

The SmokeFreeGreece initiative

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1. Background and context

Tobacco use and experimentation usually commences during adolescence (Hodder R. K., 2011; U.S. Department of Health and Human Services, 2014) and it is associated with future smoking (Hodder R. K., 2011) related to high dependence in nicotine, difficulty in quitting and significant health costs in adulthood (Hodder R. K., 2011). Furthermore, youth have been shown to underestimate the addictive nature of tobacco products and they may know less than adults about the health effects of smoking. Nearly 9 out of 10 smokers first tried smoking by the age of 18 (U.S. Department of Health and Human Services, 2014), while 99% of smokers have already started smoking by the age of 26. **This constitutes a unique window of risk during which preventative actions are needed. This is why scientific evidence has concluded that prevention programs for tobacco should focus on the 12-25 age group** (American Lung Association, 2011; U.S. Department of Health and Human Services, 2012).

Schools potentially provide the best environment for interventions to take place due to the fact that students spend most of their time, and interact with their peers and teachers, there (Hodder R. K., 2011; Patton G.C., 2000). School-based interventions that promote well-being, improve children’s health, provide information and focus on teaching about health and the development of skills, are more effective (Stewart-Brown S, 2006). Moreover, school interventions can be delivered to all children since they take place in the school environment and they match the educational character of that environment (Thomas R.E., 2013).

Greece is an EU country that has not been left out of this addictive maelstrom and had some of the most detrimental statistics in tobacco use and prevalence. Recent epidemiological evidence has noted that 39% of Greek men and 26% of Greek women (15+ years old) smoke daily, while 27% of young adolescents (15 – 24 years old) smoke daily or occasionally (ELSTAT, 2014). An additional area of concern is the prevalence of

exposure to second hand smoke both at home, but also in public places – including school grounds, where the smoke-free legislation is poorly enforced. Indeed, recent research has indicated that 37% of Greek students are exposed to second hand smoking at school (Lappas A, 2015). Due to the fact that children spend most of their time at school, they are more often exposed to smoke there than at home (Lappas A, 2015). Therefore, school-based interventions in Greece which are rooted in socio-cognitive theories, could provide knowledge and skills and change attitudes and misconceptions (WHO, 2018). For these reasons prevention and smoking interventions are critical.

Health professionals have been using theories to develop effective programs and interventions which promote healthy behavior and self-efficacy; both playing a key role in providing the necessary confidence to an adolescent so as not to engage in unhealthy behaviors like smoking (Gmitro Prieto, 2015). The philosophy of our intervention is deeply rooted in three key research method theories: social learning theory (Bandura, 1977), the theory of planned behavior (Ajzen, 1991) and problem behavior theory (Jessor, 1987).

According to Social Learning Theory, children observe people around them behaving in various ways. These people include parents, siblings, teachers and friends and they act as role models for them (Bandura, 1977). For this reason, children may be more likely to smoke by observing and imitating their role models' behavior since their own individual behavior is affected by the knowledge and attitudes of their role models (Bandura, 1977). At the same time, the Theory of Planned Behavior has been successfully used to explain a wide range of unhealthy behaviors such as smoking, drinking and substance use (McEachan R.C. M., 2011). This theory originated from Bandura's concept of self-efficacy. The term refers to an individual's belief in his/ her innate ability to achieve goals (Bandura, 1982). The Theory of Planned Behavior (Ajzen, 1991) states that there are four different pathways to behavioral intention which lead to actual behavior. The first pathway is attitudes, meaning the cognitive beliefs of a person. The second is subjective norms which refers to whether society approves or disapproves of a behavior. Subjective norms are affected by the beliefs of a person which, in turn, are influenced by the beliefs or the judgment of significant others like parents, teachers and peers. The third pathway is self-identify and it refers to the conflict between self and social identity. The fourth is the perceived behavior, indicating a person's perception on the ease or difficulty of adopting a new behavior (Ajzen, 1991). On the other hand, Problem Behavior Theory describes that all behavior is a result of three independent but interrelated systems. The first is personality which describes the values, expectations and attitudes of a person (Jessor, 1987). For example, what a teenager knows about smoking and its health effects. The second system is the environment which includes a person's closest social influences such as friends, family and social circle. Teachers and peers smoking on school grounds is significantly associated with smoking in young age (Jessor, 1987; Lappas A, 2015). The third is the behavior which includes both problematic and non-problematic behaviors that contrast each other (Jessor, 1987). For example, smoking in young age is a problematic behavior. Therefore, each of the three systems includes variables that either stimulate the occurrence of a problematic behavior or protect a person from engaging in one (Jessor, 1987).

These three approaches aim to influence the beliefs, attitudes, intentions and the norms of youth on smoking as well as enhance self-esteem and provide knowledge (Jessor, 1987; Karaman N. G., 2013). These interventions develop personal and social skills such as decision making, problem solving and stress management while augmenting cognitive ability in order to facilitate the adoption of healthier behaviors (Bandura, 1977; Thomas R.E., 2013). These are traits that we wished to support and hence the SmokeFreeGreece initiative was created.

2. Objective

Since a lifetime of smoking generally commences with nicotine addiction in youth, the main objective of the SmokeFreeGreece initiative is to reduce the initiation of smoking in children and young people. The focus of primary tobacco prevention has been school- based instruction. School- based health promotion programs serve an important role especially if they are part of a broader, community- centered approach such as the SmokeFreeGreece initiative.

The main objective of the SmokeFreeGreece initiative is to enhance the awareness of Greek youth on tobacco addiction through educational interventions within the context of the school community with the aim to reduce tobacco prevalence and initiation among youth in Greece. To reach this objective certain process and outcome indicators have been defined.

The specific **process indicators** of the initiative are the following:

- ✓ A minimum annual attendance of 15,000 students at interventions on tobacco use across Greece; including remote rural areas and remote Greek islands.
- ✓ Getting the innovative school notebook “Learning to be smoke-free!” into the hands of every primary school student (fifth and sixth grade) in Greece.
- ✓ Have approximately 1,000 students participate in the activities and student art competition of the annual “Youth Against Tobacco” conference
- ✓ Train 200 school teachers each academic year through the Train-the-Trainer workshops.
- ✓ Publish and update the material addressed to both teachers and parents “Education for a Smokefree Society” and print a copy for every teacher in Greece.
- ✓ Publish and release the material for health care professionals entitled “Smoking: Approach for a Health Professional” in 1,000 copies.
- ✓ Update the website and Facebook page of SmokeFreeGreece on a weekly basis with national and global news on tobacco control.
- ✓ At least one annual presentation of the SmokeFreeGreece initiative’s actions at international conferences.

The **outcome indicators** are the following:

- ✓ A 2.4% annual reduction in smoking prevalence among youth in Greece
- ✓ A 2% annual reduction in smoking prevalence among adults in Greece
- ✓ A 5% annual decrease in total cigarette consumption in Greece
- ✓ A 97.2% support for school tobacco prevention interventions

3. Methodology

Recognizing the importance of preventing youth tobacco experimentation, subsequent nicotine addiction and tobacco use, a nationwide initiative entitled SmokeFreeGreece was developed. Schools are in a very powerful position to play a major role in reducing the serious problem of tobacco use. Hence, we developed the school- based interventions on smoking designed for students between 10- 17 years old. This initiative rests on three pillars that interplay to ensure a sustainable approach which will empower youth to avoid tobacco experimentation. These pillars are: 1) **Research**, 2) **Education** and 3) **Communication**.

In 2009 a multidisciplinary group of scientists including school teachers, behavioral psychologists, doctors, nurses and health promotion experts, began to work on the methodological context of the “SmokeFreeGreece” initiative. Taking into consideration that schools are an essential element of a comprehensive tobacco prevention program, the initiative was developed and after feedback was provided by representatives of all school groups (students, teachers and parents), the final SmokeFreeGreece initiative was created. Its core aspects include, but are not limited to, the creation of specially-designed educational centers, school-based interventions, train-the-trainer workshops, production of educational material, annual student conferences, student competitions on tobacco control and awareness-raising campaigns through athletic events and other dissemination actions.

Three individual face-to-face interventions were created to address tobacco use in the ages between 10-12 (primary school students), 13-15 (secondary school students) and 16-17 (high school students) years old (Picture 1). This methodological framework indicates the importance of creating an interactive, age- based intervention for each age group that focuses on aspects that are important to each specific group. It is equally important to focus the content of the interventions on the positive reasons for not using tobacco, emphasising the healthy lifestyle associated with non-smoking behavior and not on the negative aspects of tobacco use. For



Picture 1. Smoking Prevention Intervention to a middle school.



Picture 2. Our own board game “Cigarettes and ladders”.

primary school students (Grades 5 and 6), the intervention is primarily interactive using videos and conducting experiments; breathing through straws to simulate the decrease in athletic performance, an adverse health effect of smoking. Another innovative approach is that we have created our own board game “Cigarettes and ladders” (Picture 2), a variation of the famous board game “Snakes and ladders”. The game is a race contest between two teams of students and it is based on luck and the knowledge they have obtained during the intervention. “Cigarettes and ladders” is well received by primary school children and it is a very pleasant way to absorb the information they have heard from the educator. Also, at this age the intervention aims to promote the positive perceptions of the child.

Our youth smoking prevention program is age appropriate, with the most intense intervention aimed at middle school students (13-15 years old) and regular reinforcement throughout high school (16-18 years old). For maximum effect, the program addresses all aspects of tobacco use including the short- and long- term negative health effects, information about different tobacco products (cigars, water-pipe smoke, e-cigarettes, etc.), social acceptability, social influences, negative social consequences, peer norms and peer pressure, resistance and refusal skills and media literacy as it relates to tobacco marketing and advertising (Thomas, 2013). The interventions about tobacco use take place in Greek but there are some intercultural primary and middle schools that also attend the program. In these cases the intervention is in English, so that every student may



Picture 3. Health professional plays “Cigarettes and ladders” with the students.

understand their content. Material in other languages has also been developed (Arabic, Turkish and other). Moreover, students with special needs are approached differently as they respond very well to a multi-sensory intervention with visual and auditory cues. This intervention for this population is interactive and shorter in duration, approximately 45 minutes long. During the intervention, it is important to explain the theoretical part using simple words and to teach appropriate behaviors through demonstrating.

