE THE PILLS.

YOU WANT NICLA TO BRING THE PILLS TO HARRY AND JENNY, SAYING THAT "IT'S SNACK TIME".





LISTEN TO AMANDA AND GO STRAIGHT BACK TO WHAT THEY WERE DOING, FORGETTING ABOUT WHAT HAPPENED? AFTER ALL, NICLA SEEMS OK.

ASSUME THAT NICLA MAY HAVE SWALLOWED SOME OF THOSE STRANGE PILLS AND WARN THE PARENTS.

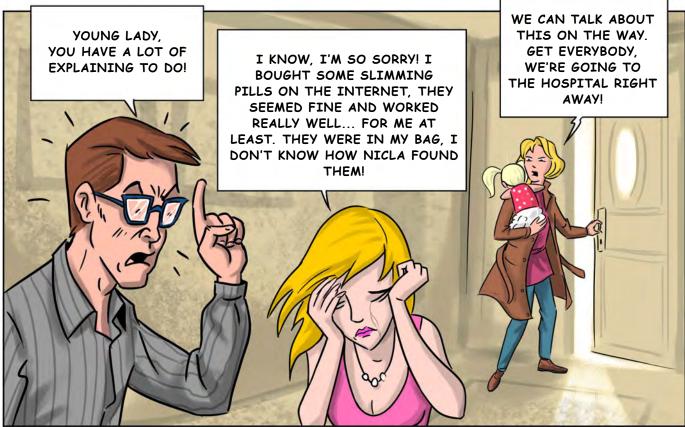


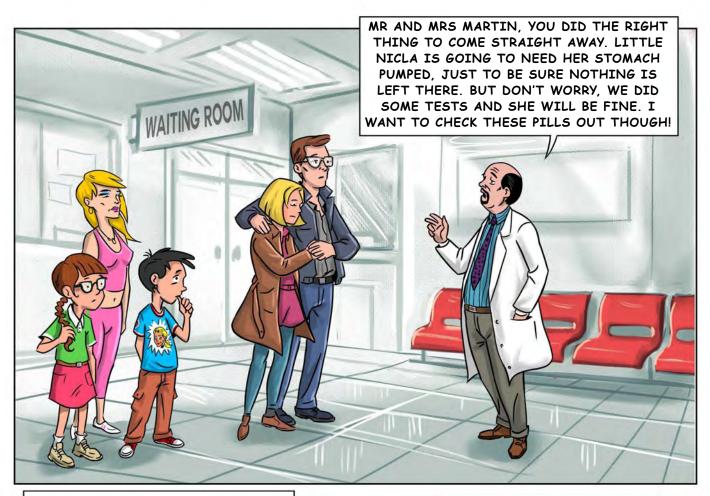


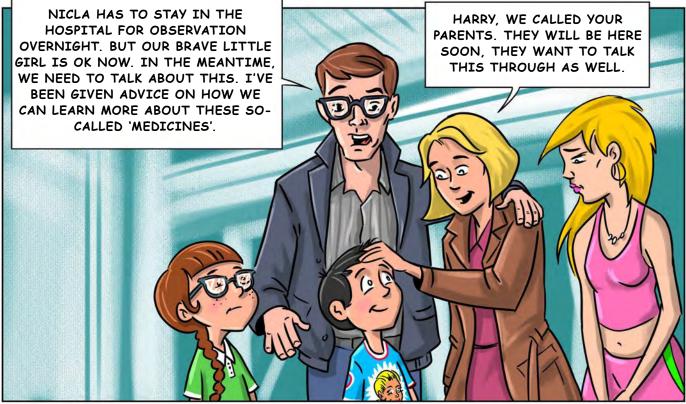
PRETEND TO TASTE THE PILLS TO SATISFY LITTLE NICLA, AND THEN SEE HER OUT OF THE ROOM TO PLAY BY HERSELF AGAIN.

ASK NICLA WHERE SHE GOT THESE STRANGE-COLOURED PILLS FROM.



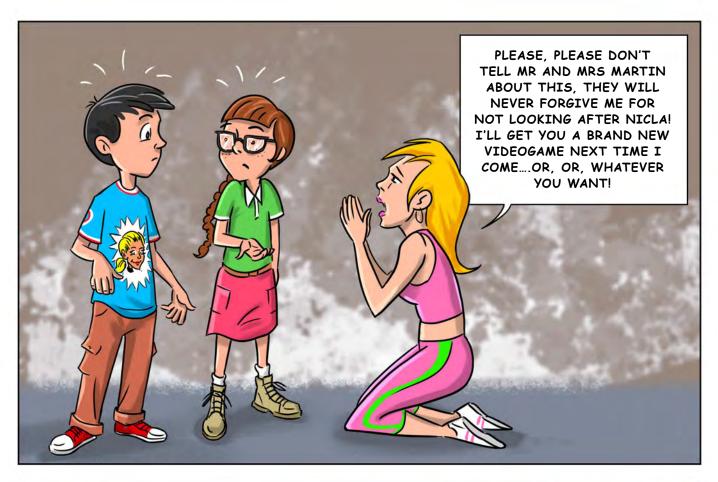






PARTICIPATE IN THE DISCUSSION WITH THE FAMILY.

SAY TO THE GROWN-UPS THAT THEY ARE TOO YOUNG AND THAT THEY DO NOT WANT TO TALK ABOUT IT ANY MORE, PROMISING FROM NOW ON THAT THEY WILL REPORT SUCH THINGS STRAIGHT AWAY TO THEIR PARENTS AND NOT LISTEN TO BABYSITTERS OR LITTLE SISTERS.





LISTEN TO AMANDA AND GO STRAIGHT BACK TO WHAT THEY WERE DOING, PRETENDING THAT EVERYTHING IS OK AND JUST BE HAPPY TO GET A NEW VIDEOGAME OR SOMETHING...

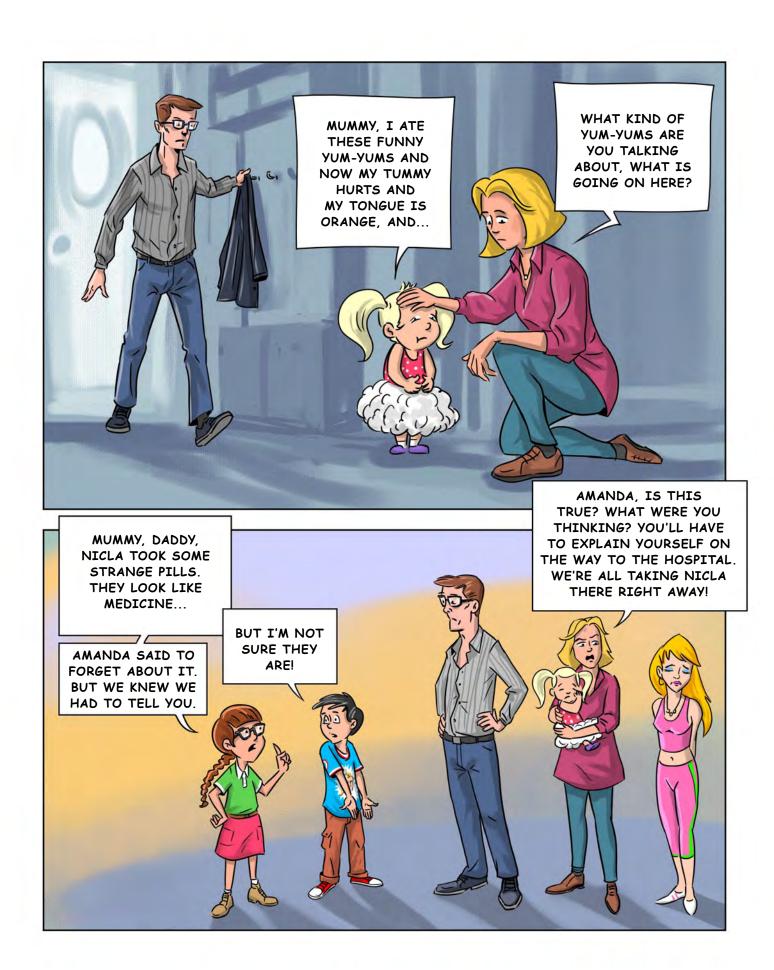
NOT BE CONVINCED BY AMANDA'S INSISTENCE THAT EVERYTHING IS OK BUT, INSTEAD, WARN THE PARENTS IN CASE NICLA SWALLOWED SOME OF THOSE STRANGE PILLS.

