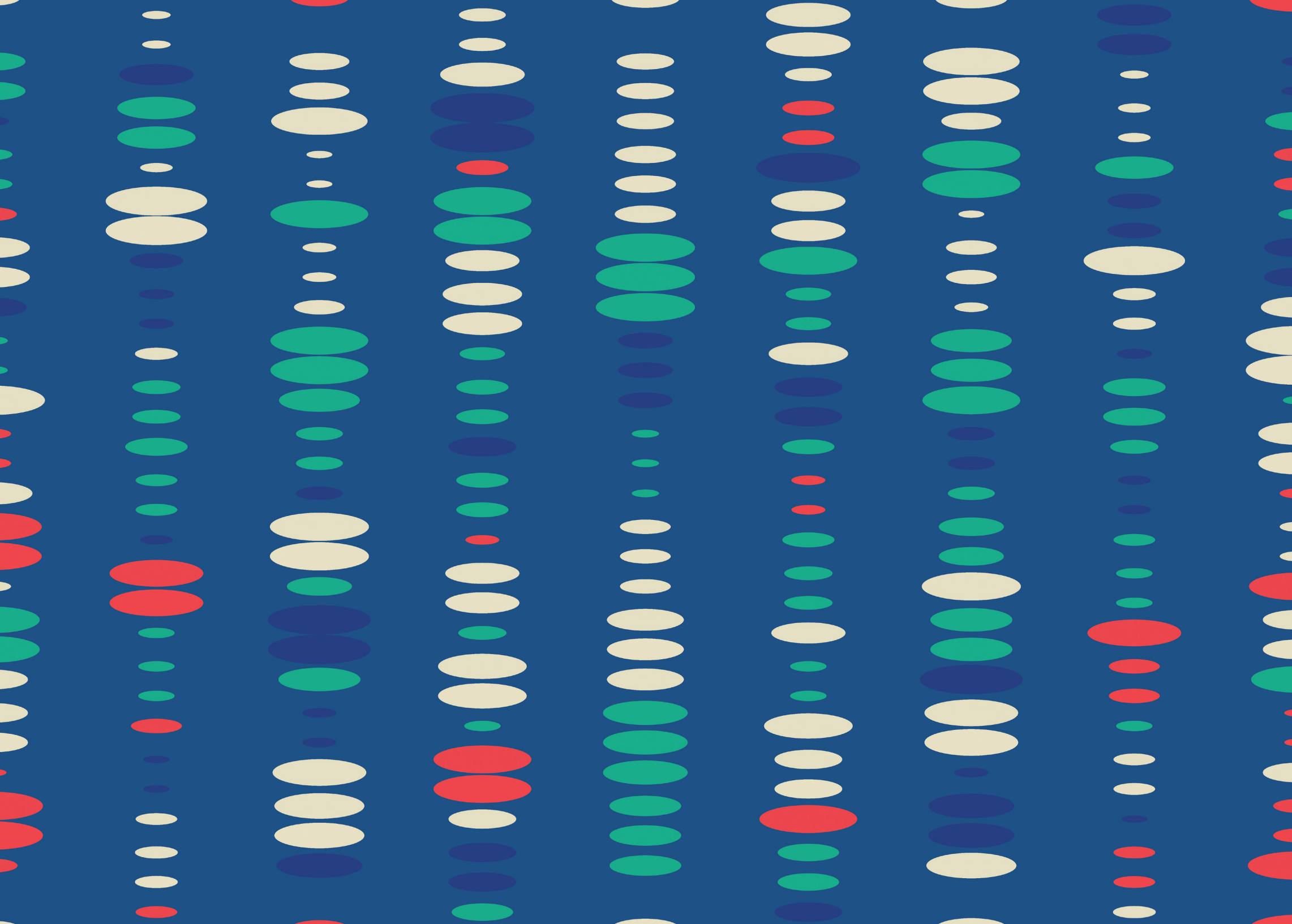


KNOW YOUR BODY, KNOW YOUR SUBSTANCES

**CASE STUDIES
& SESSIONS**





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The SAFE YOU project team does not condone or encourage the use of performance- and/or image-enhancing substances. The aim of the SAFE YOU Project is to help young people to make informed decisions about these substances, regardless if this decision is abstaining from these substances altogether; or using some or all them with caution. The best way to avoid potential harm related to the use of these substances is not using them. However, if you decide to try any of them, we strongly encourage you to educate yourself first and do everything you can to reduce the risks – but to be able to do that, you need to be aware of them. The SAFE YOU TOOL is there to help you to make the decision that is right for you.

The most important thing is that you know your body and know your substances.

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01

INTRODUCTION

The SAFE YOU TOOL

Two years ago, a consortium of global experts in the study of the use of Performance and Appearance Enhancing Substances (PAES), joined forces through the ERASMUS+ funded **SAFE YOU** (Strengthening the Anti-doping Fight in Fitness and Exercise in Youth) project to develop an evidence-based educational tool to **support young** people involved in amateur sports and fitness to avoid potential harm from the use of PAES.

Our research conducted in five European countries (Greece, Cyprus, Germany, Italy and the UK), has led us to the conclusion that the use of PAES amongst young people in the 16 to 25 year age group is both widespread and increasing. The team worked together and with young stakeholders in **collaboration**, to learn more about the situation and present strategies for health promotion. There are lessons here for sure: messages about avoidance and discriminating use, messages about ease of access, messages about the ethical dilemmas posed by sport's ever present competition to excel and the ease with which exercisers can now

obtain an edge.

Through the empirical research phase of the project we found that the two most important - and equally dominant - sources for both seeking information and obtaining substances were friends and fellow athletes; and the Internet. The Case Studies we present here give a very clear indication that these sources are seldom in a position to offer evidence-based expert advice.

To this end, we recognise that the Internet offers excellent opportunities for reaching adolescents and young adults. **Equally**, we are also aware that the Internet presents significant dangers because both information and doping substances are readily available on the Internet with limited or no control.

There is certainly room for more education and for raising awareness about **PAES**. In addressing this, our work draws upon a range of quantitative and qualitative sources generated through the research phase of the **SAFE YOU** project; not to advocate ever spiralling legislative restriction, nor to present an unrealistic picture of depravity and human waste, but to confront the issue head on.

From this perspective, the **SAFE YOU TOOL** was created with the active involvement of the end-users to ensure that the **TOOL** is relevant and useful for those who we intend to serve. Our co-creators, young people from this stakeholder group, have advised us to *"provide unbiased information so that we can make informed choices"*.

Therefore, the **SAFE YOU** Project adopts a non-judgmental and pragmatic approach to **PAES** use by aiming to empower young people to make informed decisions about these substances. Hence our motto *"Know Your Body. Know Your Substances."* The **SAFE YOU TOOL** is a carefully planned collection of information resources and educational materials.

To reflect the true global nature of the phenomenon and the need for harmonised effort across Europe, we are making the **SAFE YOU TOOL** available in four languages: English, German, Italian and Greek.

This book is part of the project's 'Train the Trainers' approach: our aim here is to assist professionals, educators, health education and health promotion specialists, fitness instructors and coaches involved with young people, those who can directly reach out to our target groups in sport or educational settings and beyond to deliver bespoke training for young people about the issues surrounding **PAES** use.

This book presents **Case Studies** that illustrate a comprehensive range of personal experiences with **PAES**. Together, these case studies exhibit a wide range of use patterns and reflect a kaleidoscope of attitudes to **PAES** amongst the populations that we surveyed. These narratives should be seen as 'scripts' for the educator to use as illustration in debates and coaching sessions.

We've also produced a number of carefully worked training **Session Plans** for eight themes to assist with further and more detailed study. These Themes are summarised in this book with a clear indication of how each theme and its **Session Plans** will contribute to developing good 'health-literacy' and increase self-efficacy in young people to make informed, evidence-based and holistic decisions about **PAES** use that take all aspects – the body, the environment and the substance - into consideration: regardless of what these decisions might be. Trainers are assisted in the collection of quantified outcome-based evaluation data about the effectiveness of their **PAES** training sessions through a bespoke assessment of self-efficacy (**SAFE YOU Self-Efficacy Scale**). Because self-efficacy is the belief in one's own ability to reach goals (i.e., to be able behave in a certain way, making wise decisions, etc.), this scale assesses the **SAFE YOU** training workshop participants'

self-reported levels of confidence in their abilities of making informed and evidence-based decision.