Apart from the interventions that take place in the school environment, we have founded three educational centers in Athens, Thessaloniki and Tripoli. They are specially designed so as to be pleasant and friendly towards children and young adults. In Athens, student interventions on tobacco use take place in the appropriately-designed lecture hall of the “George D. Behrakis” Research Lab of the Hellenic Cancer Society. A class of students visit the hall on a daily basis in order to attend an intervention about tobacco use from a trained educator. In Thessaloniki, the second largest city in Greece, the educational center is at the second floor of NOESIS Science Center and Technology Museum (Picture 4), which has granted us the use of this space. Every day students from north Greece visit the museum and have the opportunity to attend the intervention. In Tegea, located in the Peloponnese, there is an educational center for the students of south Greece. This youth- centered tobacco control program has broad public support and is further supported by the Michail N.Stasinopoulos- Viohalco foundation that covers the travel expenses of the local students who come to be educated. It is worth noting that the bus expenses for the other two cities, Athens and Thessaloniki, are covered by the SmokeFreeGreece program so that students and teachers attend without any additional cost for the schools.



Picture 4. Smoking Prevention Intervention in Thessaloniki.

In order to reach every student in every corner of Greece, we have made a collaboration with *Symplefsi*. *Symplefsi* is a nonprofit organization that aims to support and improve the living conditions of the inhabitants of remote Greek islands. Through this collaboration, our goal is to inform the students and generally the inhabitants about tobacco use. We have visited 19 remote islands to this day: Kimolos, Folegandros, Sikinos, Iraklia, Schinoussa, Thirasia, Anafi, Pserimos, Telendos, Lipsi, Arki, Kasos, Agathonisi, Agios Eustratios, Ikaria, Patmos, Astypalaia, Kastelorizo and Gavdos, the southernmost island of Europe. It is worth mentioning that during these visits, we have had the honor of being accompanied by: Eleftherios Petrounias, Olympic Gold Medalist 2016, Vasiliki Milloussi, holder of many World Cup gold medals and, acclaimed Greek pole vaulter, Emmanouil Karalis. All three interacted with the children and talked about sports and a healthy life without smoking. During the interventions they also talked with the students about the importance of patience and perseverance.

Teachers have a major role in the constant battle against tobacco. Their most obvious contribution is the education they can provide to their students. With this in mind, seminars on tobacco use for teachers entitled “Train-the-Trainer workshops” were designed. Our team was the first to offer these seminars to teachers in order to educate and train them so they may become able to deliver the school interventions themselves. These workshops were expanded and adapted to include health professionals enabling them to host interventions outside school premises, in locations such as hospitals and health centers.

Furthermore, the Smokefreegreece initiative is responsible for the creation, production and distribution of educational material for tobacco prevention. The educational material is addressed to all the target populations: students, teachers and parents.

The educational material for primary school students is a notebook entitled “Learning to be smoke-free!”. Each page has a playfully-presented message on tobacco use, designed to provide information about health effects and nicotine addiction in a pleasant way: “Touch your chest and feel your heartbeat, feel the beat of life! Keep your heart strong and live a long life!”. Apart from setting the positive tone, the notebook is a useful tool since students can use it to keep notes during class as a regular school notebook (Please find it attached). Recognizing the success and the innovative approach of such an educational tool, the notebook “Learning to be smoke-free!” has been translated in English. Although the initiative has not been transferred yet, the transferability and scaling up has been considered on a European and international level. For this reason, the team of SmokeFreeGreece has proceeded to translate the notebook into French, Spanish, Arabic, Russian, Turkish and Serbian which are currently ready for production. For middle and high school students, a school notebook entitled "Education for a Smokefree Society" has been produced, promoting personal choice and active engagement. Each page contains scientific evidence about tobacco use since, at this age, students require scientific information in order to be persuaded which is precisely what they gain from this educational tool.

The educational material primarily addressed to teachers and parents is a book entitled “Education for a Smokefree Society”. The book has eighteen chapters and they contain scientific evidence on tobacco use: Health effects of smoking, Nicotine addiction, Tobacco advertising and promotion, Smoking during pregnancy, Smoking cessation, The economic impact of smoking, Passive smoking, Legislation on tobacco control, New tobacco products, The role of the teacher in effective smoking prevention, Prevention of smoking in the student community - The Greek experience, Methodology of school-based interventions for primary school students and for middle, high school students, Parent counselling on tobacco prevention and research results of surveys of the Greek population. An additional use of this book is the accompanying CD- ROM with a presentation of every chapter that can be used in the classroom. For instance, if a teacher read the third chapter and wished to present it to their students, they can use the ppt presentation in the CD-ROM along with the material already prepared for them. (Please find the book [here](#)).

Handbooks for primary, middle and high school teachers (Picture 5) have been created and produced by the SmokeFreeGreece initiative. These describe what an age-appropriate intervention should contain as well as how it should be carried out. The term “smokefree schools” refers to the total of interventions that aim to prevent smoking among school population throughout the educational process. The adoption of a systematic smokefree approach in the form of a continuous process is both significant and necessary to achieve the ultimate goal, the reduction of smoking initiation.



Picture 5. Handbooks for primary, middle and high school teachers.



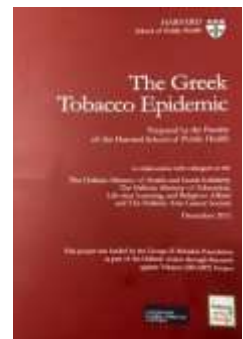
Picture 6. The book entitled “Smoking: Approach for a Health Professional”.

Another book, produced for the “SmokeFreeGreece” initiative, is addressed to inform health professionals on tobacco prevention. The book entitled “Smoking: Approach for a Health Professional” (Picture 6) is built upon the principles of health promotion in a holistic manner covering most of aspects of smoking such as Smoking during Adolescence, Smoking and Cardiovascular Diseases, Smoking and Respiratory Diseases, Passive Smoking, Smoking and Psychiatric Disorders, Smoking and Health Professionals, Smoking Cessation.

To tackle the biggest epidemic of all time, smoking, the Framework Convention on Tobacco Control (FCTC) was created by the World Health Organization as the largest global Treaty. The SmokeFreeGreece initiative, promoting and supporting the successful implementation of international tobacco control legislation, has translated the FCTC text into Greek and has printed and distributed it to concerned public health care authorities and health care centers.

“The Greek Tobacco Epidemic” (Picture 7) is another book published in 2011 by the Faculty of the Harvard School of Public Health in collaboration with colleagues from the Hellenic Ministry of Health, the Hellenic Ministry of Education, Religious Affairs and Research and the Hellenic Cancer Society and it focuses on tobacco control in Greece. The book traces the roots of the tobacco problem in Greece and describes complementary approaches towards a smokefree Greece.

Additional chapters outline measures specifically focusing on reducing adult smoking as well as means of appropriately conveying the message to the public and highlighting accomplishments and prospects of related research. The book concludes with the administrative dimensions of the initiative for tobacco control in Greece, a core aspect of which was a school-based tobacco control intervention.



Picture 7. The book entitled “The Greek Tobacco Epidemic”.



Picture 8. The TOB.g book entitled “Tobacco Cessation Guidelines for High-Risk Populations”.

Smoking cessation is strongly connected to smoking prevention since some students are already smokers at the time of the intervention. This is why the SmokeFreeGreece initiative has also created specialized guidelines for school health care professionals (nurses, psychologists, pediatricians) so they may provide material that will aid the adolescent smoker in an effective smoking cessation intervention within the school setting. These guidelines entitled “Tobacco Cessation Guidelines for High-Risk Populations” (Picture 8), was developed with co-funding from the European Union, under the TOB.g project.

Concerning “**Communication**”, the SmokeFreeGreece initiative has an extensive agenda. Online communication of the actions of the SmokeFreeGreece initiative is made through our website (www.smokefreegreece.gr), Facebook page and YouTube channel.

At the same time, we have gained extensive media coverage through regular distribution of press releases to TV channels, newspapers/magazines as well as frequent radio interviews of members of the initiative and Prof. Behrakis, founder of SmokeFreeGreece. Finally, the interventions, awareness campaigns about tobacco use, brochures for these campaigns, the annual student conference and the art student competition allow for a personal and direct channel of communication between the initiative and the community.

Since 2010, the “SmokeFreeGreece” initiative organizes the annual student conference on tobacco control. Having built a strong relationship with the school community, each year the students await for this student conference eagerly. Recognizing its success, for the past two years the conferences have taken place not only in Athens but also in Thessaloniki and Tripoli (Picture 9), where our other two educational centers are located. For the next school year (2018-2019), the student conference will be held in Trikala in central Greece. So far, eight Panhellenic student conferences have taken place wherein students participate and approach tobacco prevention through music, songs and theatrical events.



Picture 9. Student conference in Tripoli in 2017.

Parallel to the Conferences, an Art Student Competition on tobacco control is held each year and thousands of students from across Greece participate.

Every time the competition has a specific theme; last year for instance was “Smoking and its effects on Environment” whereas the previous year it was about passive smoking and human rights. Primary school students can take part with a painting/act/video relating to the theme. Middle and high school students participate by creating videos, applications, writing essays or letters on the given topic to a recipient of their choosing. Two years ago (2016), the President of the Hellenic Republic, Mr. Prokopios Pavlopoulos, gave the awards to the students (Picture 10).