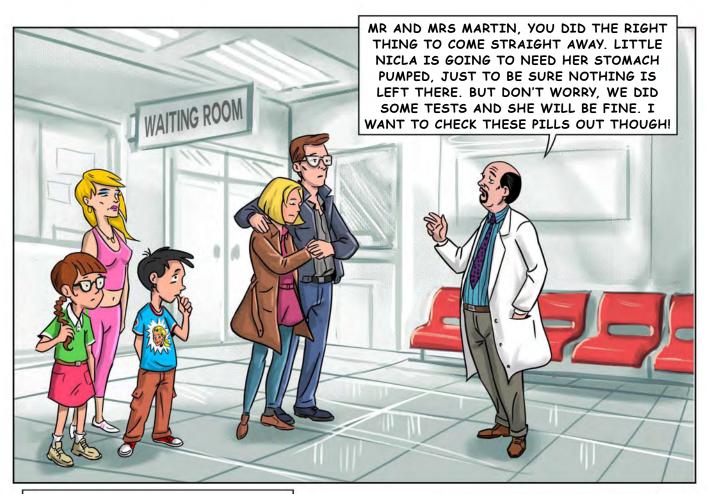


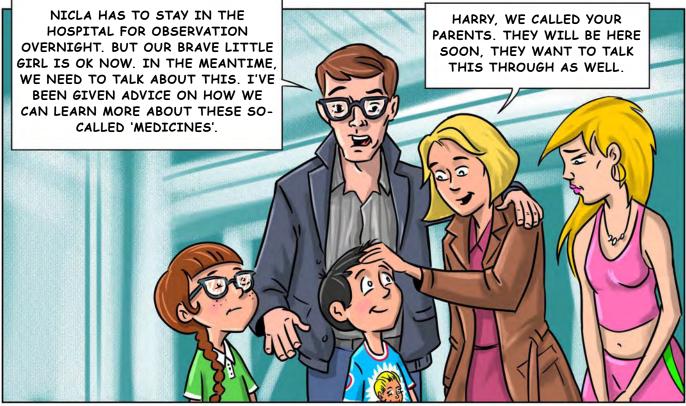


GO TO THE BABYSITTER AND TELL HER WHAT HAPPENED.

GO BACK TO WHAT THEY WERE DOING BEFORE AND TELL NICLA TO STAY OUT OF ROBERT'S ROOM AND NEVER TO TAKE THINGS THAT ARE NOT HERS AGAIN.

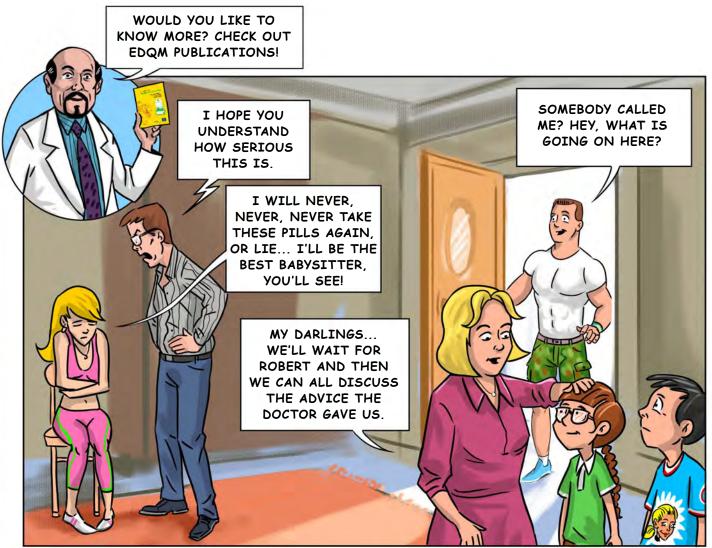


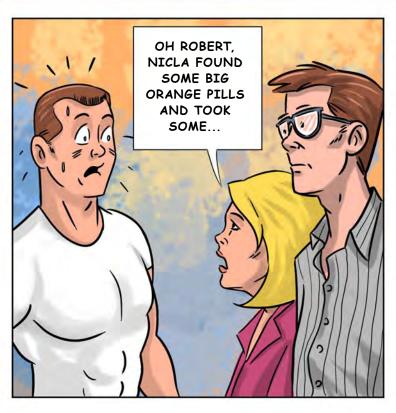




PARTICIPATE IN THE DISCUSSION WITH THE FAMILY.

SAY TO THE GROWN UPS THAT THEY ARE TOO YOUNG AND THAT THEY DO NOT WANT TO TALK ABOUT IT ANY MORE, PROMISING FROM NOW ON THAT THEY WILL REPORT SUCH THINGS STRAIGHT AWAY TO THEIR PARENTS AND NOT LISTEN TO BABYSITTERS OR LITTLE SISTERS.

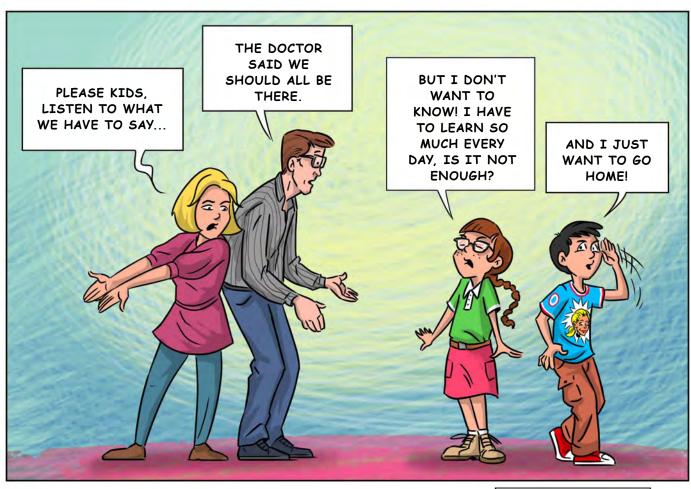


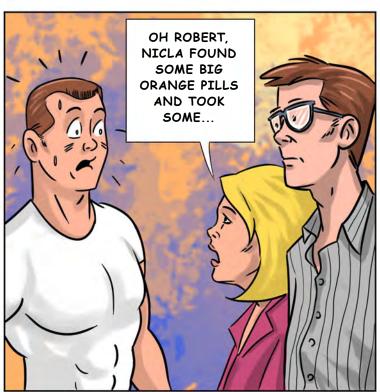




WHAT SHOULD THE PARENTS DO?

ASK ROBERT ABOUT THE PILLS THAT NICLA HAS SWALLOWED. START LECTURING ROBERT RIGHT AWAY FOR HIS MISTAKE.

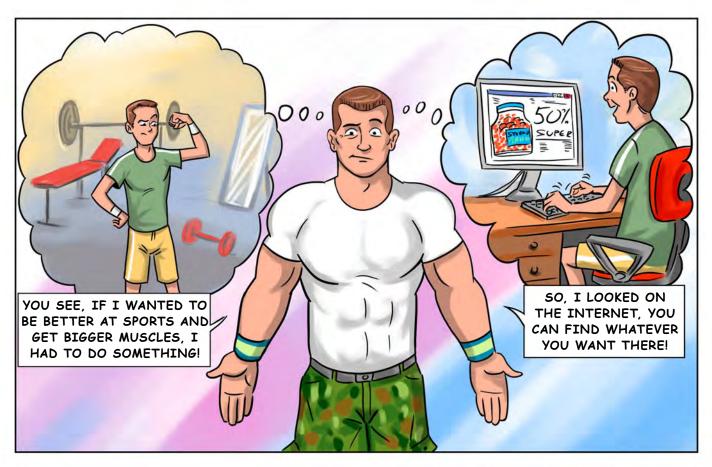


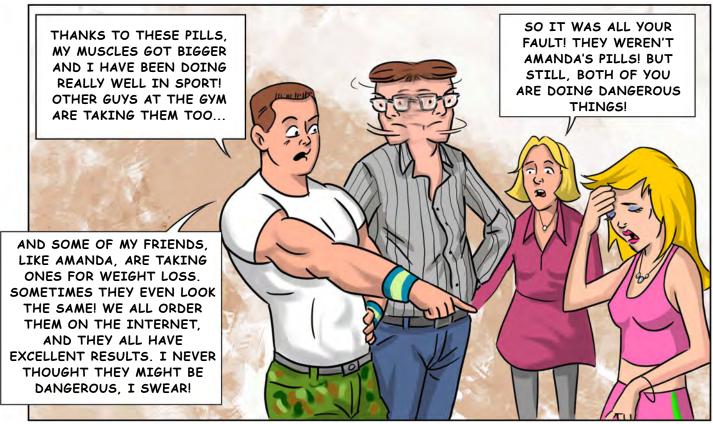




WHAT SHOULD THE PARENTS DO?