As part of the **SAFE YOU TOOL**, we have prepared a wide range of teaching materials (PowerPoint presentations, case studies in both written and video-format, videos, additional readings and exercises) to supplement each session plan. Detailed instructions on how to run the **SAFE YOU** training workshops, including suggestions for the best use of the PowerPoint presentations, videos and other supplementary materials are also provided on the project website.

Although the **SAFE YOU TOOL** offers PowerPoint slides for the thematic session plans, these should be seen only as support with background material and ideas, to facilitate and guide discussions and are not an end in themselves. They should not simply be delivered in a didactic manner; our co-creators asked for education in a fun and interactive way. They want to learn but they do not want to be lectured! Our project is committed to interactive learning and so exercisers and educators are invited to work together on these themes in a creative workshop environment. We acknowledge that running effective workshop-style sessions is challenging and thus we have prepared general guidance on how to run these sessions effectively.

The **SAFE YOU TOOL** also aims to empower people by building and strengthening self-efficacy through a Problem Based Learning (**PBL**) Approach when using the Case Studies as educational materials. In this, the tutor acts as facilitator and mentor rather than a source of 'solutions'. Knowing that in the fast changing terrain of **PAES**, we cannot offer definite solutions that stand against time, we intend to empower young people with skills - actively acquired through the workshop

discussions in problem solving exercises and self-directed learning. This involves trialling what is already known and what needs to be learned, becoming more flexible in processing complex information and sensibly handling often conflicting motives. In doing so, young people become more cognisant about their own thinking processes and develop awareness of their reasons for using and avoiding **PAES** while 'doing something fun'.

To enable trainers to engage in **PBL**, the Case Studies are accompanied by a set of intriguing Problem-based Scenarios - built on the sixteen personal stories - for learners to solve. Detailed instructions for learners and guidance notes for the trainers are included in each Problem-based Scenario.

In addition, both learners and trainers are supported with a **PAES Information App** which covers the most common **PAES** categories and offers a comprehensive (but ever-expanding) list of Frequently Asked Questions.

All **SAFE YOU TOOL** materials are freely accessible and downloadable from the project website: www.safeyou.eu

Background to The **SAFE YOU** project:

Nutritional supplements are heavily promoted and used among recreational exercisers. Evidence from written literature also suggests that whilst nutritional supplements represent a distinct and legitimate stage in performance enhancement, they are not risk free choices. **Potential health** risks from these dietary supplements may arise from contamination, from inappropriate use of licensed supplements, or from use of unregulated nutritional supplements. On the other hand, using these substances may be a precursor to the use of other more dangerous substances that are either of uncertain composition, not licensed for human consumption, or specified for controlled use only, and sometimes illegal.

To address this issue, the **SAFE YOU Project** set out first to explore the phenomenon through both quantitative (survey) and qualitative (focus group interviews) enquiry. The research phase was then followed by a series of 'co-creation' workshops with members of our key stakeholder group in order to devise the **SAFE YOU TOOL** and to ensure that what evolved was as needed and desired by those who the **TOOL** intends to help.

The Surveys:

The quantitative survey was conducted in the all five partner countries and involved almost 1000 young exercisers and amateur athletes. More than half of the overall sample (55.2%) had used uncontrolled substances (nutritional supplements) in their lifetime and 8.2% also admitted using controlled substances in

the same time period. A significantly higher percentage of **younger participants** used controlled substances compared to older participants (16-20 years vs. 21-25 years) whereas there was no significant difference in the use of uncontrolled substances.

When asked about access to information and access to substances, participants generally referred to 'friends' and 'the Internet' as primary sources: 25.6% of participants said that their main sources of information were friends or fellow athletes who use **PAES** and 23.5% said that their main source of information was Internet advertisements/online stores. Regarding the access to **PAES**, 27.1% of participants purchased substances from the Internet and 31.3% affirmed that friends or fellow athletes gave **PAES** to them.

Exercisers' reasons are useful concepts in devising prevention or harm reduction strategies because unlike global attitudes and beliefs, 'reasons for' and 'reasons against' a specific behavioural choice, such as using or not using a certain type of **PAES**, have direct influence on behaviour¹.

It was therefore imperative that we capture the reasons for using and the reasons for avoiding **PAES**. Asking about reasons for *both* using and avoiding **PAES** was important. Because they rely on separate goals, thought processes about 'doing' a specific behaviour are not simple opposites of the thought processes associated with 'not doing' the same behaviour². The results, presented in Table 1 in order of importance as identified by our survey participants, aligned with this pattern.

1. Westaby, J. D. (2005). Behavioral reasoning theory: Identifying new linkages underlying intentions and behavior. *Organizational Behavior and Human Decision Processes*, 98(2), 97-120.

2. Richetin, J., Conner, M., & Perugini, M. (2011). Not doing is not the opposite of doing: Implications for attitudinal models of behavioral prediction. *Personality and Social Psychology Bulletin*, 37(1), 40-54.

Reasons for using PAES	Reasons for not using PAES
helping to recover faster after exercise/training	not feeling the need for it
helping to achieve my desired results faster	wanting to see what I can do naturally
seeing how far I can push my physical limits	worrying about possible side effects on my health
helping to achieve my performance or appearance-related goals	being 'artificial' (if I use PAES, it is no longer 100% me)
helps to aid recovery after injury	lacking trust in quality and ingredients
being curious to find out if it really works	would be unfair advantage in a competition
following the recommendation of someone whose opinion is important to me	people whose opinion is important do not approve
PAES being normal part of any serious exercise/training regime	not many people in the social environment using PAES
wanting to gain advantage in competition	worrying about the legal consequences
following what most people around me doing	not knowing what and how to take
	not knowing what and how to take
	not knowing where to buy it
	being too expensive for personal budget

Table 1: Reasons for using and not using PAES

Our results are consistent with the established literature on having different sets of cognitions for 'doing' and for 'not doing'², the important conclusion for the **SAFE YOU TOOL** from these results is that solely focusing on reasons against **PAES** use will only reinforce the motives for those who wish to avoid **PAES** in the first place, but will simply not address those who are using or contemplating using **PAES**.

Congruently, the **SAFE YOU TOOL** targets both those thought processes underlying not using **PAES** and those underlying using **PAES** separately. We believe that these cognitions must be underpinned by good health literacy (which is defined as the degree to which individuals have the capacity to obtain, process, and understand relevant health information and services needed to make appropriate health decisions³). This, in turn is the key to effective prevention and/or harm-reduction initiatives that cater for all situations that a young person might encounter in various sport and exercise settings.

We recognize the strong influence of the environment. The **SAFE YOU TOOL** builds upon our view that (1) self-referenced reasons can be targeted directly through education and (2) because environmental factors cannot be easily changed, the best option is in building resilience and developing decision making skills through enhanced health literacy and strong self-efficacy. It is our view that only through education will we see health literacy and only through health literacy can we expect better reasoning and better self-care.

3. U.S. Department of Health and Human Services. 2000. *Healthy People 2010*. Washington, DC: U.S. Government Printing Office.

The Focus Groups:

Focus groups were carried out with youth in leisure-sport and exercise. A total of **88 participants** in the five partner countries took part in these discussions.

From the collated results of these focus groups, we identified three distinct '**at-risk**' groups:

- 1.** The experienced gym users (mainly bodybuilders, power-lifters or athletes from strength sports) who possess good knowledge of **PAES** and still wish to know more and be even better informed;
- 2.** Athletes involved in organised sports in club settings who appear to be reasonably well protected by the official anti-doping movement for competitive sport and observant of the morality that surrounds doping use in competitive sports; and
- 3.** Autonomous gym goers who appear to be inexperienced and the most naïve when it comes to **PAES**.

Thus the creation of the **SAFE YOU TOOL** focused on autonomous gym goers who are very likely surrounded by and even offered **PAES** but do not necessarily have access to reliable information and expert advice.

Stakeholder involvement through co-creation workshops:

Because we believe that involving young people in the process of designing intervention and/or harm-reduction approaches is paramount to success, the **SAFE YOU** project addressed this need fully through a series of co-creation workshops, which involved 66 young people in the five partner countries. The most important goal that was set by our co-creators for the **SAFE YOU TOOL** was to find ways of *“providing unbiased information, so informed choices can be made”*.