Picture 10. President of the Hellenic Republic, Mr. Prokopios Pavlopoulos in 2016.

For the school and athletic events, the SmokeFreeGreece initiative has created and produced material such as stickers, balloons, pencils, USB sticks, bookmarks and posters (Picture 11). Three posters have been produced to approach primary, middle and high school ages.

The motto for the primary school students' poster is “I learn not to smoke” because at this age we promote positive perception. For secondary school students the motto is “I choose not to smoke” promoting personal choice and for high school students the motto is “I demand a tobacco-free world” encouraging active engagement.



Picture 11. SmokefreeGreece Posters.

Last but not least, since social media is growing at great speed with more and more young people joining and regularly using social media sites, the SmokeFreeGreece initiative created its own Facebook page, “Smokefreegreece” in which we post interesting news and share our actions. By adding a social media touch to the initiative, we not only reach and connect with many more young people but we have also generated a “SmokeFreeGreece” trend.

All the above constitute the three pillars of our initiative: Research, Education and Communication.

4. Stakeholder involvement

Stakeholder engagement and public involvement are considered integral to developing effective public health interventions. National health policies are more likely to get implemented effectively if their design, implementation and continuity are inclusive of all stakeholders in and beyond the health sector. The combination of knowledge, passion and thoughtful organization characterizes the SmokeFreeGreece initiative overall and is reflected in the type of stakeholders that are related to the initiative, which have evolved and expanded over the years.

In 2009, when the SmokeFreeGreece initiative started through initial seed funding from the Behrakis Foundation of Massachusetts, a memorandum of understanding was signed between the Harvard School of Public Health, the Hellenic Ministry of Health, the Hellenic Ministry of Education, Religious Affairs and Research and the Hellenic Cancer Society. This collaboration initiated this activity, which has evolved over the years with changes in its composition and great feedback from many stakeholders. Later on, for the implementation of the SmokeFreeGreece initiative, a working collaboration was established between the Hellenic Cancer Society (Research Lab “George D. Behrakis” www.researchlab.gr) and the Biomedical Research Foundation of the Academy of Athens (<http://www.bioacademy.gr/?lang=gr>). More recently, since 2016, the Institute of Public Health of the American College of Greece, has become a core component of this team and is now a fundamental institution of the SmokeFreeGreece initiative (<http://www.acg.edu/about-acg/institute-of-public-health/>). However, in addition to these core stakeholders many other organisations have supported and enhanced the initiative's actions.

Specifically:

- ✓ Regarding the educational activities of the SmokeFreeGreece initiative, each academic year the **Hellenic Ministry of Education, Religious Affairs and Research** approves our actions and the educational material is also approved by the **Institute of Educational Policy** (<http://iep.edu.gr/el/>).
- ✓ The last three Panhellenic Annual Student Conferences took place under the auspices of **H.E. the President of the Hellenic Republic** Mr. Prokopios Pavlopoulos who has also attended the event for the past two years. During the conferences, there was the award ceremony where H.E. presented the students with their awards for the Panhellenic Art Student Competition.
- ✓ The organization of the last two conferences which took place in Thessaloniki and Tripoli respectively, were organized with the support of the **Region of Thessaloniki** and the **Municipality of Thessaloniki**, the **Region of Peloponnese** and the **Municipality of Tripoli**.
- ✓ With regards to the missions to the remote Greek islands, apart from the collaboration with the **NGO Symplefsi** (<https://www.symplefsi.org/>), there is strong collaboration with the local public authorities of every island we have visited.
- ✓ Recognizing the huge success of the school notebook “Learning to be smoke-free!”, many stakeholders were interested in printing and distributing this notebook to school students. The **Marianna V. Vardinoyannis Foundation** (<http://www.mvvfoundation.gr/en/homegb/>) is an NGO with a Consultative Status in the United Nations Economic and Social Council (ECOSOC) and cooperates with UNESCO. Focusing especially in education, the Marianna V. Vardinoyannis Foundation financed the printing of an additional 10,000 school notebooks “Learning to be smoke-free!” for the schools of remote areas. The distribution of these notebooks was financed by another private company, **Papadelos S.A.** (<http://papadelos.gr/>) which is a leading company in courier services. **The National Bank of Greece**, a global banking and financial services company, donated the money for the printing of 1,000 copies of the teacher and parent book entitled “Education of a Smoke-free Society” to the SmokeFreeGreece initiative.
- ✓ **Arcadia Shipmanagement** is a leading company in the shipping of oil and other petroleum products. Arcadia Shipmanagement donated the money for the printing of 10,000 “Learning to be smoke-free!” school notebooks.
- ✓ The SmokeFreeGreece initiative has other donors and stakeholders such as the **Hellenic Parliament** and the **Hellenic Post**. For the academic year 2017- 2018, the Hellenic Parliament as a major donor, printed 160,000 school notebooks for Greek students through the **National Printing House**. These notebooks, through a donation from the Hellenic Post, were sent to every school reaching every student in Greece. After the successful distribution and implementation of this public health action, the **Hellenic Parliament** committed that this collaboration will be continued for the following academic years, reaching more and more students, every year.
- ✓ One of the initiative’s major donor is the **Michail N. Stassinopoulos- Viohalco Public Benefit Foundation** (<http://www.stassinopoulos-viohalcofoundation.gr/en/the-foundation/>). The Foundation's mission is to promote culture and provide further education to the people of Tegea. The Foundation has financed the function of the educational center in Tegea, the interventions on tobacco use that take place there and the transportation of the local students for the past four academic years.
- ✓ The SmokeFreeGreece initiative has mostly invested in education. However, recognizing that environmental pollution is a major threat and since, from a public health perspective, smoking does not only harm human health but also has detrimental effects on the environment, we developed a collaboration with **MEDASSET**. The **Mediterranean Association to Save the Sea Turtles**

(<http://www.medasset.org/>) is an international nonprofit organization working to protect marine and coastal habitats in the Mediterranean. Many school-based interrelated awareness campaigns took place during the academic year 2017- 2018 focusing on the catastrophic effects of cigarette butts: most commonly found and non-biodegradable item of litter in clean-up efforts across the globe, serious source of water contamination through the leaching out of toxic chemicals, fish and animal poisoning through toxic exposure or consumption and finally, the increased risk of fire from a smouldering cigarette.

- ✓ Apart from tobacco prevention, the SmokeFreeGreece Initiative has dealt with smoking cessation during adolescence by collaborating with the **Hellenic Center for Disease Control and Prevention** (<http://www.keelpno.gr/en-us/home.aspx>) and providing tobacco cessation guidelines for five high risk groups (teenagers, cardiovascular patients, pregnant women, patients with diabetes and chronic obstructive pulmonary disease) leading to a more efficient approach to a major public health concern.

The above stakeholders are direct beneficiaries of the results but have also contributed to the initiative's development and success.

5. Target Population – Implementation

The target population of the initiative is the school community of Greece which consists of three main components, a) **students**, b) their **teachers**, and c) their **parents**. Together, these three groups have the ability to significantly influence adolescent behavior and beliefs towards tobacco use, experimentation and subsequent addiction. The SmokeFreeGreece initiative is designed to address the needs of school students between the ages of 10 and 17 years old. However, as the needs, risk factors and motivational factors of adolescents differ during these formative years, a different approach was created for each group according to their age. The first group is comprised of primary school students (10-12 years old), the second of secondary/middle school students (13-15 years old) and the third group is comprised of high school students (16-17 years old).

In order to minimise the impact of inequalities within the target groups, there were no exclusion criteria for students to participate in the SmokeFreeGreece initiative.

- ✓ Students from both public and private schools can attend the smoking prevention program.
- ✓ Students with special needs, such as students with learning disabilities, are not excluded. On the contrary, a tailored version of the smoking prevention program is provided.
- ✓ Intercultural primary and middle schools with students of multiple ethnic backgrounds may attend the program which is conducted in Greek or English. These schools often host immigrant children who represent a significant percentage of refugees these past three years in Greece. Interventions are a major opportunity to enhance the integration of this special population. (For this reason, some of our material has also been translated into Arabic and Turkish – please see the Results section for further information).
- ✓ Vocational high schools (second chance schools) were also included in our initiative. Although the students of these schools may be older than 16 or even young adults, they have never had the opportunity to complete formal education. Within this context, interventions of the SmokeFreeGreece initiative took place during the evening classes and were also tailored to the needs of this older age group.
- ✓ Within our initiative, geographical inequalities in Greece were also addressed as our school-based programme was also targeted to students in small towns and rural areas in other areas of Greece. These

include, but are not limited to, the Prefecture of Peloponnesus, the Prefecture of Northern Greece, the Prefecture of Sterea Ellada and the Prefecture of Crete.

- ✓ It is of special interest to note that the intervention was also provided to school children of isolated Greek islands, some of which only have 5-10 students per school. These students were also included in the programme and received the same intervention as those in urban schools in Athens. These interventions were performed in the remote islands of Kimolos, Folegandros, Sikinos, Iraklia, Schinoussa, Thirasia, Anafi, Pserimos, Telendos, Lipsi, Arki, Kasos, Agathonisi, Agios Eustratios, Ikaria, Patmos, Astypalaia, Kastelorizo and Gavdos.

School teachers are the second target population of the initiative. In every school we have visited, an intervention also focuses at the school teachers to ensure a “train the trainer” approach. This activity ensures sustainability of the action by training teachers and thus, enabling them to educate their own students in tobacco prevention in the future. No exclusion criteria were set for teachers and the training workshops are open to all specialties. These workshops have taken place in 11 different cities around Greece with statistics to support its reach as outlined in the results section.