ASK ROBERT ABOUT THE PILLS THAT NICLA HAS SWALLOWED. START LECTURING ROBERT RIGHT AWAY FOR HIS MISTAKE.

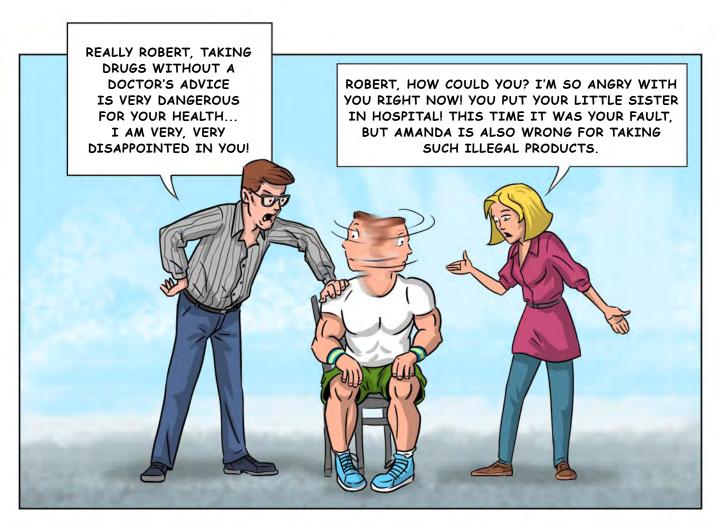




WHAT SHOULD THEY DO?

THESE FLASHY WEBSITES ARE OBVIOUSLY NOT LEGAL E-PHARMACIES AND DON'T SELL LEGAL MEDI-CINES. ROBERT SHOULD BE ASKED ABOUT HIS COACH'S OPINION ON THIS.

JENNY AND HARRY SHOULD ASK THE GROWN-UPS ABOUT THESE PILLS AND HOW ROBERT COULD BUY THEM FROM A SUSPICIOUS WEBSITE.





WHAT SHOULD THEY DO?

LOOK AT THE INFORMATION THE DOCTOR GAVE THEM.

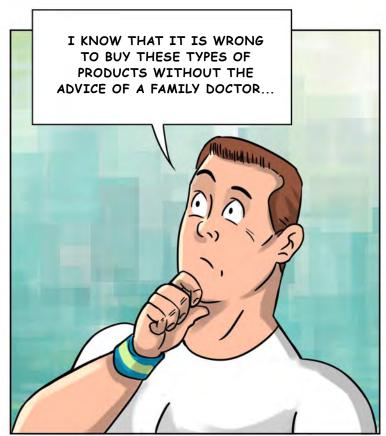
ROBERT SHOULD BE ASKED WHY HE HID THE PILLS UNDER HIS BED IF HE THOUGHT THAT IT WAS OK TO HAVE THEM.



WHAT SHOULD THEY DO?

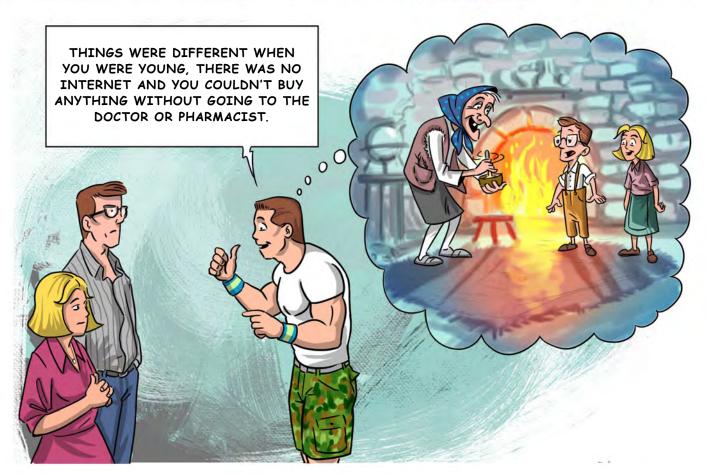
ROBERT SHOULD BE ASKED WHY HE HID THE PILLS UNDER HIS BED IF HE THOUGHT IT WAS OK TO HAVE THEM.

THE PARENTS SHOULD START LECTURING ROBERT RIGHT AWAY FOR HIS MISTAKE.



BUT YOU GROWN-UPS
AREN'T TRYING TO BECOME
CHAMPIONS IN A SPORT
AND YOU DON'T NEED TO
LOSE WEIGHT, SO YOU CAN'T
UNDERSTAND HOW AMANDA
AND I FEEL.





WHAT DO YOU THINK?

ROBERT IS MAKING A BIG MISTAKE BECAUSE TRUE SPORTS PEOPLE SHOULD NOT TAKE DRUGS, AND BECAUSE IT IS BETTER TO EAT HEALTHILY AND WORK OUT MORE RATHER THAN TO TAKE THESE TYPES OF DANGEROUS PILLS.

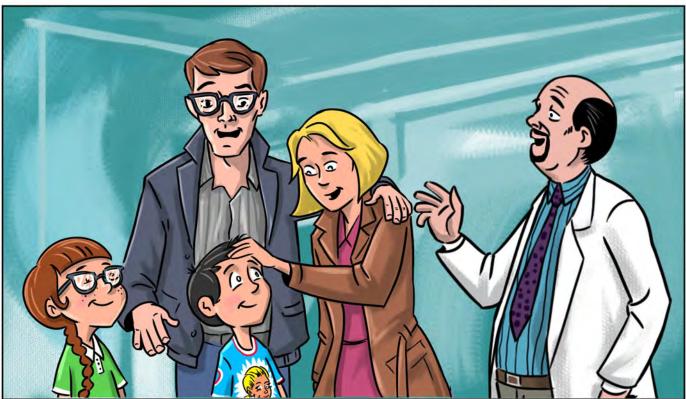
THIS PROBLEM SHOULD BE DISCUSSED WITH PARENTS, SINCE THEY CAN EXPLAIN THE DANGERS BETTER AND BECAUSE KIDS DO NOT KNOW ENOUGH ABOUT THESE THINGS.





YOU ARE A SMART KID. YOU KNOW WHAT TO DO TO STAY HEALTHY. BUT, IF YOU WANT TO KNOW MORE ABOUT THE DANGERS OF MEDICINES BOUGHT ON THE INTERNET WITHOUT A DOCTOR'S ADVICE, GO TO THE NEXT PAGE.



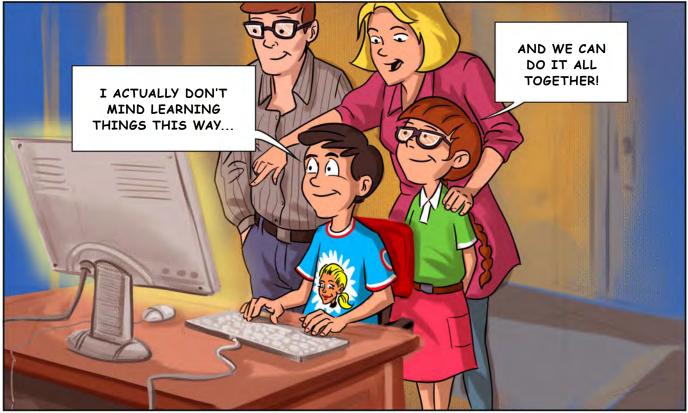


BE CAREFUL! ILLEGAL MEDICINES «DRESS UP» AS REAL ONES USING FALSE LABELS, BUT THEY ARE BAD AND DANGEROUS! THEY ARE MANUFACTURED WITHOUT CONTROL IN HORRIBLE CONDITIONS, AND BY USING TOXIC SUBSTANCES!

HOW TO MAKE A DIFFERENCE BETWEEN REAL MEDICINES IN YOUR HOME AND THESE FAKE DRUGS? EASY! ONLY TRUST PROFESSIONALS, DOCTORS AND PHARMACISTS ABOUT YOUR HEALTH AND WHAT TO TAKE. AND OF COURSE, YOUR PARENTS!

TO LEARN EVEN MORE GO TO NEXT PAGE!