To reflect this empowering approach, we adopted the motto “Know Your Body. Know Your Substances.” and built the **SAFE YOU TOOL** on the educational goal of increasing health literacy and strengthening self-efficacy to enable young people to make informed, evidence based and holistic decisions about using or not using **PAES** for themselves.

In the co-creation workshops, five dominant ‘issues’ around **PAES** use that the **SAFE YOU TOOL** would address were identified:

- **PAES prevention and harm reduction**– for which having accurate information, including managing expectations and access to experts, is key. The **SAFE YOU TOOL** addresses this need with three Session Plans in two dedicated Themes (Theme 3 and Theme 6), along with the **PAES** Information App.
- **The difficulty in finding reliable information**– noting that education should not be limited to the facts about the substances but include the thinking processes and help developing critical

thinking for choosing the right information source, product, implementing advice. The **SAFE YOU TOOL** addresses this need with three dedicated Session Plans in two Themes (Theme 1 and Theme 7); and the **PAES** Information App.

- **The usefulness of shared experiences**– emphasizing that users’ experiences should include examples of both responsible and irresponsible use of **PAES**. The **SAFE YOU TOOL** addresses this need with sixteen Case Studies of which eight are also supported with video format.
- **Our preoccupation with appearance and the popularity of PAES**– promoting a holistic view of the effects and consequences related to **PAES** use capturing both psychological and physiological aspects of **PAES** use. The **SAFE YOU TOOL** addresses this need with four Session Plans in three dedicated Themes (Theme 2, Theme 4 and Theme 5).
- **Achieving desired results in absence of PAES**– providing general information on what can be realistically obtained with/without the use of **PAES**; and reflecting on the fact that **PAES** do not always work. The **SAFE YOU TOOL** addresses this need with a dedicated Theme and two Session Plans (Theme 8).

Overall, the recommendations for 'solutions' formed three distinct groups:

- 1.** Direct help to young people who are interested in PAES should be provided through accurate and reliable information provision in formats that are easy to use and fit with their lifestyle. This direct support in the SAFE YOU TOOL is found in the PAES Information App offering basic information on PAES and a simple but effective danger warning system, Frequently Asked Questions and the comprehensive Glossary – all are designed to help your people to navigate the largely unregulated terrain of the PAES market and information.
- 2.** Educational provision for (e-)health literacy through developing critical thinking, facilitating knowledge and confidence of young people to make their own decision (as opposed to telling them what they should and should not do). It was generally agreed that scaremongering does more harm than good. Specific attention must be given to 'e-health literacy' because people, particularly adolescents and young adults, tend to use the Internet for obtaining health-related information. The educational provision of the SAFE YOU TOOL is centred on the eight themes that emerged from the collated co-creation workshop data.
- 3.** Finally, there was a strong drive toward 'asking for help from above' such as a call for better regulation and control over both production and marketing; but also by making gyms and educational providers more responsible for providing access to accurate and unbiased information on PAES. Following up on these recommendations, albeit

very relevant and critically important, was beyond the scope of the SAFE YOU TOOL. Nonetheless, we recognise the importance of these issues, include a brief summary of them in this book, and then follow up with Policy Recommendations for much needed structural changes relating to both the regulation of the PAES market and improved public health initiatives.

These recommendations advocate at government level in order to establish better regulation for the supplement industry and at the same time attending to misleading advertisements, ensure better transparency about ingredients, offering impartial information and controlling international trafficking and internet sales.

Equally education providers (including but not limited to high school/sport academies, training courses for teachers and trainers, sport and exercise focused degrees) should incorporate PAES into the curriculum and/or drug-prevention education. It was also suggested that gyms should be more involved through raising awareness and offering better education and information. At the government level, a 'healthy gym' scheme should be established.

To address the heavy influence of the media, public figures and role models could be harnessed to suggest more honesty about PAES use and help to dispel the myths and media created unrealistic expectations.

Theoretical underpinning of the SAFE YOU TOOL

The theoretical pillars of the SAFE YOU TOOL are empowerment through community involvement and health literacy.

Accumulated evidence from decades of health-protection and harm-reduction initiatives in the public health domain suggests that to be effective, preventive interventions should identify the key contextual or environmental factors that influence (in some cases indirectly), an individual's behavioural choices. Interventions that target the underlying causes (collectively referred to as structural interventions) are more likely to be successful and more cost effective. However, the success of these structural interventions always depends on how closely these well-intended initiatives fit with the social environment of the target population, and what kind of support is available to facilitate their integration.

Community-based interventions seek consensus and conciliation between structural and individual values. Their attractiveness is underpinned by (1) the recognition of the needs of those affected, (2) the commitment to identify mutually acceptable solutions between the regulators and those subjected to the respective regulations, seeking balance between the individual and collective needs, and (3) the focus on both proximal and distal factors that exert influence on empowering individuals to make the right decisions⁴. This was the very reason why the **SAFE YOU TOOL** was built together with the representatives of our key stakeholder group: young people aged between 16 and 25 years who are involved in sport and exercise.

We are certain that empowerment through increasing 'health literacy' is an important part of health promotion and, as captured in Figure 1, it presents the most useful approach for the **SAFE YOU TOOL**.

Using the WHO definition:

- "Health literacy refers to the collection of cognitive and social skills which determine the motivation and ability of individuals to gain access to understand and use information in ways which promote and maintain good health.
- Health Literacy goes beyond a narrow concept of health education and individual behaviour-oriented communication, and addresses the environmental, political and social factors that determine health."

4. Sweat, M., & O'Reilly, K. (2013) Ideological barriers to structural change. Toward the model of values-based interventions. In M. Sommer, & R.G. Parker (Eds.), *Structural approaches in public health* (pp 83 - 95). London: Routledge.

1. Target

e-Health literacy

- functional (knowledge)
- interactive (capacity to act independently on knowledge)
- critical (resilience to environmental pressure)

2. Mediator

self-efficacy

- one's ability to reach goals (i.e. to behave in a certain way, making wise decisions, etc.)
- expressed as level of confidence in one's own ability of making informed and evidence-based decisions

3. Outcome

improved self-care

- avoidance
- resistance
- harm-reduction or minimisation
- safe use
- balance

Figure 1: Relationship between health literacy, self-efficacy and improved self-care

The thrust of the **SAFE YOU TOOL**, its mission, is in respect of promoting 'Health Literacy'. The materials that we have assembled in the **SAFE YOU TOOL** are designed to contribute to this ultimate educational goal.

The thematic session plans, presented as part of the **SAFE YOU TOOL**, offer three potential outcomes⁵:

- Sessions which result in functional health literacy: communicating information. This level targets improved knowledge and compliance with set rules.
- Sessions which result in interactive health literacy: developing personal skills. This aspect builds on functional health literacy and improves motivation and self-confidence as well as capacity to act independently on knowledge and to influence social norms through interactions with social group members; and
- Sessions which result in critical health literacy: developing personal empowerment. This aspect aims to improve individual resilience to environmental influences.

The **SAFE YOU** project recognises that the Internet is a double-edged sword. On one hand, it presents significant challenges through the amount of uncontrolled information and the unrestricted global accessibility of PAES. On the other hand, it offers excellent opportunities for reaching adolescents and young adults - upon which the **SAFE YOU TOOL** unashamedly aims to capitalise.

5. Nutbeam, D. (2000). Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International*, 15(3), 259-267.

The SAFE YOU TOOL

The **SAFE YOU TOOL** is a carefully planned collection of information resources and educational materials. Our ambition in presenting the **SAFE YOU TOOL** is to increase empowerment, to provide coaches and teachers with helpful practical sources from which informed dialogue can flow, deep learning can follow and better individual choices might result.

The **SAFE YOU TOOL** also addresses the needs of the end-users (young exercisers, amateur athletes, fitness participants and gym goers) directly. Throughout the project, co-creation with our key stakeholder group was a challenging but immensely rewarding experience, thus we intend to continue involving our target population through facilities such as the Interactive **PAES** Survey, Frequently Asked Questions (FAQ), personal stories and testimonials.