The third target population of our intervention are the parents and guardians of the adolescents involved in the initiative. As family members have an enormous influence on children’s smoking perceptions and attitudes, it is essential to integrate their involvement in these efforts as much as possible. Hence, we provided seminars on tobacco use for parents so as to educate them on how to approach a teenager and to discuss with him/ her about smoking. This population of parents was also given a copy of the book/CD “Education for a Smokefree Society” (described in the results section) which contains all the chapters necessary for parents to engage with their children in a constructive and nonconfrontational manner. When there is parental disapproval toward smoking, adolescents responded by being less likely to take up smoking regardless of parental smoking status (Eiser et al., 1989). Even parents who smoke can be effective in instilling a tobacco-free attitude if this is accompanied by an explanation of their regrettable addiction to nicotine.

6. Results

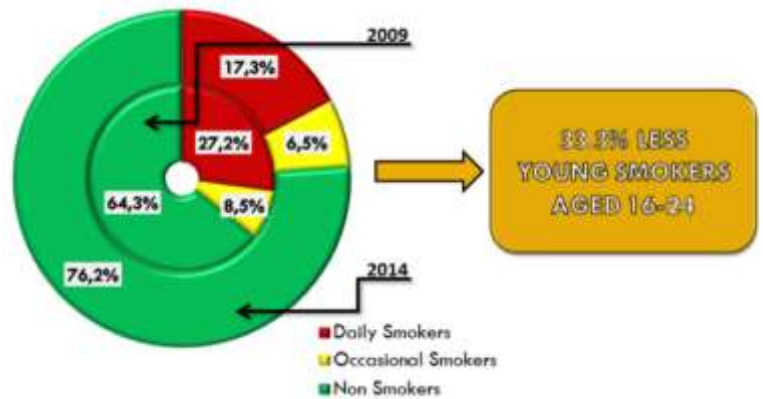
The results of our actions are directly linked to our process and output indicators. The numbers linked to these indicators are substantial, especially when we take into account the small population of Greece. Specifically:

- ✓ **In total 1,525 interventions have taken place** across Greek cities and Greek islands.
- ✓ The school-based interventions on tobacco have a broad reach and **40,000 students across Greece have participated** in them. Apart from the interventions that took place at the specially-designed educational centers in Athens, Thessaloniki and Tripoli and urban school premises, interventions have also been held at the following remote islands: Kimolos (total number of students: 35), Folegandros (28), Sikinos (12), Iraklia (7), Schinoussa (14), Anafi (54), Thirasia (14), Astypalaia (128), Pserimos (1), Telendos (5), Lipsi (87), Arki (4), Kasos (81), Agathonisi (13), Agios Eustratios (11), Ikaria (122), Patmos (68), Kastelorizo (22) and Gavdos, the southernmost island of Europe (7).
- ✓ Regarding the Train-the-Trainer workshops, **more than 2.500 school teachers** have participated. [They were trained and in addition they educated their class students.] With minor adaptations, these workshops have been **attended by 700 healthcare professionals** such as nurses, psychologists, social workers, in order to transfer the knowledge they have gained to their patients and other hospital staff.
- ✓ Regarding the educational material that SmokeFreeGreece has created and produced, the numbers are staggering indicating its broad reach across Greece. The innovative student notebook “Learning to be smoke-free!” has been **printed and distributed to 380.000 primary school students**.

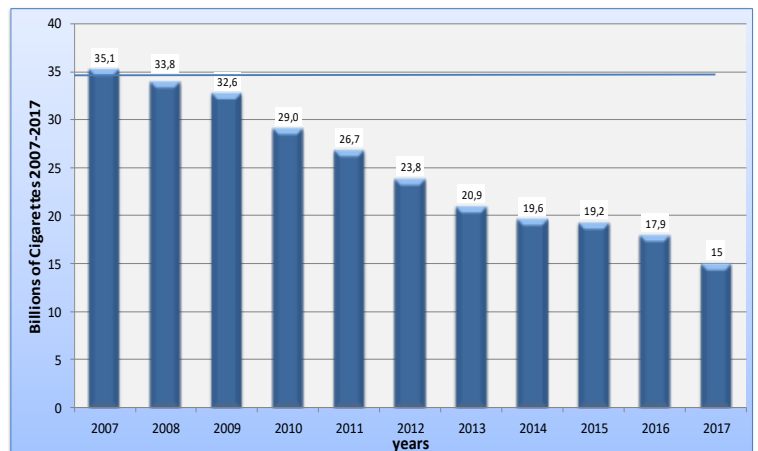
- ✓ For middle and high school students, a notebook has been produced entitled “Education for a Smokefree Society” containing scientific evidence on tobacco use and promoting active engagement. This student notebook has been **printed and distributed to over 85,000 school students** across Greece.
- ✓ The SmokeFreeGreece initiative has also produced the book entitled “Education for a Smokefree Society” which has been printed in **5,000 copies and 10,000 CDs**.
- ✓ The three posters (“Learning to be smoke-free!” – I choose not to smoke – I demand a smoke-free society) were **distributed to 50,000 primary, middle and high school students**, respectively.
- ✓ Since 2010, the SmokeFreeGreece initiative organizes an annual student conference on tobacco control which is attended by more than 1,000 students. **A total of 7,200 students have participated in the eight conferences** to date. Parallel to these conferences, there is an art student competition **with more than 35,000 artwork submissions**.
- ✓ With more and more young people joining Facebook, the SmokeFreeGreece initiative has created its own Facebook page with **more than 4,000 followers**, a number rising on a daily basis.

With regards to the output indicators, it is important to note that according to Greek Legislation it is illegal to retain personal information of children and adolescents and hence it is illegal to perform a pre-post intervention analysis. Hence the output indicators are based on population indexes.

- ✓ The Hellenic Statistical Authority conducts a large cross-sectional survey every five years and smoking is included in its questions on health. Comparing the data that were collected in 2009 and again in 2014 (the last available survey), **smoking prevalence in adolescents and young adults dropped from 35.7% to 23.8% in 2014** (Output indicator 1) (Picture 12) **and among adults from 37.9% to 27.1%** (Outcome Indicator 2)
- ✓ **Since 2009, there has been a significant drop in the consumption of legally-taxed cigarettes by 57%**, meaning that in the past 10 years, the per capita consumption of legal cigarettes **has halved**. While other factors may have played a part in this decrease, it is impossible to remove the role of the educational interventions from this success as its effects are also clearly indicated by the aforementioned reduction in smoking prevalence among youth (from 35.7% to 23.8%) (Outcome Indicator 3) (Picture 13).
- ✓ Support for this educational intervention is also very high. According to the most recent national awareness survey, **97.2% of adults in Greece support the educational intervention** that takes place in schools within the SmokeFreeGreece campaign (Outcome Indicator 4).



Picture 12. Smoking Prevalance in Greece in 2009 and 2014.



Picture 13. Annual Cigarettes Sales 2007-2017.

7. Dissemination Actions

Smoking and other forms of tobacco consumption are considered the single most important cause of preventable morbidity and premature mortality worldwide, with tobacco being the major single cause for premature deaths in Greece and the European Union (EU). Our initiative has two approaches for this public health challenge: communication and dissemination actions. Our communication strategy includes both traditional and social media. Traditional media are used as a broader-reach outlet while social media offers the chance to target those recipients who are more receptive to the messaging thus achieving higher precision. Combining traditional media with social media can prove most effective for an initiative with a public health character. More specifically:

- Traditional media means press releases (n=30), TV channel coverage for our events and awareness campaigns (approximately twelve per year), newspaper and radio interviews of Prof. Panagiotis Behrakis, who is the person responsible for this initiative, and of other key members of the team (approximately ten per month).
- Social media presence on Facebook and YouTube. The “SMOKEFREEGREECE” Facebook page has 4.000 followers with this number rising on a daily basis. The goal is to share two to three posts per week with interesting topics about public health issues and especially tobacco use. We also have a YouTube channel which allows us to share our actions and campaigns with the public, and teenagers in particular, in a more attractive and effective way.

(<https://www.youtube.com/watch?v=LSOSzYfrwio>, <https://www.youtube.com/watch?v=htdPgkpdFEA>, <https://www.youtube.com/watch?v=vEV6UL4OFeg>, <https://www.youtube.com/watch?v=dr1j8JSCC9E>)

- The website of the initiative (www.smokefreegreece.gr) is crucial in providing an easy way of communicating information not only about smoking but also about the initiative itself. Living in a digital world, the website is accessible to anyone in the world and the ability to break through geographical barriers has never been easier. In addition, the website is a good way to promote our social media channels and build up a “SMOKEFREE” community to change behaviors and perceptions. Furthermore, online presence helps engage effectively with the initiative’s stakeholders.
- Brochures about tobacco use, passive smoking etc. For our awareness campaigns we produce brochures using not only text but also visuals to increase willingness to read, to grasp both the big picture and the details faster and lastly and to ensure audiences understand what information you want to share with them.
- Our dissemination actions aim to demonstrate our initiative’s results by presenting them at Scientific Conferences and in publishing peer- reviewed articles.
- Over the past four years our tobacco prevention efforts have been presented in scientific conferences around the world with great success. Below is the list:
 - World Conference on Tobacco or Health (WCOH) held in Abu Dhabi, March 2015
 - 9th State of the Art Adolescent Medicine Course, Athens, March 2016
 - European Network for Smoking and Tobacco Prevention (ENSP) Capacity Building Workshop in Ljubljana, October 2016
 - 10th State of the Art Adolescent Medicine Course held in Athens, March 2017
Our abstract received first award.