NOW YOU UNDERSTAND WHY IT CAN BE VERY DANGEROUS FOR YOUR HEALTH TO USE MEDICINAL PRODUCTS WITHOUT A DOCTOR'S ADVICE OR WITHOUT TALKING TO A PHARMACIST. IF YOU WANT TO KNOW MORE, EXPLORE EUROPEAN DIRECTORATE FOR THE QUALITY OF MEDICINES AND HEALTHCARE - EDQM HOME PAGE TOGETHER WITH YOUR TEACHERS AND YOUR PARENTS: HTTP://WWW.EDQM.EU/

Appendix 2

Teen trials

Interactive story for 12-15 year-old adolescents

Concept: Domenico Di Giorgio Story: Luisa Salmaso Comic book script adaptation: Pavle Zelić Art: Boris Nenezić

ARE YOU READY, PLAYERS? YOU ARE ABOUT TO BEGIN A JOURNEY OF DISCOVERY IN A STORY-GAME. YOU HAVE THE OPTION OF CHOOSING THE PARTICULAR PAIR OF CHARACTERS THAT YOU WILL GUIDE THROUGHOUT THE COURSE OF THE STORY.

READ THE PROFILES AND CHOOSE THE PAIR THAT SEEMS MOST INTERESTING TO YOU.
REMEMBER YOU CAN ALWAYS START AGAIN BY CHANGING THE CHARACTERS DURING THE
COURSE OF THE STORIES.

IF YOU ARE READING THE STORY ALONE, CHOOSE THE CHARACTERS YOURSELF. IF YOU ARE READING THE STORY IN CLASS OR AS A GROUP, DISCUSS THE OPTIONS FIRST AND THEN POSSIBLY PROCEED WITH A MAJORITY VOTE.

A) MODEL 'ATHLETIC TEEN':

STRENGTH AND ATHLETICISM - 15; GENERAL INTELLIGENCE -6; CHARM - 8.





CHOOSE THE CHARACTERS AND THE STORY: IS THIS YOUR CHOICE?

B) MODEL 'TEEN NERD':

STRENGTH AND ATHLETICISM - 3; GENERAL INTELLIGENCE -15; CHARM - 3.





IS THIS YOUR CHOICE?

YES

NO

C) MODEL 'GLAM TEEN':

STRENGTH AND ATHLETICISM - 5; GENERAL INTELLIGENCE -6; CHARM - 15.

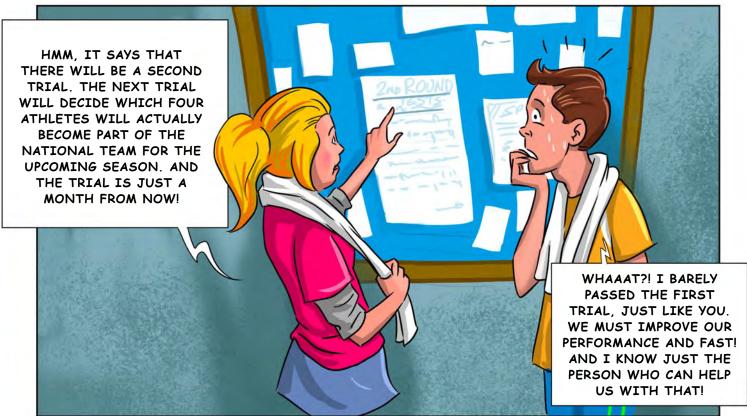


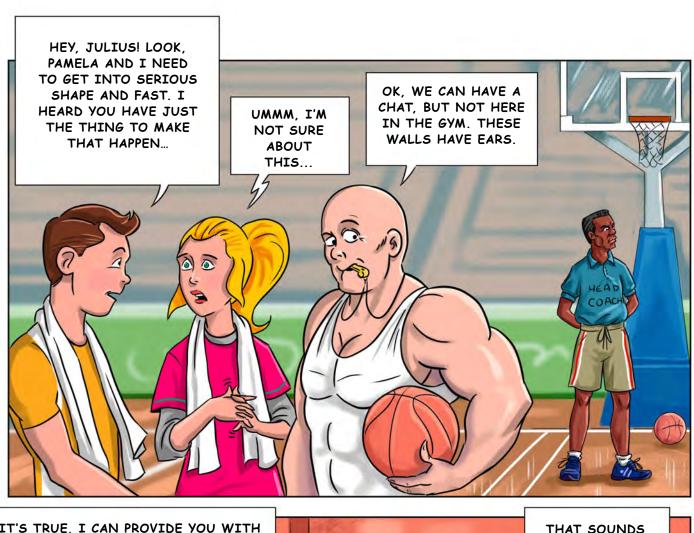


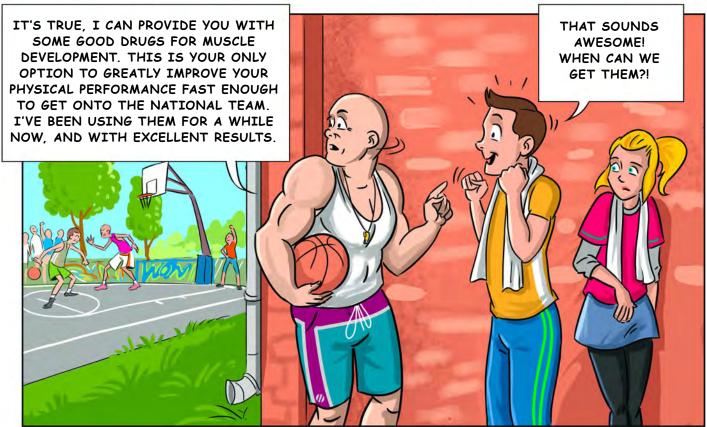
IS THIS YOUR CHOICE?