The **SAFE YOU TOOL** offers coaches and teachers a set of resources which cast light on this topic and offer for dialogue:

- Video Stimulus Material;
- Detailed 'representative' case studies drawn from extensive pan European research;
- Bespoke Problem-based Learning guide for each case study;
- A compendium of planned workshop sessions with linked audio-visual resources;
- Web based information sources;
- A powerful 'PAES Information App' for mobile access;
- An interactive 'crowd-sourced' survey harvesting users' experiences with and knowledge about PAES;
- Collection of relevant research papers;
- Tailored assessments;
- A Web based facility for continuous engagement with the project through FAQ, shared personal stories and experiences.

02 USER GUIDE

Aims and Objectives

The overarching philosophy for our project: *"Know Your Body. Know Your Substances."* - arose out of our co-creation workshops. **Our aim** is (1) to ensure that young people have access to unbiased information mediated through an educational process that can lead them towards **Health Literacy** and better choices; and (2) to supply information in as wide a variety of contemporary modes as possible: using video format, interactive, web-based, and supported by a mobile App.

We are committed to an ongoing dialogue with young people in the spirit of co-creation and for them to evaluate and contribute to our work going forward and for us to respond.

Themes and Session Plans

The Themes of the **SAFE YOU TOOL** were synthesised from the co-creation workshops across the five countries. The Themes place **PAES** use in a broader personal, societal and environmental context in order to provide realistic scenarios for decision making training and to facilitate holistic approaches to these choices. With these themes we recognise that decisions about **PAES** are not made in a vacuum and that the environment exerts significant influence. We are also cognisant of the fact that no two decisional situations are the same and thus we cannot provide pre-set answers. Therefore our aim is to empower

young people to be able to consider and deal with these environmental influences in order to make informed and situated decisions about **PAES**.

A major element of the **SAFE YOU TOOL**, alongside our illustrative case studies, is the collection of thematic session plans. These have been devised by **PAES** experts and educators from the five countries involved in the project and grouped thematically according to themes which emerged from the project's co-creation workshops. **The Session Plans** and the resources which support these are web-based.

The Session Plans are detailed and to a pattern: Key Questions, Learning Outcomes, Specific eLearning Activities for use in workshops or independently and in most cases, suggestions for Independent focussed study (tasks) and strategies for assessing the learning that has taken place. Each Session clearly indicates how successful completion of the Session contributes to health literacy and Self-Efficacy - by this we mean the level of confidence **young people** have to make an informed and evidence-based decision about **PAES** use; supported by a bespoke set of graded self-efficacy items to assess learners' progress.

For each session we have proposed detailed **Learning Outcomes** and **Key Questions**, tutors should certainly be clear about what they are trying to achieve with any one of the sessions. In a couple of instances a theme will run over two sessions, with an interim assessment suggestion and a final assessment suggestion. Supporting PowerPoint presentations and video material are available online but our aim is to encourage interactive sessions where ideas can be presented, attitudes tested and challenged, and a free flowing dialogue between tutor and participants is possible.

Case Studies

The sixteen **SAFE YOU** Case Studies present a fascinating array of young individuals from the five partner countries. With these, we intend to show a kaleidoscope of decisions, good and bad, about **PAES** use. The stories behind the **Case Studies** are true. We deliberately do not make judgements; nor did we select certain cases to have a point.

To facilitate the use of the colourful collection of these interesting personal stories as an educational resource, we have appended a descriptive title to each story. This title is entirely our interpretation of the story – and these stories are quite complex with multilevel meanings and multiple interpretations. Other readers may see the story differently, which is quite alright. In fact, this complexity and fluidity makes the **SAFE YOU** Case Studies excellent 'triggers' for workshop discussions. Eight of the sixteen case Studies are also available in video format.

PAES Information APP

The **PAES** Information App is a searchable compendium of information on pharmaceuticals and nutritional supplements. This App is envisaged to be underpinned by a living database that is constantly evolving to cater for the dynamics of this fast changing market.

The App is intended to serve as a quick reference point and thus only covers the basic information of those **PAES** categories and substances which young people are most likely to encounter in gym environments or are exposed to through advertisements - for quick reference. Those interested trainers and learners who wish to learn more and acquire in-depth knowledge are advised to seek further information through recommended websites and publications. For this

Information App, we have also adopted a warning system that is solely based on time. Following from our intention to provide a quick 'on-time' reference guide, we defined danger as the "time available to take corrective actions". This definition also captures the dangers that arise from one time use and a single dose. This is deliberately done in line with our mission to prepare young people to make informed and evidence based decisions – which require deliberation and careful consideration of the pros and cons. The warning system is designed to prevent harm from a one-off, impulsive decision that is made in haste. For example if the substance is so potent that a single use (overdose) can cause serious harm, as it is the case with **DNP** (2,4-dinitrophenol), our warning system flags this substance red and 'very dangerous'. Erring on the safe side, substances with unknown or unclear compositions are also flagged as 'very dangerous' although the risk here is related to the unknown factor.

Impact assessment: The **SAFE YOU** Self-Efficacy Scale

The **SAFE YOU** Self-Efficacy Scale has been specifically designed to offer before- and after assessment of 'the journey travelled'. Self-efficacy is a very important aspect because it reflects how confident people feel with making decisions and reaching their goals. To this end, trainers may find the **SAFE YOU** Self-Efficacy Scale particularly useful in assessing the impact of the training on trainees' self-efficacy.

We recommend that facilitators use the **SAFE YOU** Self-Efficacy Scale twice: administer it before the training and again immediately after the training. This will enable them to capture any changes in learners' self-efficacy towards making decision about **PAES** use, and also indicate how effective/impactful the training

was with respect to producing those changes. The **SAFE YOU** Self-Efficacy Scale can be used to assess the effectiveness of the sessions in each theme individually or as a course covering all eight themes. It can also be used to establish a baseline to gauge whether training is needed for a particular group; or used as a self-assessment tool.

Practical Advice for Coaches and Teachers

It is important then that learners apply learning, connect with others, collaborate in substantive ways and create responses to real problems. They should cease to be 'receivers' of content and instead become activators of their own learning.

Whilst this is true of all learning at the current time it is particularly relevant to our project and to the controversial nature of our subject matter and our mission. Where possible, we have tried to foreground group activities, shared engagements, and debate, discussion and presentation activities.

We hope that tutors will practice a supportive pedagogy to this approach: preparing carefully, being assured of learning goals, leading discussion, challenging misconceptions and supporting dissent. The supporting materials in the **SAFE YOU TOOL** are designed to help those with no pedagogic training or experience. Equally our session plans are applicable to self-directed learning and can be accessed without tutor support, however the real excitement of change comes from awareness and groups sharing and working together. A group of your exercisers might pause at the end of a work out to consider the session themes together in self-supporting groups.

There is no correct order from which to approach the sessions or the themes. Each can be seen as a stand-alone workshop session. There is plenty of variety in respect of supporting materials and modes of delivery so trainers are free to choose how where and when they use these: in combination with the case studies, or using the case studies separately and for other conversations. What is important is to keep the focus on enhancing health literacy, enabling informed choices, and developing confidence one's ability to make a responsible decision based on information, evidence and after taking both the body and the substance into consideration.

There is enough here for a full course, separate and self-contained in its own right, or individual sessions as openers for, or links into other programmes of health education and doping topics, even for cultural and media studies in tutorial sessions and structured lessons. We believe the **Session Plans** also offer sufficient stimulus for self-study and enough flexibility to be the subject of discussion in informal coaching sessions or in fitness sessions with peers. Additional help on how to run the **SAFE YOU** training workshops is available on the project website. A number of suggestions for how best to use the PowerPoint presentations, the videos and other supplementary materials - along with useful tips for interactive discussion and maximising participants' engagement in these discussions - are presented to aid the most effective use of the **SAFE YOU TOOL** by inexperienced educators. To facilitate dynamic discussions and debates around the case studies, each case study comes with additional supporting materials suggesting ways to use the case studies and including a set of possible questions for **workshop** discussions or independent learning assignments. General help on how to run workshop discussions effectively is also provided.

Thinking Forward

We hope that you find the SAFE YOU TOOL helpful in your work educating young people about PAES. If you would like to use or incorporate the SAFE YOU TOOL, as a whole or any part of it, please visit the project website: www.safeyou.eu

Having secured further funding from the ERASMUS+ Programme for supporting our work in the next two years, we will endeavour to keep building and expanding the SAFE YOU TOOL. Please come and visit our website as often as you wish. If you would like to be involved in this project, have suggestions or comments for us, please get in touch. We would very much appreciate your feedback.