- 2nd International Conference on Tobacco Control of the European Network for Smoking and Tobacco Prevention (ENSP) in Athens, May 2017
- World Conference on Tobacco or Health (WCOTH) held in Cape Town, South Africa, March 2018
- Athens Science Festival, April 2018

Apart from the presentations at scientific conferences on public health and especially on tobacco control, there are two publications regarding the SMOKEFREEGREECE initiative at open- access, peer-reviewed online journals:

- Reach of the SmokeFreeGreece Educational Campaign in Greek Schools. Tobacco Prevention & Cessation. Tob. Prev. Cessation 2017;3 (May Supplement):103
DOI: <https://doi.org/10.18332/tpc/70395>
- Smoking prevalence, compliance and attitudes towards smoking bans among school teachers in Attica, Greece 2014. PNEUMON journal, Vol. 30, No 4, October – December 2017, ISSN 1105-848X, e-ISSN 1791-4914

8. Addressing Inequalities

We have made extreme efforts to reach every child in Greece. In order to minimize the impact of social inequalities, there are no exclusion criteria in the SmokeFreeGreece initiative and all students are able to participate in the program. There are many factors that can affect the smoking behavior of a youth such as school failure, low socio-economic, socio-cultural backgrounds or being part of rural population (Cousson-Gélie F., 2018). The smoking prevention program addresses students from public, private and vocational high schools, while the interventions are tailored to cater for children with special needs and for students on rural areas and isolated islands.

Unfortunately, smoking prevalence is higher in minority groups and people and children in disadvantaged groups are more exposed to tobacco use (Hiscock R., 2012). For this reason, SmokeFreeGreece interventions' take place in public and private schools which means that the program addresses students from all socio-economic background as well as children that belong in minority or disadvantaged groups.

A large disadvantaged group in Greece is the refugees. The percentage of refugees in Greece is rising every day. Scientific evidence has shown that smoking prevalence is higher in refugee population (Jawad M., 2016). For this reason, the SmokeFreeGreece team has made a point of approaching these children and pursued establishing school-based interventions at intercultural primary and middle schools. The interventions are tailored to their specific needs and they are translated into English and/ or Arabic with more audiovisual material.

School-based interventions also take place in vocational high schools. The intervention programs follow the curriculum of vocational high schools and take place in the evening. Students in vocational schools are a particularly high-risk group for tobacco use (Cousson-Gélie F., 2018). As in these high schools students older than 16 years old attend, the program is modified to cater for older populations. Teaching adults is very different than teaching children (Morland V., 2006). The context of these interventions focuses more on the adverse health effects of smoking, on passive smoking and the adverse health effects smoking has on the family and close friends of the smoker, smoking prevention and the benefits of smoking cessation.

The school interventions also address children with special needs, like students with learning disabilities and sensory impairments. All children need to attend smoking prevention interventions regardless of whether they have learning difficulties or not (Robertson S.B., 1996). To include these children, the intervention is tailored to their needs and skills. Its duration is reduced to 45 minutes and in order to keep them interested, we employ visual material, flash cards, story-based techniques, colored markers and cultivate teamwork and collaboration between the students.

The life and health of people living in rural areas is impacted by tobacco use even more than those in urban and metropolitan areas (CDC, 2018). This is due to socioeconomic factors, culture, policies, lack of proper healthcare and of smoking prevention programs (CDC, 2018). In order to reduce health inequalities, our initiative is taken place not only in city centers but in other geographical regions in Greece such as rural areas and isolated islands.

School-based interventions have not taken place only in the capital city of Greece, Athens but in other cities including Thessaloniki and Tripoli as well. Moreover, SmokeFreeGreece has provided school-based interventions to children who live on isolated Greek islands, Kimolos, Folegandros, Sikinos, Iraklia, Schinoussa, Thirasia, Anafi, Pserimos, Telendos, Lipsi, Arki, Kasos, Agathonisi, Agios Eustratios, Ikaria, Patmos, Astypalaia, Kastelorizo and Gavdos. These students were included in the program and received the same intervention as those in the schools of Athens, Tripoli and Thessaloniki. Due to the fact that these schools have as few as 5-10 students, the intervention was modified to meet the needs of each school. Intervention in isolated islands is more personalized and it is based on learning through games and creative stories.

So as to “Train the Trainers”, we provide seminars to teachers in order to educate them in tobacco prevention and school-based interventions. These seminars have taken place in eleven different cities around Greece including Athens, Thessaloniki, Patras, Tripoli, Volos, Karditsa, Heraklion, Chios, Alexandroupolis, Ioannina and Chania.

Overall, within this initiative we have taken and will continue to address the reduction of inequalities across the population of Greece.

9. Operational Requirements

The SmokeFreeGreece campaign currently employs 10 full-time staff members. From the initial conception of the project in 2009, the major funder has been the Behrakis Foundation, Boston, MA, founded in 1996 by George and Margo Behrakis. A private family foundation, since 2009 it has donated 600,000 US dollars on an annual basis and continues to do so to this day. Funding and donations by the Behrakis Foundation have made the core (staffing, office rental space, lecture spaces in three cities, website, educational material) and logistical functioning possible. Collaborators include the Hellenic Cancer Society (Research Lab “George D. Behrakis”), the Biomedical Research Foundation of the Academy of Athens, the University of Athens, the University of Crete and Symplefsi.

The “owner” of the SmokeFreeGreece initiative is Professor Panagiotis Behrakis, one of the leading experts on Tobacco Control worldwide, an Investigator at the Biomedical Research Foundation of the Academy of Athens and focal point of WHO (World Health Organization) for Tobacco Control in Greece. Board certified in three specialties, Pulmonary Medicine, Internal Medicine, and Critical Care Medicine, Prof. Behrakis earned an MD from the School of Medicine of Athens University, and two PHDs, the first from the School of Medicine of Athens University and the second from Mc Gill University- Department of Experimental Medicine. He is a former Associate Professor of Respiratory Physiology at the University of Athens and former Adjunct Associate

Professor at Harvard University. He has also served as President of the Board and currently of the Scientific Committee of the European Network for Smoking and Tobacco Prevention and is the founder of the “George D. Behrakis” Research Lab of the Hellenic Cancer Society. Prof. Behrakis is currently the Director of the Institute of Public Health of the American College of Greece and also serves as a Member of the Board of Regents of the American College of Chest Physicians. He recently became the Coordinator of the “Joint Action on Tobacco Control”, a European Commission project for the implementation of the Tobacco Products Directive in the European Union. Prof. Behrakis is the author of more than 150 full scientific papers with over 3000 citations. Other key staff in the project include: Dr Anna Tzortzi, Prof Constantine Vardavas, Mrs Marina Demi, Dr Vasso Evangelopoulou, Mrs Stephanie Telionatis, Mrs Venia Behraki and Mrs Vergina Vyzikidou.

The national ESPA program, which is co-funded by the European Commission and the Hellenic State, provided the funding required for the initial production of teaching, educational and communication materials for the initiative.

The TOB.g program has funded the production and distribution of the smoking cessation guidelines for high-risk vulnerable populations including adolescents. The TOB.g project was funded under the 3HP — HP-PJ-2014, with grant number: 664292. The final deliverables of this 3rd Health Programme, which has just concluded, was the creation of specialized guidelines for smoking cessation among five risk groups, including adolescents within the school setting. These guidelines were pilot tested in close collaboration with the SmokeFreeGreece initiative, and by the same team members, and were successful in increasing school health professionals' knowledge and awareness on smoking cessation among adolescents.

10. Ensuring Sustainability

In order to sustain the initiatives of the SmokeFreeGreece campaign, several actions have been taken, including securing funding for the campaign until 2020, creating resources such as books and websites available in both Greek and English, and providing training to teachers and parents so they may conduct the interventions independently equipped with all the necessary material and resources.

The initiative functions in partnership with the Institute of Public Health– The American College of Greece and the George D. Behrakis Research Lab– Hellenic Cancer Society which further support the sustainability of the SmokeFreeGreece campaign while the continuous funding by the Behrakis Foundation since 2009, ensures its development and enhances its visibility and reach.

In order to sustain the actions of the SmokeFreeGreece campaign of the Hellenic Cancer Society, training seminars called, “Train-the-Trainer” have been designed to educate both the educator and parent on how to approach elementary and high school students on tobacco prevention. More than 2.500 teachers and parents have completed the training so far, with numbers continuing to rise. In addition to the training, participants are provided with training material, including the book (and CD) “Education for a Smokefree World”, containing all the information participants need to become a tobacco prevention trainer. Additionally, they receive two booklets, each designed to cater for either elementary or high school students, with presentation-ready material for the trainer to use in the seminars to his/her students. The aim of these training workshops is to create a population of trainers who will be able to implement the educational course in their own classes in the following years. The workshops have also attracted stakeholder and donor interest to reproduce printed material to ensure that teachers can continue to offer printed material to their students. Naturally, as with every health-related promotion program, we perform frequent re-training of the core team as well as training of all new team members to ensure sustainability of the awareness of the new incoming trainers.

Population support for this educational intervention is also very high, as 70% of adult respondents to our population-based, evaluation survey said they would wish to volunteer in such an educational intervention. This provides extra added value.

11. Scaling up

Health intervention programs are manifold and complex, so the question of transferability and applicability is very crucial when advocating evidence-based approaches, especially in youth (Cambon L., 2012). This is why we consider every aspect and take every necessary precaution to spread the smokefree message clearly, not only to national audiences but also to a potential European audience. Consequently, we work hard as a team to make our material international, capable of addressing different populations and cultures.

It is with this in mind that the “Learning to be Smokefree” notebook for primary school students, written in Greek, has been translated in English, French, Spanish, Arabic, Russian, Turkish and Serbian. Despite the fact that the notebook has not been distributed to other countries yet, we have already prepared our material so that it can be scaled up to include other EU and neighboring countries.

According to studies, simplicity is a crucial factor to scaling-up health intervention programs (Yamey G., 2011, 2012). To ensure the transferability of our program and material, we have simplified the interventions and made our material universal. We also constantly try to reach and include the experience of refugees and children of different ethnicity.