YES





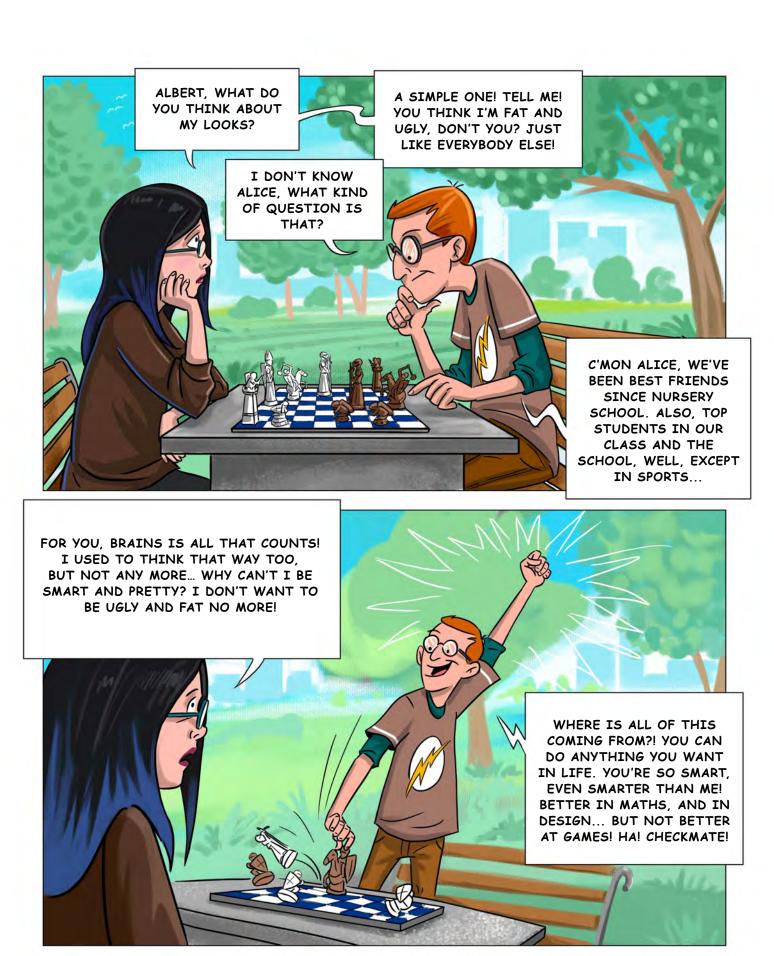


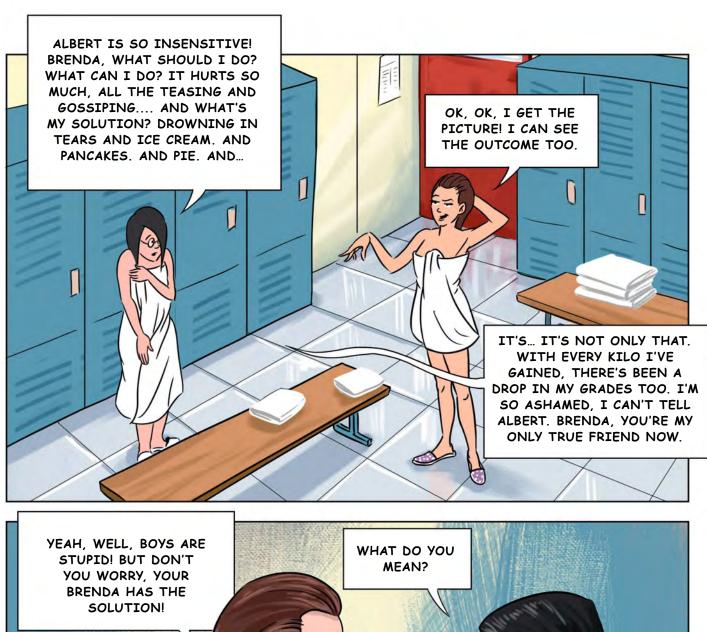


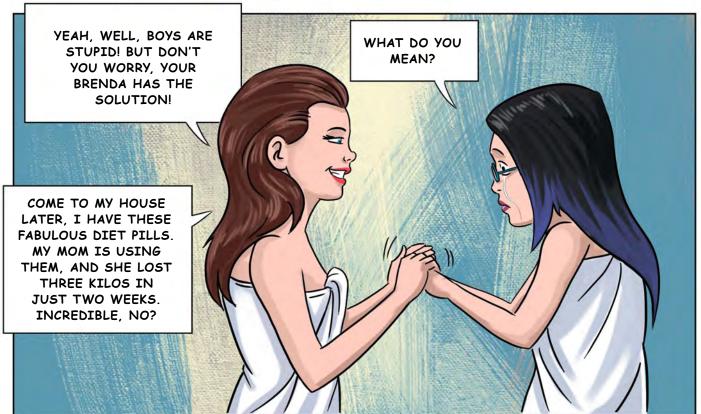
WHAT SHOULD JACK AND PAMELA DECIDE?

ACCEPT THE OFFER.

ASK WHY IT IS BETTER TO USE THESE PRODUCTS.

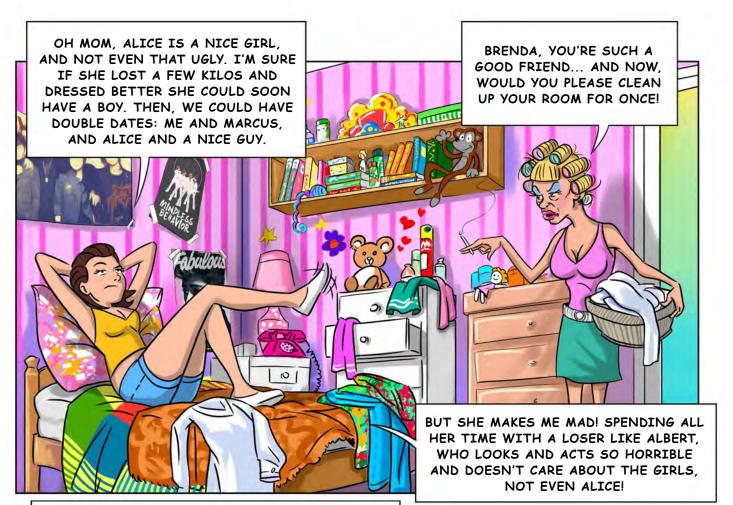


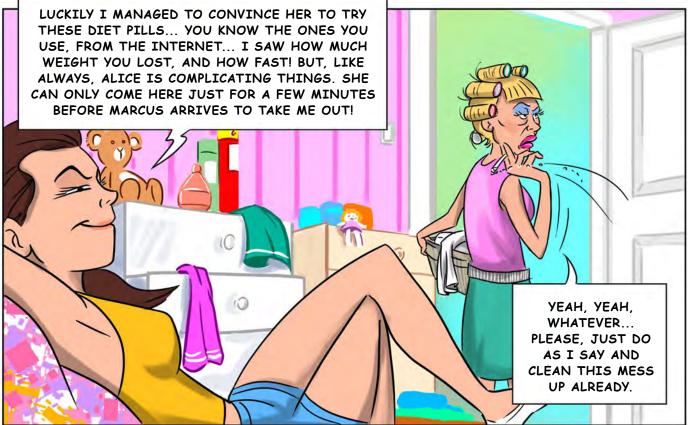




WHAT SHOULD ALICE DECIDE?

ASK ALBERT TO TAKE HER TO BRENDA'S HOME, EVEN THOUGH SHE IS MAD AT HIM. NOT TO SAY ANYTHING TO ALBERT AND GO ALONE TO BRENDA'S PLACE.

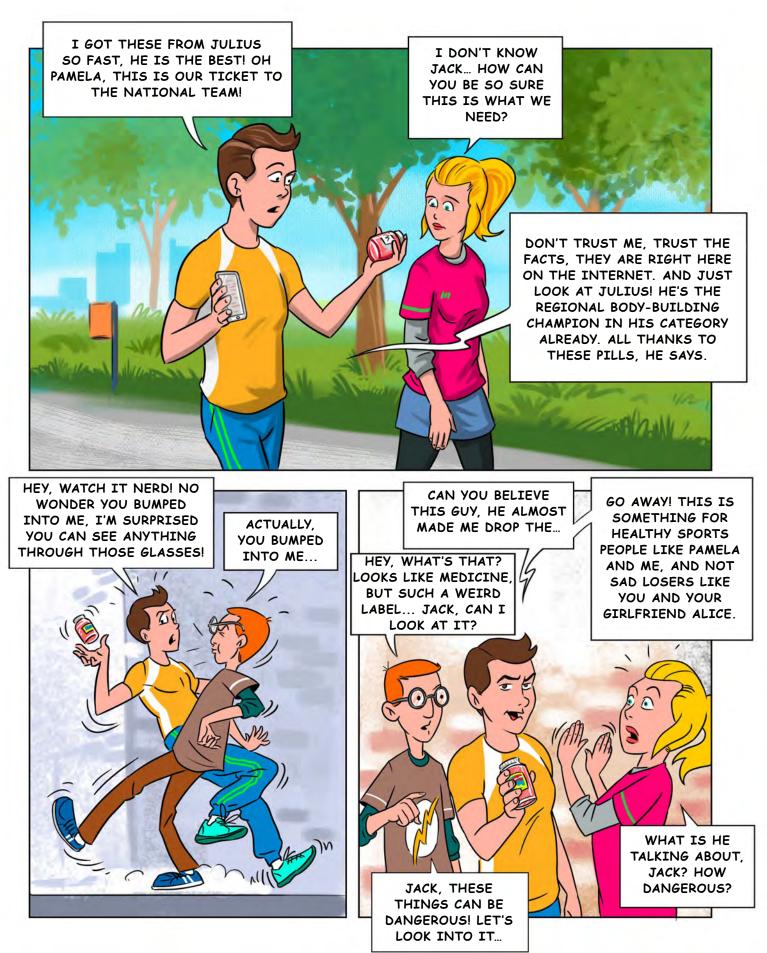




WHAT SHOULD BRENDA DO?

KICK ALICE OUT RIGHT AWAY SO SHE CAN BE ALONE WITH MARCUS. HER MOM DOESN'T LISTEN OR CARE ABOUT HER, SO WHY SHOULD SHE CARE ABOUT ALICE?