03 CASE STUDIES



"The stories behind the Case Studies are true but the names of the characters and some demographic details have been changed for protection. The scripts and quotations have been edited to tell a story and to have a uniformity in narration."

The Competitiveness

Episode 1: Christos' story

Christos is a 22 year old bodybuilder. He started playing football when he was 12 years old. In order to meet the demands of the training, he also started working out in a fitness gym. He realised he was not an exceptional football player; in fact, he enjoyed his gym sessions more. He stopped playing football and started to devote himself to fitness and bodybuilding. The last four years, he trained in a bodybuilding style and became a competitive bodybuilder.



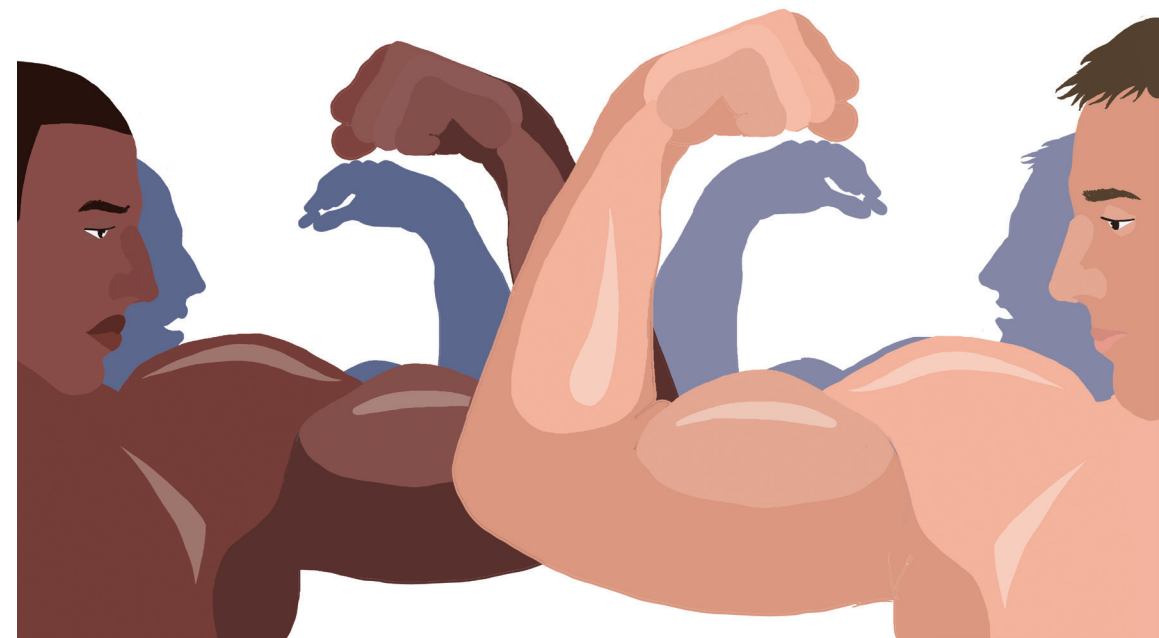
He does not use gym instructors; rather, he prefers to coach himself. He designs his training programs by getting information from the Internet or books. He also discusses and exchanges training tips and programs with other people on the field such as experienced athletes, coaches and doctors, whom he fully trusts. His goal is to have a stronger and more muscular body, as well as to stay at a competitive level.

Christos believes that gym goers' diets should consist mainly of protein and carbohydrates through meals and nutritional supplements. Taking vitamins and minerals are not necessary as they come from the meals themselves. In order to increase muscular strength, gym goers need to take nutritional supplements such as protein, carbohydrates, glutamine and casein - in addition to consuming meals rich in protein such as

beef, chicken and rice.

However, he also believes that for a competitive bodybuilder it is necessary to use substances with performance enhancing effects - including both nutritional supplements and doping - in order to be successful. He says: *"Training and nutrition alone are not sufficient to take you to the highest level of competition."*

Christos thinks that the most important substances for exercisers are testosterone and growth hormone. He has tried testosterone, growth hormone, Deca, Primobolan and other substances. He is doing six-month training cycles with three months substance cycles. During the preparation period, he spends three months using steroids and three months off steroids. At the same time, he uses other performance enhancing and nutritional supplements. This is because each anabolic steroid has a different effect - depending on the training period, he selects the substances depending on his particular goals for that time period. He explains: *"For example, I take the*



growth hormone before falling asleep during the period of muscle strength training but I take it in the morning and in the afternoon when I stop muscle strength training."

Christos has experienced several negative side effects from using doping substances such as palpitations, headaches, swelling, weakness, aggression and even fluctuations in sexual desire. Once, he overdosed with an anabolic steroid and he had a stroke. Despite these side effects, he believes that these substances have many benefits such as increased muscular strength and endurance development and he intends to continue using them - with harm-reduction measures in place. *"During the competition period, I may take up to 100 pills every day but I regularly have blood tests, usually a month after the end of a cycle, to check my health."*, he says. Depending on these test results, Christos may take additional substances, such as hepatoprotectives or blood pressure medications, that help his body to recover. *"These protective substances depend on the doping substances I am using. For example, if I use Aromasin during the cycle, then I will take Prolomet and Proviron during the recovery period."* The types of substances, the dosages and the use patterns are determined by Christos himself, based on his experiences, and the consultation with a doctor. Christos thinks that accessing and purchasing doping substances is easy. Gym goers can purchase these substances from the Internet and food stores; or through athletes and fitness instructors. He never faced difficulties in finding the substance he was looking for. The Internet is an important source of these substances and there is always a network of people that can provide access to these substances quickly.

The Influence

Episode 2: Yannis' story

Yannis is 21 years old and likes spending time in fitness gyms. He believes that doping substances are used by gym goers to increase their strength. He also claims that there are normative reasons which explain exercisers' use of these substances: other exercisers do it, so it is acceptable and using these substances helps keeping up with exercising.

According to Yannis, doping use is now very common in gyms, as exercisers simply desire to look better as soon as possible. Doping substances are used in cycles with some intervals. Yannis thinks there are certain periods when use is increased, especially in the summer. Also, he believes that some gym goers use these substances, while others abuse them.

Yannis himself uses nutritional supplements throughout the year. Depending on the time of the year, he will do cycles of different nutritional supplements. He mostly uses supplements to increase muscle mass and aid recovery from training. This year for the very first time he was introduced to steroids by his personal trainer. Reflecting on this experience, Yannis says: *"I did a cycle with Winstrol but I am still unsure whether the substances have helped me or not."*

From his experience, Yannis thinks that not many gym goers buy doping substances through the Internet because they worry that the substances might be impure. Yannis thinks that gym goers ask fitness

instructors for information about doping use. Gym goers trust their instructors. They are influenced and inspired when they look at instructors' strong and muscular bodies. In addition, Yannis thinks that gym goers purchase these substances from nutritional supplement stores recommended by their fitness instructors. Yannis argues that it is risky because *"nowadays, many people call themselves personal trainers with minimal qualifications and they are the persons who promote doping use."* He is also aware of advertisements where popular athletes, personal trainers or coaches promote the use of performance enhancement nutritional supplements. This in turn develops a mentality of supplement use as necessary to increase performance beyond regular training.

The Acceleration

Episode 3: Kostas' story

Kostas is 22 years old and is a recreational athlete. Kostas has been training in gyms and fitness centres for several years and occasionally practices martial arts in his free time. Kostas believes that gym goers use doping substances to optimize their performance when training alone is not sufficient to reach their goals. Kostas also claims stereotypes about attractiveness, social norms and overall moral climate that prevail nowadays increase doping use among exercisers. He says: *"exercisers are heavily influenced by social media and the image stereotypes they promote, and they reach for substances when they struggle to achieve the 'ideal body' quickly"*.

Kostas has used nutritional supplements systematically the past three years. He started using protein supplements and amino acids, then he soon moved to Tribulus and ZMA. Currently, he is using combinations of nutritional supplements depending on the time of the year.