Moreover, to scale up our intervention program, we are considering communicating with European implementers and other stakeholders. Furthermore, we will communicate with non-governmental organizations in other countries because they can play key role in a successful scale-up of our anti-smoking, school-based interventions (Yamey G., 2011). We have already made contact with Greek primary schools in England and provide them with the innovative school notebook “Learning to be smoke-free!” and our future plans are to approach other schools and organizations internationally.

SmokeFreeGreece has already prepared material for interventions for refugees and for students from eastern countries. This is especially relevant as the percentage of refugees in Greece, and in the EU, is rising every day. A significant barrier when working with refugees are cultural differences. In our intervention program we include and discuss all tobacco products such as cigarettes, cigars, pipes, water-pipe smoke and chewing tobacco. The SmokeFreeGreece initiative wants to approach these children from different ethnic and cultural backgrounds who may be trying to integrate into public or intercultural schools. For such interventions, the program is translated and provided in English so that every student may understand the content as well as the skills and knowledge provided. Another barrier in school-based interventions with refugees is language so we have translated but also modified the presentations and pass on information via pictures and videos instead of relying solely on verbal communication. For example, sometimes the children do not speak English. To overcome this barrier health professionals promote group work and peer education. This means that children who speak both English and the native language of students who do not understand English, become the “experts” and educate their friends within a “peer to peer” educational intervention. Our material is available for organizations working with refugees in the EU to use in smoking prevention programs for this special population.

12. Equity and Bioethical principles

The SmokeFreeGreece initiative respects all equity and bioethical principles. All measures are in agreement with national and current or forthcoming EU (i.e., Directive 95/46/EC) regulations. School-based interventions are annually approved by the Ethics Committee of the Hellenic Ministry of Education, Research and Religious Affairs. The approval by the Hellenic Ministry of Education, Research and Religious Affairs is then directly circulated to every school in Greece at the beginning of each academic year informing them with details about the program. **Due to the fact that the Hellenic Ministry of Education, Research and Religious Affairs does not approve the collection of personal data in the context of such educational interventions, we are not allowed, by law, to collect information that would enable us to evaluate the effectiveness of the intervention on the actual pupils using a pre-post intervention assessment.**

- ✓ The program is optional and does not interfere with the school's agenda. The principal or a teacher of a school makes contact with us via email or telephone.
- ✓ The parents or the legal guardians are well-informed on the program, intervention content and provide signed consent. Children are also asked to provide consent to be involved in the program. Despite the existence of a signed consent form, if a child later expresses a desire not to participate or to withdraw their participation, this is respected.
- ✓ It is very important to note that we do not collect any type of personal information of the children or teachers who attend the program. We also do not collect any type of biological sample or share any type of material that has not been approved by the Hellenic Ministry of Education, Research and Religious Affairs' Ethics committee.
- ✓ If any information has been identified as confidential, even if only orally, it will remain confidential. Any information that is provided by the pupils is not used against them nor will it be shared with others who may use it against them. The children are aware of their rights and are free to express themselves. On the other hand, they are aware of the contextual limits to confidentiality and their permission sought for disclosure. Moreover, we respect the autonomy, desires, personal goals and values of every child and the right of individuals to make their own, informed decisions based on adequate, timely information. We take every precaution to limit any harm. We also respect the appropriate boundaries. The established contact with the children and the relationship between us is open and truthful.

The SmokeFreeGreece team has no conflicts of interest to declare regarding the interventions. There are no interests of other stakeholders. The stakeholders are well-informed about their responsibilities towards the children, the content and the duration of the interventions. They are well-educated and take measures to ensure that the potential biases, inherent in their own backgrounds, do not lead to prejudicial treatment of the children. Moreover, they do not engage in unfair discrimination based on age, gender, ethnicity, culture, disability or socio-economic status.

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**Learning
to be
smoke-free!**

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This notebook is the product of
the scientific work of smoke free Greece

With thanks to the sponsors
George D. Behrakis Research Lab
Hellenic Cancer Society
Institute of Public Health
The American College of Greece

ATHENS 2018



Breath!
A word that means life.

Take a deep breath
and feel refreshed, alive!





Lungs are essential organs because they deliver life-giving oxygen to the body.



Smoking damages the lungs, and makes it hard to breathe.



Smoking one pack of cigarettes per day deposits one cup of tar in your lungs each year.

Tar is very toxic, it makes you sick. Tar covers your lungs and turns them black.



Breathing is the biological process of inhaling oxygen and exhaling carbon dioxide.

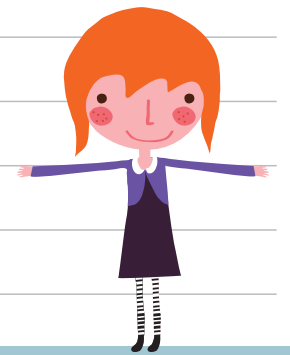
How does breath work, this constant in and out? Read on, so you can learn what breathing's all about...

Bronchi or airways are the tubes that carry air in and out of your lungs.

The alveoli are 300 million tiny sacs inside the lungs. They take in oxygen when they inflate and remove carbon dioxide when they deflate.



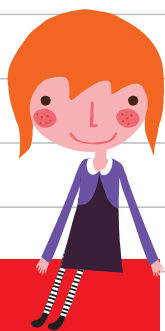
Smoking clogs the bronchi and damages the alveoli. Smoking makes breathing difficult.





Touch your chest
and feel your heartbeat,
feel the beat of life!

Keep your heart strong
and live a long life.



Hold out your hand
and make a fist.
That's the size of your heart.

The heart is small but powerful.
It works non-stop and beats
so hard that it can spray blood
a distance of 10 meters!

In one day, your heart beats
approximately 100,000 times.
In one year, your heart beats
approximately 40 million times!



Smoking thickens the blood
and causes the arteries to narrow.
It reduces the amount of
oxygen-rich blood circulating in
the organs.

With less oxygen passing through
the arteries, the hard-working
heart must work even harder.
Blood pressure rises as a result.

Tobacco use is major risk factor
for serious heart disease.



The heart works hard to supply the entire body with oxygen-rich blood.



The heart rate of an adolescent smoker is 2-3 beats per minute faster, so the heart gets more tired.

The arteries carry oxygen-rich blood all through the body.



If all the blood vessels in the human body were laid out end to end, they'd stretch 60,000 miles. That's twice the circumference of the Earth!

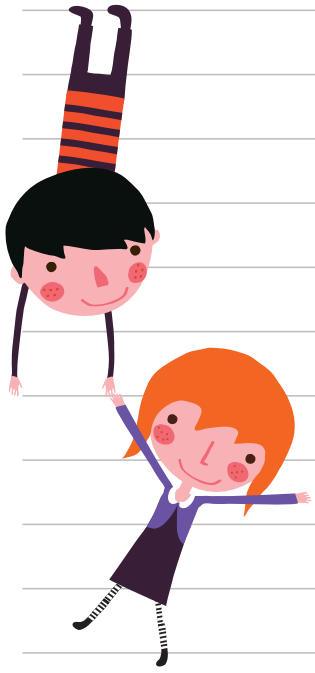


Tobacco narrows and clogs the arteries.



**Exercising
and being athletic
improves my health,
mood and looks.
Vibrant health is
the best cosmetic.**

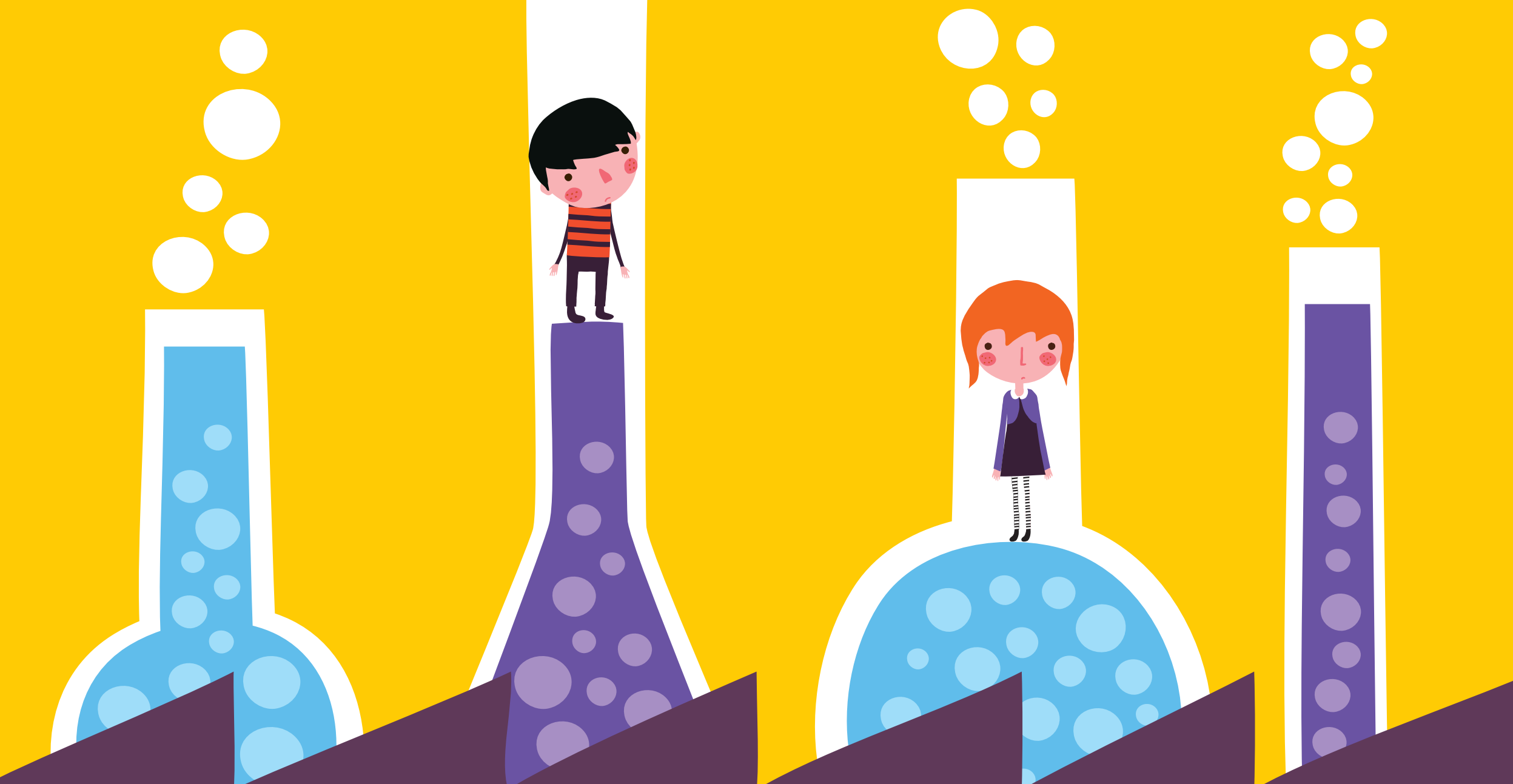
**Running, dancing,
staying fit
keeps me alive!**



Being active keeps
my body fit
and my heart strong
and healthy.