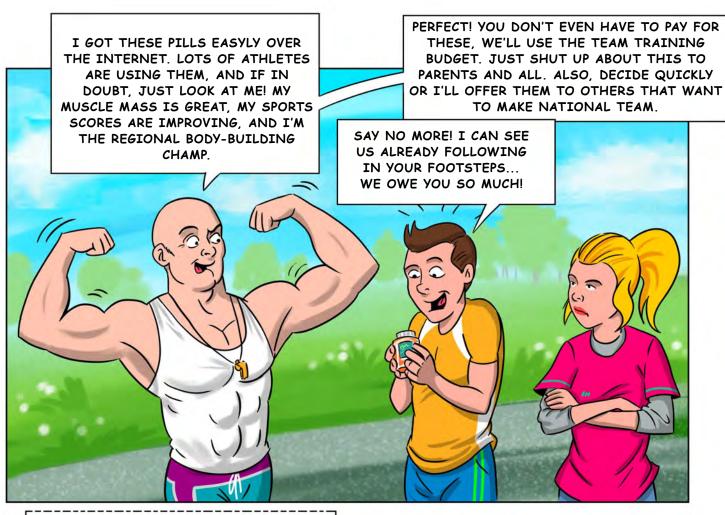
KICK MARCUS OUT INSTEAD OF ALICE, GIVING UP ON PERHAPS THE MOST IMPORTANT WALK WITH HIM EVER, THE ONE THAT COULD LEAD TO A KISS. EVEN THOUGH HER MOTHER IS A BAD EXAMPLE IN EVERYTHING, HER SECRET SUPER-STRONG DIET PILLS MIGHT BE USED FOR HELPING ALICE, NO MATTER WHAT THE COST.

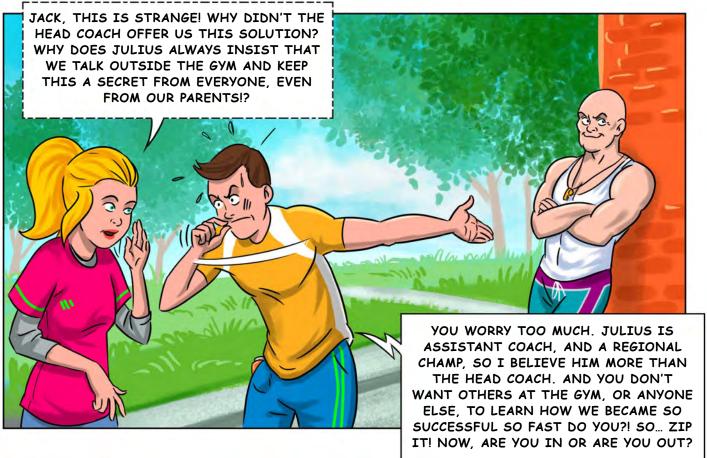


WHAT SHOULD JACK AND PAMELA DO?

DECIDE NOT TO SAY ANYTHING TO ALBERT AND NOT LET HIM INTO SOMETHING THAT IS NOT HIS BUSINESS ANYWAY.

ALLOW HIM AT LEAST A COUPLE OF MINUTES OF THEIR PRECIOUS TIME, SINCE HE IS INSISTING SO MUCH.

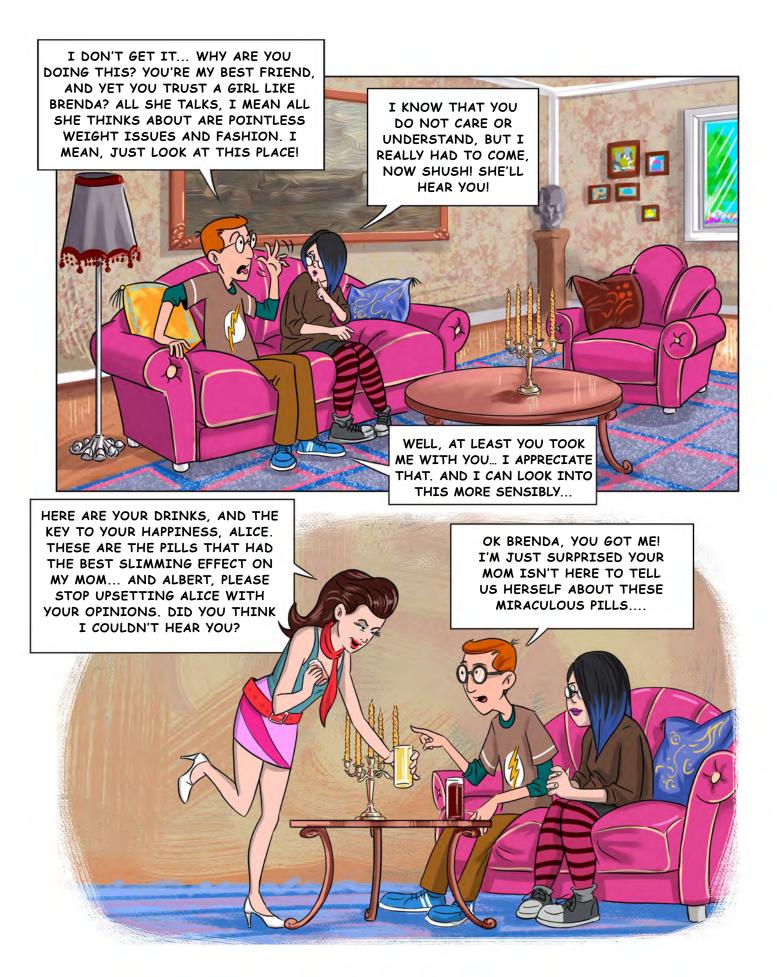




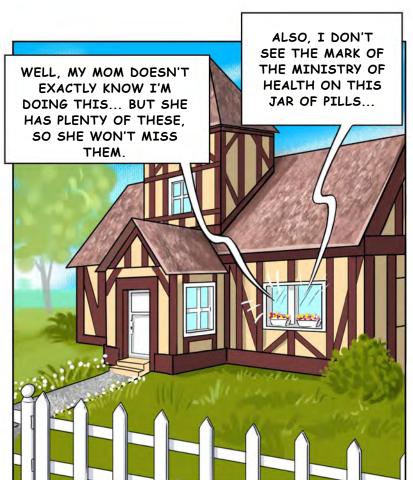
WHAT SHOULD JACK AND PAMELA DO?

ACCEPT THE OFFER, DESPITE PAMELA'S DOUBTS.

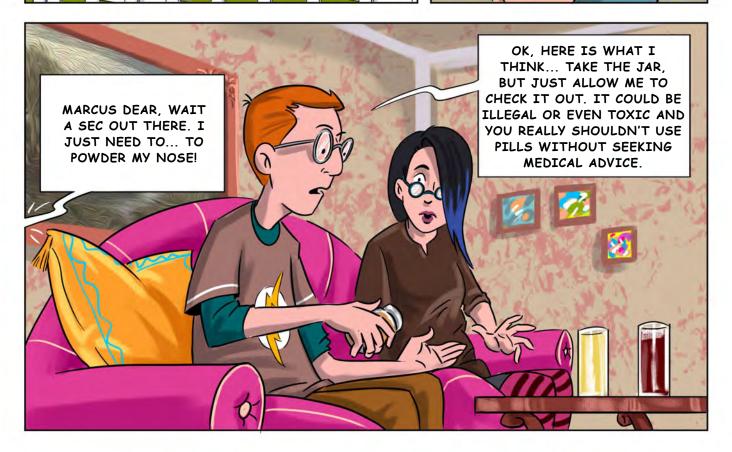
TAKE TIME TO INFORM THEMSELVES BETTER BEFORE THEY ACCEPT THE OFFER.



IN ORDER TO PROCEED, GO TO NEXT PAGE.



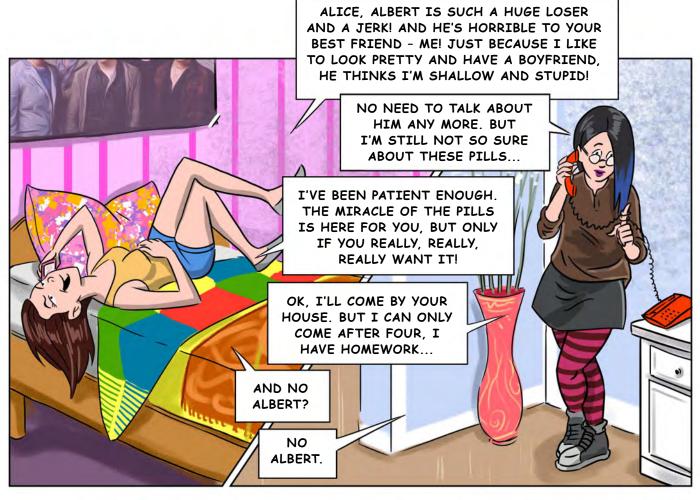


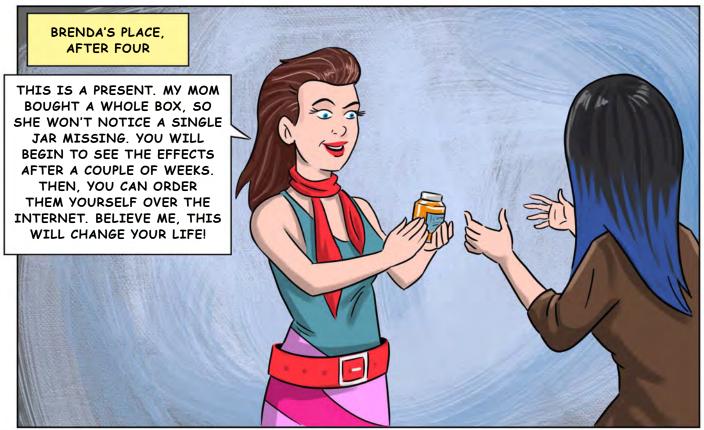


WHAT SHOULD ALICE DO?