"EXERCISERS ARE HEAVILY INFLUENCED BY SOCIAL MEDIA AND THE IMAGE STEREOTYPES THEY PROMOTE..."

Kostas thinks that gym goers use nutritional supplements daily, whereas doping substances are used in cycles of six months. Performance enhancing substance use (including both nutritional supplements and doping) depends on gym goers' goals. For instance, steroids are used during winter and spring to bulk up, whereas the use of fat burners is increased in summer time. The dosages depend on the weight of each gym goer.

For information on performance enhancement substances, gym goers consult friends and fellow athletes, or ask for information at nutritional supplement stores. Kostas says that gym goers purchase these doping substances through the Internet. He also claims that these substances are promoted heavily by gyms.

The Norm

Episode 4: Jermaine's story

Jermaine is 18 years old and he is finishing high school. He started to play soccer at club level when he was 10 years old. While growing up, his peers in the soccer club became more muscular and physically stronger whereas his body appeared to be underdeveloped. To improve his physical appearance, Jermaine decided to join a gym.

At the beginning, he went to the gym sporadically but soon he started to enjoy the motivating atmosphere. His parents bought him a permanent membership as a present for his 16th birthday. Because they thought nutritional supplements are an integral part of the typical training routine in gyms, they also gave him a package of protein.

Jermaine started to go to the gym twice a week and soon he noticed positive results. He improved his gym performance and his body became more muscular. Supplementing with protein became part of his training. When he was 17 years old, one of his friends in the gym convinced him to give up soccer and invited him to join an American Football team. Since then, he works out in the gym three times a week and practices American Football with his new team-mates twice a week.

Since the day Jermaine received the first protein



package from his parents, he consistently consumes nutritional supplements. He includes an appropriate amount of protein in his gym routine after every workout. Recently, Jermaine started to use pre-workout supplements which he consumes before the workout to be alert and focused for the upcoming session. During the American Football season, Jermaine uses painkillers, especially when he feels pain in his shoulder and other body parts; or when he has a headache after a game. During the games, the coaches usually provide beverages containing magnesium and calcium which all team members, including Jermaine, consume regularly. So far, Jermaine has never used any other performance enhancing substances.

After Jermaine received protein from his parents, he subsequently ordered protein from the Internet. He educates himself about the substances that he wants to use. *"I tested different kinds of proteins before I decided to stay with the products I currently use."*, he says. In fact, he tried several brands until he found his preferred mixture and flavor.

The 'home pharmacy' of his parents provides him with painkillers. His parents know that Jermaine takes these substances. He hopes that he will be able to order the pre-workout supplements from the Internet soon. Currently, this product is not available in Germany. He received it from a friend at the gym who had been to the US and bought an XXL-package for him.

Almost all his American Football team members go to the gym regularly and take all sorts of supplements. Most of them use protein and creatine. *"To them, taking supplements is just as normal as consuming painkillers. Nobody questions this procedure or talks about it."*, Jermaine says. Mostly he is not influenced by the supplement manufacturers' commercials or promotions; but now and then he picks up some supplements that are promoted by players from the U.S.

American Football League (NFL). Jermaine knows what he wants when he orders protein from the Internet; or when he asks a friend to buy him supplements in the US. The distributors on the Internet often include special offers or discounts, but Jermaine is not interested in these deals. He just orders the products he knows and wants.

The Look

Episode 5: Rico's story

Rico is 23 years old and works as a qualified bank employee. He started an apprenticeship right after he finished high school and now works at the bank full time as a member of staff.

Rico was not interested in sports, but he was a big movie fan. He was inspired by the aesthetic bodies of his favorite actors and wanted to emulate their bodies. Rico was always impressed by the actors who had more defined biceps and muscles than him. He became a member of a gym and started to work out three times a week regularly. Over time, he changed his routine and now he works out almost every day. He is proud of his well-toned body and tries to maintain his diet to remain slim.

Rico started to go to the gym when he was 15 years old. He recognized the first positive results immediately

**"I FELT THAT
I MUST GAIN
MUSCLES
TO BECOME
EVEN MORE
IMPRESSIVE."**

and subsequently increased his workout sessions both in terms of time and intensity. After the first one and a half years of training, his body performance did not increase as fast as he wished. *"I felt that I must gain more muscles to become even more impressive and with that, it appeared to me that I needed to change something,"* he says.

Rico asked other members from the gym he befriended and the most frequent answer was to use nutritional supplements. Rico decided to buy his first protein supplements at the gym. He quickly became interested in supplements and willingly tested any product that was offered to him. At first, he bought the over-the-counter supplements in his gym, then he became regular customer of a specialized shop right next to his apartment. A further one and a half years passed before the pattern of stagnant performance repeated itself. Once again, Rico found himself too thin and not muscular enough. He observed what the other frequent gym users looked like. Most of them had a physique like the actors in Rico's favorite movies.

"I started asking for more information about how the others gym users got their bodies in shape. I also asked the store owner of the shop where I regularly bought my supplements. They basically told me that I would not make it to where I wanted to be just by normal workouts and normal supplements. In particular, a guy I did not know all that well told me what kind of substances I needed for real muscle growth. He even offered to buy the proper medication for me," Rico remembers. This was the first time Rico took anabolic steroids. He was 18 years old.

In the following weeks, Rico felt great. He was happy because he could see instant improvements. He went to his friend's shop and shared his experience - which opened a door for him to a whole new world. He was

offered to purchase everything he needed to set up a 'course treatment'. Rico was introduced to a group of other users. Among other things, he was advised to use testosterone on top of steroids. Rico had no doubts. His muscle growth and performance exploded.

However, after a short period, the first side effects - acne on his back and first signs of gastric problems - appeared. He increased his dosage until two abscesses formed on his back. He suffered pain, went to the doctor and was finally sent to a hospital for an operation. *"The operation was a wake-up-call, but despite the negative experiences I continued using anabolic steroids. Not as extensive as before but I still want to keep my body in the shape."*, he reasons.

Rico never used the Internet for buying substances or even as a source of information. The gym offered basic supplements to Rico, which he tried excessively. Later in the shop he was offered a discount rate for his nutritional supplements (e.g., protein, creatine) if he agreed to try new supplements from time to time. He was drawn to appealing brands (e.g., "Body Lab") and product packaging. Rico did not ask for information about the products, as long as they served as a means to improve his athletic performance and shaped his body as he wished.

Although he did not know the gym user who sold him his first steroids, he trusted him. *"The impressive body was good enough reference"* for Rico. At that point, Rico worked out regularly and was well known in the gym. Later the shop was his main source of substances (anabolic treatments and testosterone). He never questioned the origin or production of the illegal supplements. Rico basically bought the products and did not care about information concerning the substances nor about the price. When purchasing nutritional supplements, his decision was not influenced by special offers and discounts, but more so

by the pure size of the package instead of the reduced price. When Rico obtained the steroids, he bought a whole cycle along with substances for post cycle therapy.



The Mindfulness

Episode 6: Tim's story

Tim is 24 years old. He started with Jiu-Jitsu at a competitive level at the age of seven. During his life, he has actively pursued several martial arts. He even competed at an international level but never reached a point where he could earn a living from sport. As he lost his passion for martial arts, Tim decided to study sport science and has turned to CrossFit - which was an emerging new sport four years ago. Currently, Tim exercises three to four times a week and is thinking about entering some regional CrossFit competitions.

Because of his sports, Tim has always been in a very good physical shape and he has always had a positive body image. Since he started CrossFit, he gained even more muscle and his body fat percentage decreased significantly. Now, he is very satisfied with his appearance although he thinks he could lose some muscle mass. Throughout his sporting career, Tim learned that athletic performance is highly dependent on exercising and willpower.

During his former martial arts competitions, Tim consumed energy drinks. He reasons: *"Because of the energy drinks, I could maintain my focus on the next competition and felt better prepared for the next opponent"*. He also tried creatine once during his martial arts training, but he did not notice any performance changes. Tim thinks that *"martial arts in general offer a mindful approach to body and soul and should not be supported by any additional substances"*.