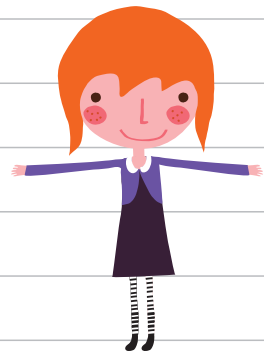
Physical activity is a great way
to have fun and feel good.
For a long and happy life,
also eat nutritious food!

Exercise helps you sleep well
and maintain a healthy weight.



Say "NO"
to toxic cigarettes.
Say "YES"
to a healthy life!

The following facts will baffle your brains, about the deadly chemicals that tobacco smoke contains: Of its mix of 7,000 chemicals, 250 are toxic, and 70 carcinogenic.

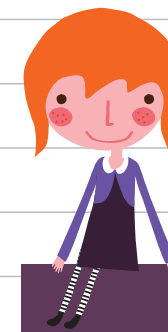


The following chemicals are found in cigarettes: Ammonia, Arsenic, Cadmium, Acetone, Carbon Monoxide.





Ammonia is found in detergents.
Arsenic is used to kill rats.
Cadmium is found in batteries.
Who would willingly inhale any of that?



Carbon monoxide is a potent poison. It inhibits the flow of oxygen in the blood. It can cause dizziness, drowsiness, coma, even death.



Cigarette smoking is popular because nicotine is addictive.

When a person smokes, the concentration of nicotine in their blood rises rapidly. It reaches their brain in 10-20 seconds.



Tobacco contains nicotine, a highly addictive substance. Nicotine makes quitting smoking hard, despite that smokers know the damage it causes.

Did you know that after heroin and cocaine nicotine is the third most addictive substance?

Children and teenagers
are more susceptible than adults
to nicotine addiction.



A balanced diet
and physical exercise
keep my body fit
and addiction-free.



Sometimes people say that smoking relieves stress, but that's a myth.

The truth is that smokers become anxious and ill-tempered because they have not smoked for a while. As soon as they light up the unpleasant feelings are temporarily relieved.

Smoking is not just a bad habit. It's an addiction, a disease!

70% of smokers want to quit.
30% attempt to do so every year.
Only 2-3% succeed.



Smoking is very hard to quit,
so in your life never let it fit!

Smokers stink!
Their clothes, hair and breath
smell unpleasant.
Their nails and teeth
turn yellow.

Smokers also lose
their sense of taste and smell.



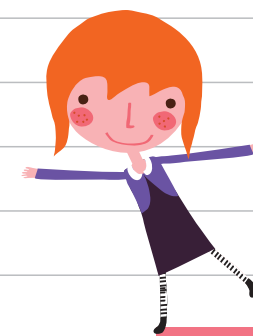
Smoking is anything
but charming and attractive.
Smoking is smelly and ugly.

Smokers are neither strong
nor independent.
Smokers are weak
and dependent.





Did you know that half of all smokers will die from a tobacco-induced disease one day? It's so sad to think that all those deaths could have been prevented.



Did you know that smoking is backed by major economic interests?

People become sick and die but the tobacco industry does not care.

Where do you stand? If you care about people, speak up, raise your hand!



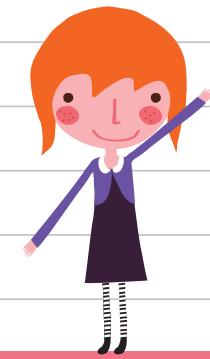
Smoking is catastrophic.
It ruins your looks and health,
your life and your future.



I believe in myself.
I choose to be smoke-free
because I know
it's good for me.



Here and now, I take a vow
that I will never start smoking!
This promise to love myself
I will keep anyway, anyhow!



All that I have learnt here
about smoking and its effects,
I'll be sure to spread around.
Imagine how wonderful
it would be if no one
smoked in town!



I do not give in to peer pressure.
I make the right decisions.
I say "NO" to cigarettes
I say "NO" to addiction.

Boys and girls, know the stakes,
because one is all it takes!

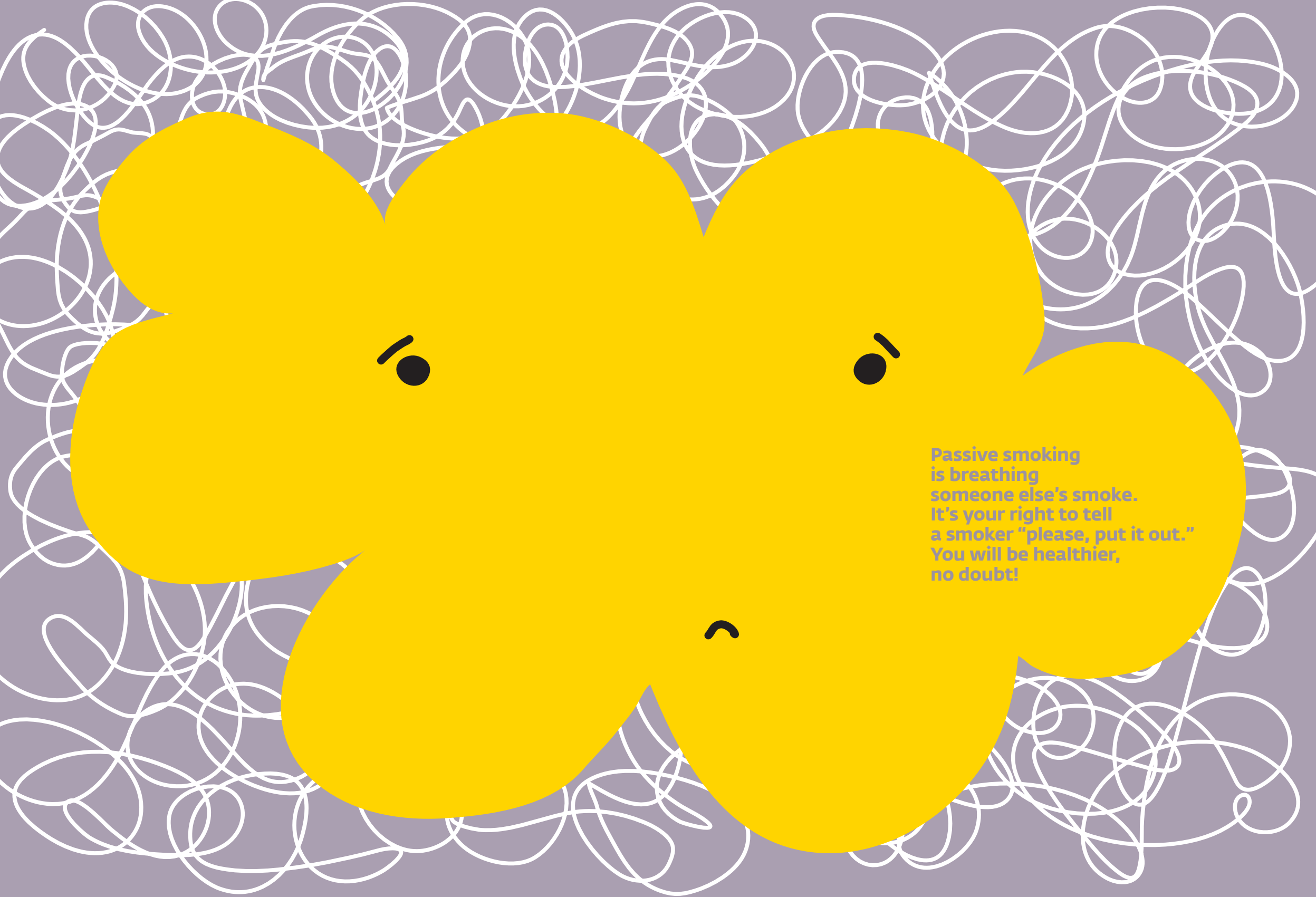
One cigarette is enough
to begin a life-long addiction.



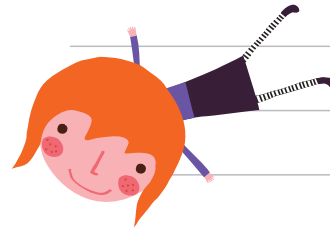
I always say "NO"
to the smoking minority.
I proudly belong to the smart
non-smoking majority!



I do not smoke but I run.
I exercise and I have fun!



Passive smoking
is breathing
someone else's smoke.
It's your right to tell
a smoker "please, put it out."
You will be healthier,
no doubt!