BELIEVE HER INSTINCT THAT ALBERT DECIDED NOT TO MAKE HER HIS GIRLFRIEND, AND THEREFORE SAY TO ALBERT TO LEAVE NOW BECAUSE "HE IS NOT A TRUE FRIEND, WHO WISHES HER WELL".

BEGIN TO THINK THAT ACTUALLY ALBERT IS RIGHT, AND THOSE PILLS ARE SUSPICIOUS, SO IT WOULD BE BETTER TO TRY TO SEEK FURTHER INFORMATION, AND ALSO HELP FROM ALBERT AND HIS PARENTS.

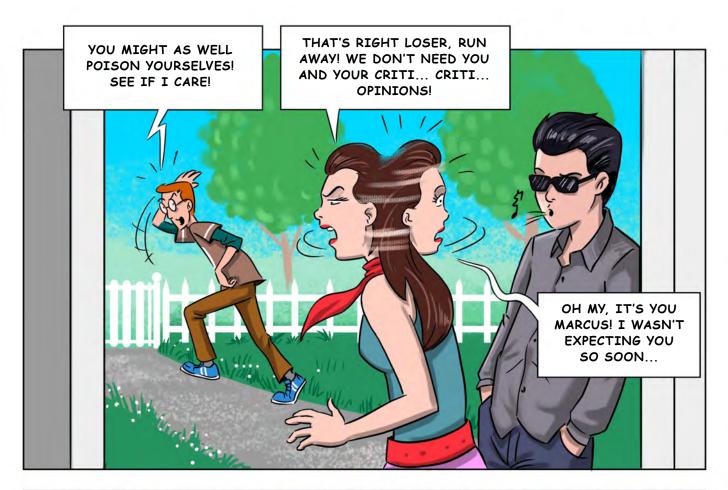


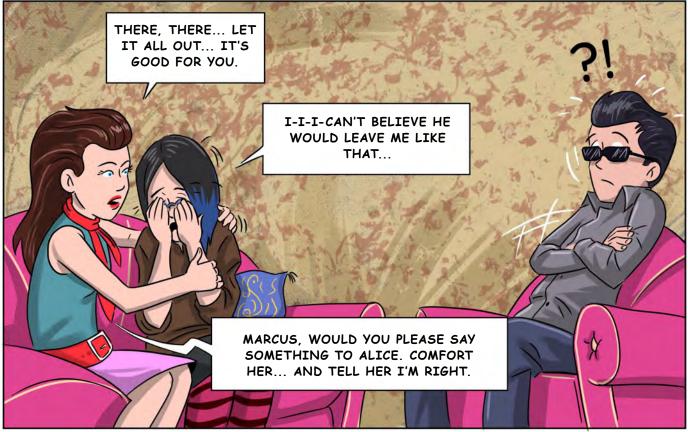


WHAT SHOULD ALICE DO?

DECIDE TO ACCEPT THE PILLS AND THANK HER FRIEND, AND GO HOME FOR NOW.

BEGIN TO THINK THAT THOSE PILLS ARE SUSPICIOUS, AND IT WOULD BE BETTER TO TRY TO SEEK FURTHER INFORMATION, AND ALSO MAYBE HELP FROM HER FRIEND ALBERT AND HIS PARENTS.

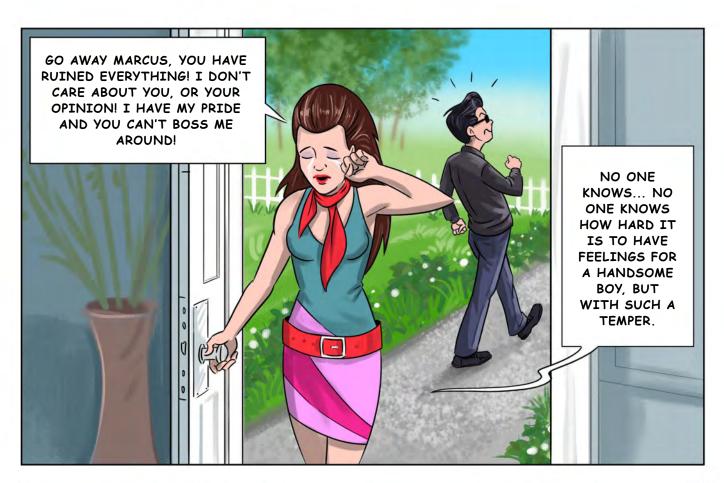




WHAT SHOULD MARCUS DO?

CONFIRM THE GENEROSITY OF BRENDA'S PROPOSALS, AND COMPLIMENT ALICE FOR HER FUTURE APPEARANCE, CONVINCING HER TO ACCEPT THE PILLS, AND THEN LEAVE HIM AND BRENDA FOR THEIR WALK IN THE PARK.

SAY TO BRENDA SHE IS A GOOSE, AND THAT SHE WOULD HAVE DONE BETTER IF SHE LET ALBERT STAY SO THEY WOULD ALL UNDERSTAND WHAT HE HAD TO SAY.

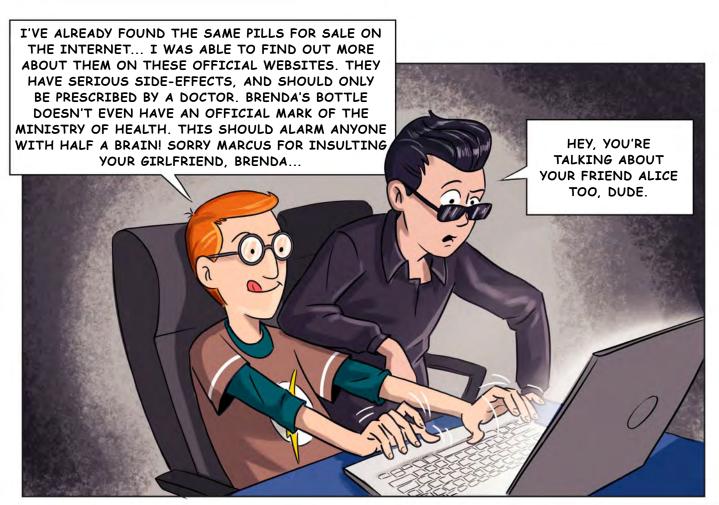


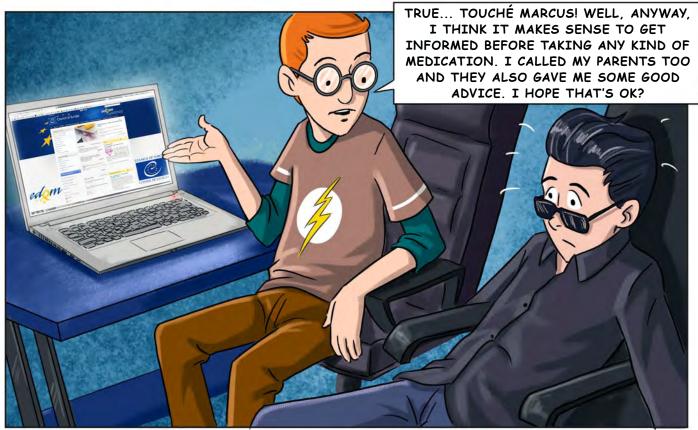


WHAT SHOULD MARCUS DO?

TRY TO FIND ALBERT.

GET BACK TO BRENDA, APOLOGISING AND TELLING HER HE REACTED IMPULSIVELY, AND SAYING THIS SITUATION DOESN'T CONCERN HIM.