In contrast to that statement but necessary to support his own extensive CrossFit training, Tim uses protein shakes. His training partners at the studio also regularly use boosters during their training sessions, but he has never considered it owing to the potential side effects. Because he is close to the studio's owner, he has insight in the promotional activities of several nutritional supplement companies. Due to the ample free samples the studios are provided with, Tim is very suspicious about the promises these products boldly make. His protein supplement is produced by a company which is located close to the CrossFit studio. He says that they personally guarantee the quality and purity of the supplements and he trusts them. Because of his studies, he knows how the body works and would not use any substances without consulting experts he trusts. *"The other products I regularly see do not provide any particular background of specialized expertise."*, he says.

Although Tim has heard stories of athletes using illegal products in martial arts and in CrossFit, even at a recreational level, he has never had personal contact with such substances. On one hand, Tim thinks illegal products might be effective; but on the other hand, he is concerned for the associated health hazards and the ethical implications. *"If I took those substances, I would contradict the spirit of martial arts; and then I would lose the respect of my friends and family."*, he says. Tim readily supports any campaign that promotes clean sport. In his opinion fitness studios should be specifically targeted. *"Every athlete, no matter what level he or she is at, should be aware of the problems related to consuming illegal substances"*, he says and continues: *"I would also impose penalties to dissuade the distribution of such products."*

"EVERY ATHLETE, NO MATTER WHAT LEVEL HE OR SHE IS AT, SHOULD BE AWARE OF THE PROBLEMS RELATED TO CONSUMING ILLEGAL SUBSTANCES."

The Shortcut

Episode 7: Dimitrios' story

Dimitrios is 24 years old and he is an amateur bodybuilder. He believes that gym goers use doping substances to get faster results and to look better compared to other gym goers who might be in better shape, indicating a normative element in doping substance use. Being more sexually attractive is another reason for using doping substances to improve physical appearance.



Dimitrios also believes that it is easier and better to consume nutritional supplements, such as protein shakes, rather than trying to get the same nutrients from regular food. Performance enhancement substance use varies with respect to dosages and type of substance used. Some substances are used daily but their dosage may increase occasionally. Dimitrios says: *"there is seasonality in performance enhancement substance use, with some doping substances used for 'bulking up' and increasing muscle size in winter time, and other uses for fat burning around summer time"*. He believes that excess use is an issue and *"exercisers may use doping and nutritional supplements at doses well beyond the recommended ones"*.

Dimitrios has used nutritional supplements regularly for the past five years and has been experimenting with steroids for the last two years. He is doing short cycles

of steroids to increase his muscle mass when he feels that his physique is not improving as expected and needs something more to boost his training.

According to Dimitrios, information about nutritional supplements is widely available. Gym goers may seek such information from personal trainers or from other fellow gym members. *"Doping substances are promoted by elite bodybuilders"* - he says - *"whereas nutritional supplements are also promoted by athletic champions through advertisements or by coaches who advise exercisers to take supplements to do better"*. Accessing and purchasing doping nutritional supplements can be easily done on the Internet.

The Awareness

Episode 8: George's story

George is 21 years old. He likes to do sports, especially CrossFit. He has been using steroids systematically in the past two years. He started using nutritional supplements but was soon introduced to steroids. He is using 10-day cycles during the winter period. He also uses several nutritional supplements such as protein supplements, amino acids and Tribulus.

He believes that gym goers use doping substances to obtain a strong and muscular body in a shorter period of time. *"We use supplements because they help us to be satisfied with how our body looks. We need these substances as part of our 'sporting mindset'."*

According to George, athletes take doping substances in cyclic intervals, which always depend on the substance. *"For example, some drugs should be taken before training. On the other hand, in fitness sports, exercisers usually take nutritional supplements all year in cyclic intervals lasting one month but they take doping substances for about eight to nine months. The most sensitive period to take doping substances is in the summer."*

George is convinced that people are heavily influenced by models with extremely toned bodies they see on television; consequently, gym goers try to obtain such bodies by using performance enhancing substances. Regarding how gym goers get the doping substances, George knows that most companies have websites and thus gym goers can buy drugs on the Internet. He points out that drug companies only present the positive effects of the performance enhancing substances to boost sales but negative side effects are not mentioned. These doping substances are promoted through videos on YouTube which are launched by popular athletes, through social media or through events which are sponsored by drug companies. George also thinks that 'word-of-mouth' is a powerful marketing tool and gym goers are informed about doping substances by other athletes rather than by their coaches.

Concluding, George underlines that if someone wants to purchase doping substances it is easy to do so. He believes that illegal substances produce results more rapidly while the use of legal supplements require a greater effort to 'build' a strong body, thus the decision to use doping substances depends on the individual's personality.



The Understanding

Episode 9: Giovanni's story

Giovanni is 23 years old. He started to play rugby when he was 12 years old. When Giovanni was 17, he had the opportunity to enter in the selection process for a national Italian youth rugby team. During that time, he suffered serious injury to his knee. To be able to play on Sunday, he took a mix of strong painkillers such as Buscopan and Voltaren. Giovanni knows that "in



Italy

rugby, the use of medications and medical practices is very common from 14 years of age, specifically when this sport generally becomes more aggressive and hard". In the sports club where Giovanni was playing the doctor advised him to take medications or treatments. For example, when his teammate had the same knee injury, the doctor aspirated fluid from his knee. Another teammate was forced to take human growth hormone (GH) by the club. However, ultimately Giovanni had to have an operation to fix his knee and his dream to become a professional athlete was finished.

Obviously, Giovanni took the performance-enhancing substances without his parents' knowledge because he knows that they would absolutely disagree with this choice. Thinking back, Giovanni acknowledges: *"At that time I was not aware of the possible consequences of taking that substance. My only goal was sports performance and the ability to play every Sunday. Nothing else mattered."*

Giovanni knows about supplements because in rugby they are widely used, and he knows that many of his teammates and friends use them regularly. In fact, they always have those fancy colored boxes which attract Giovanni a lot. In high level rugby, many players are sponsors of these substances, and there are many stands filled with these colorful boxes during the sport events. It is no wonder that Giovanni has become interested in knowing more about supplements. He never underestimated the possible negative effects of excessive use. Giovanni believes that these supplements can be useful. *"For example in rugby, the physical contacts during the match generate physical problems after the game. So it is very important to gain muscles in order to counteract or reduce these negative effects.",* he explains. *"Controlled consumption of supplements, in conjunction to physical activity in the weight room, could give an advantage because they help to build a strong muscular structure more suited for the strong impacts of the match."*

"MY ONLY GOAL WAS SPORTS PERFORMANCE AND THE ABILITY TO PLAY EVERY SUNDAY, NOTHING ELSE MATTERED."

Giovanni thinks that today the 16 and 17 year olds who play rugby are more in touch with legal substances, such as dietary supplements, even if in some cases they are in contact also with illegal PAES.

In his opinion, there is more misinformation about legal PAES than about illegal PAES, since the latter are often the focus of anti-doping campaigns.

However, in gyms, where there are no controls, there is the increased use of both controlled and uncontrolled PAES.

Giovanni thinks that in fitness, the PAES market does not need any advertising. Usually there are gym instructors or other gym goers who are motivated to sell some substances. He tells about *"a company which exploits this and distributes its products through these agents"*. Unfortunately, the system allows everybody to become a seller of legal PAES. These representatives, people without any competence, frequently recommend substituting a meal with a shaker of supplements. Generally, the instructor is the key figure who advises you to use these substances, since he often benefits financially if he sells substances. The gym instructors sometimes also give recommendations about the use modalities and the substances' dosage without any specific clinical knowledge or analysis. Giovanni speaks about sport events *"where you can find a lot of publicity about PAES, especially through stands, flyers, and free samples of substances. For example, there was a beach-rugby tournament in which the sponsors gave a goody bag filled with a lot of different substance samples to the finalists. How is that for promotion?"*

Giovanni knows that his body is his responsibility and that he needs to know how to protect it. In the sports club where Giovanni plays rugby now there is no nutritionist, only a physician who deals mainly with injuries. However, Giovanni contacted a nutritionist who advises him which substances to take, and how to take them. The nutritionist has chosen a specific plan of substances to use only after specific clinical analysis that he repeats frequently. Giovanni only buys the substances from licensed pharmacies.

The Overload

Episode 10: Luigi's story

Luigi is 25 years old. He is currently a university student studying sport science. He always loved sports. When Luigi was 15 years old, he developed a passion for martial arts, so he decided to practice karate as his main sport, aiming to reach a competitive level. When Luigi was 16 years old, he began to drift away from karate and started to play American football, which was an uncommon sport in Italy at that time. Today, Luigi plays American football for his hometown team, in the top division of the Italian championship.