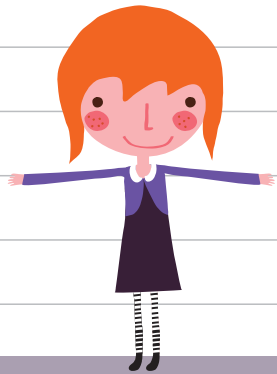
Every child out there
has a right to clean air.

Breathing other people's smoke
is called passive or
second-hand smoking.
Passive smoking causes
asthma and cancer,
respiratory and heart disease.

Passive smoking is not only inhaling the smoke of someone else's burning cigarette...



...it is also the smoke exhaled by the smoker's breath!



It is estimated that, every year, second-hand smoke kills over 600,000 people. 150,000 are kids.



Children that grow up in places where people smoke will have weaker lungs throughout their lives.
Is this fair?

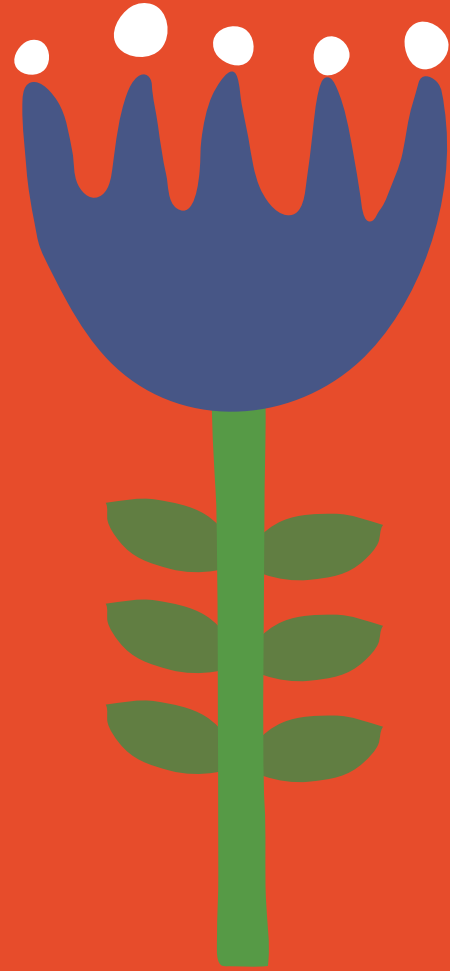
Cancer-causing substances
hide in the invisible toxic mixture
that smoking leaves behind
on indoor surfaces, clothing
and hair.



This toxic mixture lingers on
even after the room is ventilated.
This is called third-hand smoke.

Today, young people have more power than ever to protect the environment!

I say "YES" to a clean environment, to help protect it, I swear!

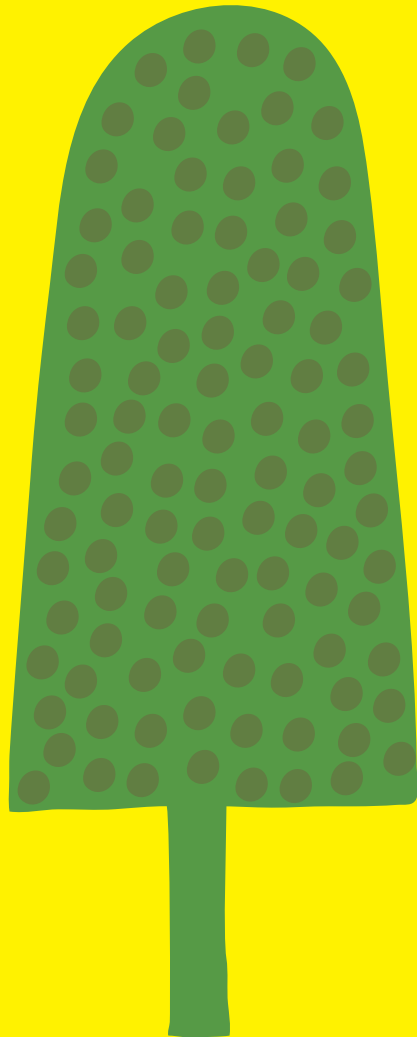
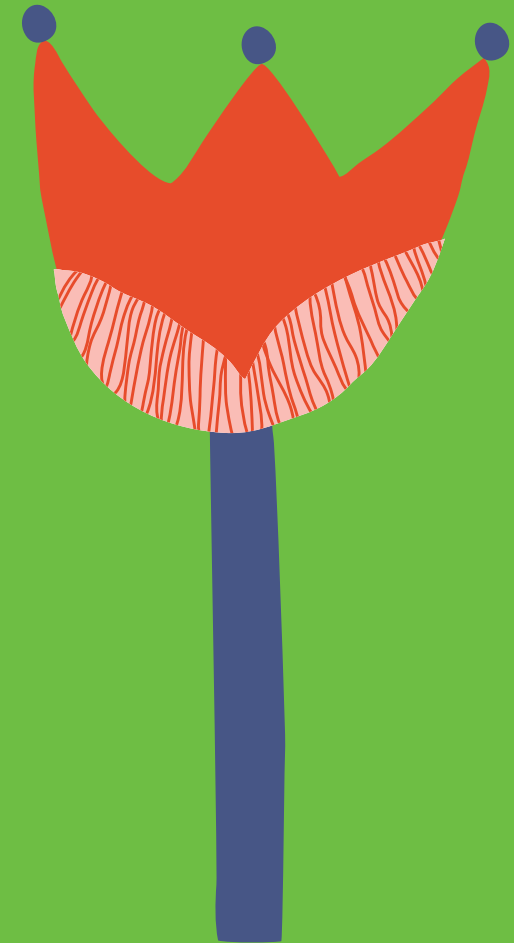


Worldwide, cigarette butts are the most common item collected in beach cleanups.

Cigarette butts are generally not biodegradable.



Smoking is harmful to the environment in more ways than you can imagine: Cigarettes not only litter but also kill. Animals, fish and birds choke on the butts or die from the poisons they contain.





**Do the math on smoking
and calculate for yourself
how costly cigarettes are
to your finances and wealth!**

Assuming that the average smoker smokes approximately one pack of cigarettes a day:

If a pack costs a minimum of 5 euros,
in one month (30×5) 150 euros are spent on cigarettes.
In three months (3×150) 450 euros are wasted.
The smoker could have bought a computer instead!

Now calculate the annual cost:
If one month of smoking costs 150 euros,
then 12 months (12×150) cost 1,800 euros.
The smoker could have travelled abroad instead!

A person who has smoked for ten years
has already spent 18,000 euros on cigarettes,
when he could have bought a new car instead!

Unbelievable!

Smoking during pregnancy affects not only the mother, but also the baby's health before and after birth. The tiniest quantity of nicotine in the bloodstream causes babies to be born with low birth weight and respiratory problems.



Tobacco ads associate smoking with allure, slenderness and style, even with women's empowerment.





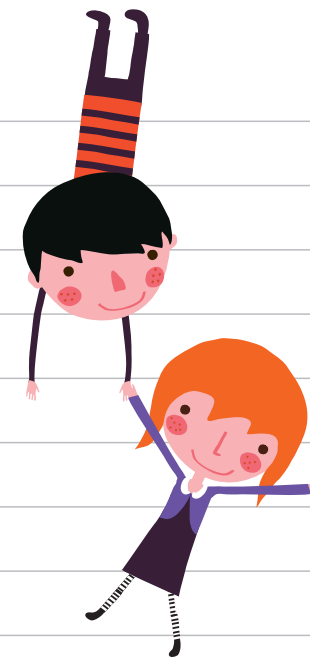
Smoking is neither cool
nor fashionable.
It's unappealing.

Vibrant, glowing health
is the new craze.



I know that a healthy lifestyle
is important and
easy to achieve:
I eat properly
I sleep sufficiently
I exercise regularly
And I never smoke!

With these four simple steps,
I keep my heart healthy:



- One, I do not smoke.
- Two, I eat many fruits and vegetables.
- Three, I exercise every day.
- Four, I stay healthy and happy.

Dare to dream, friends,
dare to soar with joy.
The future belongs to us,
to every girl and boy!

One day I'll explore
the moon...

One day I'll invent
something
wonderful....

One day I'll become
a great athlete...

One day I'll heal people...

One day I'll travel
the world...





**And with this vow our notebook ends:
I will never smoke, dear friends.
Active, healthy and smoke-free,
that's how I resolve to be!**

Hidden Word Game

Health Effects of Smoking



A	E	R	T	G	B	N	S	P	I	P	C	N	A
A	D	D	I	C	T	I	O	N	T	J	E	G	M
K	S	J	X	V	I	W	Q	E	V	Q	L	Y	B
W	E	W	M	G	R	T	I	U	H	E	L	D	R
U	T	V	I	D	T	E	X	M	Z	X	U	A	O
R	I	S	F	L	U	U	A	O	M	L	L	Z	N
S	V	T	X	J	K	V	N	N	E	K	I	J	C
T	D	L	T	V	L	X	U	I	K	E	T	I	H
R	X	U	K	I	W	D	C	A	N	C	E	R	I
O	K	Z	E	V	T	S	X	E	T	Z	K	P	T
K	T	A	S	T	H	M	A	O	E	N	T	P	I
E	L	T	A	J	R	W	R	I	N	K	L	E	S
W	H	L	X	T	M	R	K	C	O	U	G	H	J
B	N	E	H	J	S	S	F	V	B	Q	P	I	E

Try to find the following words:

Addiction
Asthma
Bronchitis
Cancer
Cellulite

Cough
Flu
Pneumonia
Stroke
Wrinkles



**I love life
and I learn
to always be
smoke-free!**



LPB George D. Behrakis
RESEARCH LAB
HELPING CANCER SURVIVE



**Institute
of Public Health**