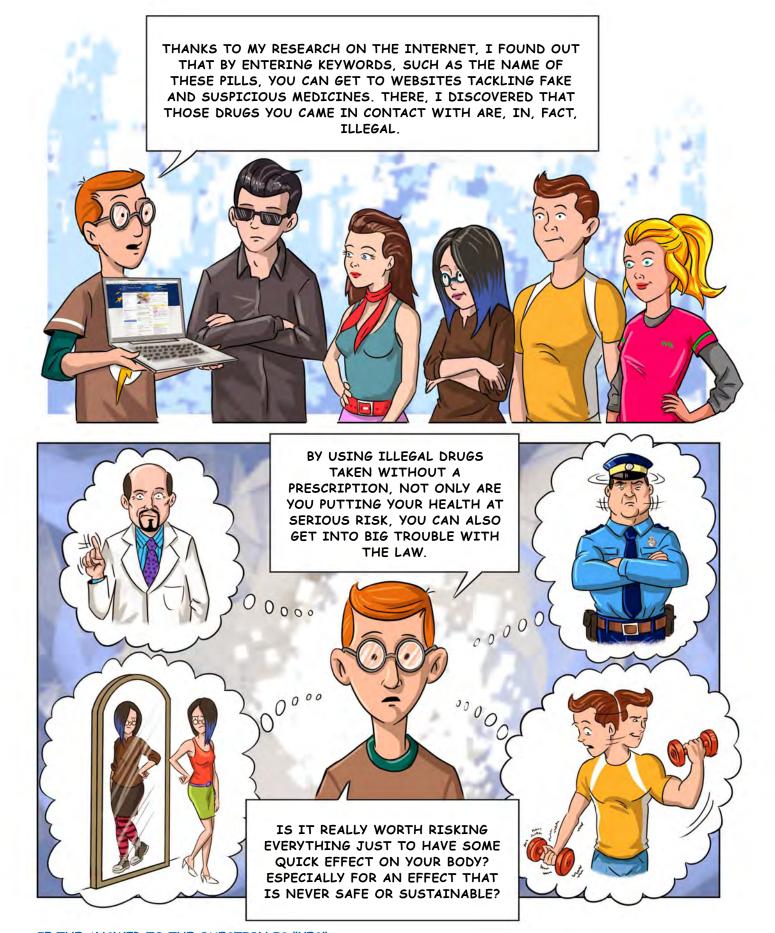




WHAT SHOULD MARCUS DO?

CONTINUE TO SUPPORT ALBERT, AND HEAR ALL ABOUT HIS RESEARCH AND ASKING ADULTS FOR ADDITIONAL INFORMATION.

DECIDE ALBERT HAS GONE TOO FAR IN TELLING HIS PARENTS AND THAT NO BIG HARM COULD COME FROM THESE PILLS.

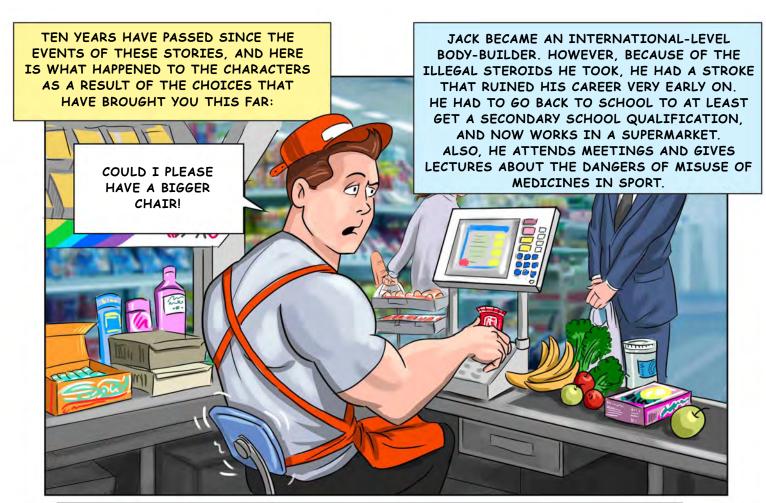


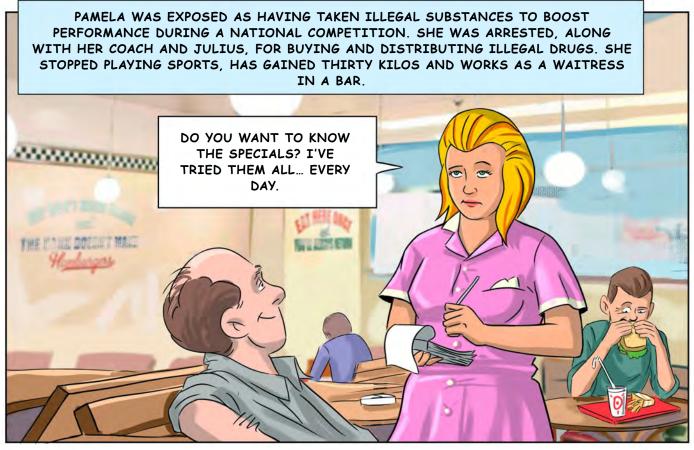
IF THE ANSWER TO THE QUESTION IS "YES".

IF, HOWEVER, YOU ARE INTERESTED IN UNDERSTANDING HEALTH AND LEGAL PROBLEMS, GO TO THE EUROPEAN DIRECTORATE FOR THE QUALITY OF MEDICINES & HEALTHCARE (EDQM) HOME PAGE: HTTP://WWW.EDQM.EU/

IMPORTANT!!! DISCUSS WITH PARENTS, TEACHERS AND YOUR SPORTS COACHES ABOUT SUCH SERIOUS MEDICINES AND PRODUCTS.

TALK, CONFRONT, READ: THOSE WHO THINK WITH THEIR HEADS ARE FREE, INFORMED AND AWARE. HAVE A SUCCESSFUL LIFE!





SEEING HOW RAPIDLY SHE LOST WEIGHT AFTER TAKING SLIMMING PILLS FOR TWO WEEKS, ALICE ORDERED MORE VIA THE INTERNET, AND WITHOUT TELLING HER PARENTS. IN TWO MONTHS SHE HAD LOST MORE THAN TEN KILOS, AND HER PARENTS FINALLY TOOK HER TO HOSPITAL. THE DRUGS SHE HAD BEEN TAKING CONTAINED TOXIC SUBSTANCES AND THEY HAD BEEN PRODUCED IN A COUNTRY WITHOUT PROPER SAFETY CONTROLS. THEY CAUSED HER SERIOUS LIVER AND KIDNEY DAMAGE. SHE TOOK A LOT OF TIME TO RECOVER AND IS STILL OFTEN SICK.





BRENDA'S MOTHER WAS ARRESTED FOR THE PURCHASE OF ILLEGAL DRUGS VIA THE INTERNET. SHE HAD TO SELL THE HOUSE AND REDUCE THE STANDARD OF LIVING FOR BOTH HER AND BRENDA. BRENDA HERSELF HAS NOT FINISHED SECONDARY SCHOOL AND NOW WORKS AS A BEAUTICIAN.

YES, YES, YES, I KNOW... I KNOW! IT WAS A MISTAKE, BUT WE CAN FIX THIS... OK, THEN I WILL FIX IT MYSELF. I DON'T NEED ANYBODY! ALL YOU JERKS HAVE JUST BEEN HOLDING ME BACK!



MARCUS QUICKLY BROKE UP WITH BRENDA.
HE GRADUATED IN LAW AND JOINED A
FAMOUS POLITICAL PARTY, BUT HE WAS SOON
CHARGED FOR CORRUPTION. HE SOMETIMES
REMEMBERS HIS YOUTH AND WONDERS IF HE
EVER LEARNT THE RIGHT VALUES...

www.edqm.eu

The Council of Europe is the continent's leading human rights organisation. It comprises 47 member states, 28 of which are members of the European Union. The European Directorate for the Quality of Medicines & HealthCare (EDQM) is a directorate of the Council of Europe. Its mission is to contribute to the basic human right of access to good quality medicines and healthcare and to promote and protect public health.

Open minds, free minds: no easy prey for counterfeit medicines aims to inform, provide a concept for development and use of interactive storytelling for training and education at school: using a cartoon format, teachers can discuss risks and encourage behaviour that avoids known routes for exposure to counterfeit and similarly dangerous medical products. The main risk areas covered are mental and physical capacity-enhancers, and slimming products or medicines from illegal distribution channels. Target audiences include teachers, trainers, and social workers who will address this topic directly with children/adolescents. The cartoons are developed by professionals to enable children and adolescents to have fun and learn relevant preventative

behaviours by gaming.