In his sporting career, Luigi - directly and indirectly - encountered different types of PAES. His first experience with PAES was only a few months after he started playing American football. This sport is very hard and implies much physical contact. Luigi was thin in his adolescent years, not fully developed physically. Some coaches in his team advised him to work on his physique, joining the work in weight room and using of protein supplements (i.e. protein and amino acids).

Luigi remembers: *"At the beginning, I did not accept advice easily from my coaches. I came from a different sport background, karate, which mainly focuses on the improvement of mental and coordination skills rather than muscular ones. I was also worried that increasing my muscle mass significantly would result in losing the speed and coordination that I had developed with karate"*. After speaking with his teammates Luigi realised that all of them used protein supplements. Consequently, Luigi also began to consume protein

and amino acids under the guidance of his teammates regarding dosages and consumption methods.

In conjunction with his work-out regime, Luigi effectively increased his muscle mass in a short period of time. These first positive results motivated Luigi to work hard on his body to improve both his performance and physical appearance.

During that time, Luigi began seeking more information about supplementation, and contacted a specialist. Unfortunately, the nutritionist did not know anything about Luigi's sport or about the specific metabolic needs of an athlete practicing that sport. Luigi remembers: *"In that period, I consumed a very large amount of supplements which led to metabolic overload"*.

When Luigi turned 19 and his body had developed naturally, he decided to reduce the amount of supplements. Currently, Luigi is not a professional athlete. He mainly uses creatine before matches, and vitamins in conjunction with a balanced diet suggested by a nutritionist. Luigi thinks that people have always used substances to improve their performance; and thus, taking legal substances in a planned and medically assisted manner is a socially accepted practice. He also feels very comfortable with protein supplements because they are dissolved in water or milk, replace a meal and can be easily taken at any time.

However, Luigi thinks that having different laws regulating PAES use across countries is not right. *"For example, there are substances that are illegal in Italy but are legal in other countries, such as Australia and South Africa"*, he comments. He wonders how it is possible that the university courses highlight and teach the possible negative effects related to the use of some substances that are legally sold in some countries.

The Environment

Episode 11: Emanuele's story

Emanuele is 22 years old. At the moment, he is studying sport science at university. He has practiced weightlifting at an amateur level for two years without any competitive purpose. Emanuele realized that all the people who practiced weightlifting took some sort of protein supplements. Conversations between gym patrons and the instructors often revolve around what substances they may take and what substances are the best. *"More than once, I have seen some guys give themselves injections of GH and/or testosterone in the dressing room."* - Emanuele adds - *"I wondered why they did this. I knew for sure that nobody in the gym participated in competitions."*

With this experience, Emanuele now understands that the sole purpose for substance use is the improvement of physical appearance. Unfortunately, this is not accompanied with correct information and/or following the advice of a professional. Emanuele explains: *"As gym users ask around for information, they believe everyone, especially guys with impressive looking bodies which inspire trust. They must know what they are doing because they've obtained the desired outcomes. In general, there is a complete lack of correct information about the substances used and their effects, as well as the correct way to use them. It's what we call 'bro-science'... which could be accurate and good but equally, it could be very much misinformed. You have to be careful."*

After a few months, Emanuele decided to start taking protein supplements in an attempt to improve his physical appearance in an easier way. Later on, he looked on the Internet and found out that a box of protein supplements costs 40 Euros, and decided to buy it. He started taking protein every day and the box lasted for a month. He decided to continue buying more boxes in the following weeks and months.

Emanuele looked for more information online and found a special offer of a free branded T-shirt with the purchase of three boxes. Emanuele, however, decided to buy only one box, and to proceed step by step. Emanuele tells of a moment when he realised something peculiar in the gym: *"After a few days, I noticed a guy in the gym wearing the promotional T-shirt that I had seen on the Internet. Many people approached him to ask information about the brand sponsored on his T-shirt."* Intrigued by this situation, he started to observe that in the weight room there was an open market of substances, mainly promoted and coordinated by the instructors.

At the moment, Emanuele is in employment and thus has disposable income. He is aware that his financial situation encourages him to buy larger amounts and different types of substances, as well as to buy substances of better quality than he couldn't afford in the past. Emanuele reflects that *"having money is a great temptation to increase my substance use; so is feeling stuck"*. Because Emanuele feels frustrated by the lack of progress despite the workout regime and supplementation, he is thinking about switching to other substances, such as those the others were taking in the dressing room when he was just a novice.

"MORE THAN ONCE, I HAVE SEEN SOME GUYS GIVE THEMSELVES INJECTIONS OF GH AND/OR TESTOSTERONE IN THE DRESSING ROOM."



The Presence

Episode 12: Jeremy's story

Jeremy is 35 years old now but his experience with PAES goes way back into his young adult life. He started weight training when he was 14 years old. His motivation was all about getting "as big as possible". He had a great appetite for sport particularly amateur 'fighting' - boxing, but also martial arts - and was also a useful sprinter.



Clearly as his teenage years developed he trained hard with weights, but also began to seek out and find out about "stuff that would help him get bigger". First stop was his local body building supplement shop where by befriending the staff he began to learn about and use proteins and also creatine. He was gaining weight and lifting bigger weights but also working to keep a balance so he could still sprint. Clearly Jeremy was very committed to getting bigger and better and contemplating the pros and cons of supplements of various kinds.

Jeremy talks too of the time he took Tribulus, how it made him feel "more manly" and interestingly how he felt it gave him "presence". Clearly this young man's use of PAES was beginning to be about appearance and self-image as much as it was about any perceived sporting advantage.

Maybe as a result of this boost, he became night club door staff, joining that group of over-coated muscle men manning the velvet rope. Suddenly the dark world of PAES opened up. Well paid, late nights and with everything to gain from a dominant physical stature and quick reflexes Jeremy moved on. He was given pills by his peers in the nightclub business and became increasingly aware of his colleagues' widespread use of injected steroids - often doing so on work shifts, but he was wholly resistant to injecting and remains so.

"I was less than impressed with the tablet form steroid I was given. With no real result to show I did not persevere but I kept on with Clen and Efergen - mostly as weight control.", Jeremy says. He pressed on with an increasing commitment to his weight lifting. Experimenting with Novatest which dramatically increased his aggression, gradually becoming more disillusioned as he realised how prevalent the steroid use was in his weight lifting competitions he used Clenbuterol, bought through a friend, and can easily get growth hormone from his old doormen crowd.

Generally speaking, he is happy to buy substances through second parties but he is worried by the possible side effects of steroids that he has read about, notably heart attack and stroke. He is pretty clear that all sorts of controlled substances are freely available through gyms and remains open minded, suggesting that in any sport where there is power, there will be steroids.

The Machine

Episode 13: Harry's story

Harry is 25 years old. He spent his sporting time actively pursuing rowing and a range of organised team sports; his focus was on the gym, with weights and circuits as a central part of his training.

Harry confesses that he *"never considered using doping as he was constantly going into tested competitions"* - which seems to be a constant pattern with many athletes whose focus is organised team sports. However as soon as his team sports backed down and he began to focus on individual weightlifting and more loner physical training he became keen to up his personal competitive edge.

Harry started taking anabolic steroids a year ago and has been observing a calculated and rational regime of dosage and frequency which he relates in a very 'matter of fact' way, this is not a careless individual, a vain uncontrolled spirit, an unscrupulous amoral operator, but an athlete at ease with himself in respect of a world where "everyone's doing it".

Harry's motivation began with *"curiosity"* and now *"I just want to see how far I can go"*. He tells of moments in the gym *"when they know you're using steroids and everyone crowds round, you know that suddenly everyone is -everyone wants to know"* and of course the gym networks offer every opportunity for regular supply: *"If it's one of those dungeon gyms it'll be the owner or his brother that's supplying, if it's a*

commercial gym, it'll be a pusher-local supplier, in and out", Harry goes on *"and anyhow, there's internet supply and it's not that much hidden and even user reviews of outlets and suppliers. So it's really not hard to get."*

Harry is aware of all the negative side effects and speaks at length about how *"it's important to know about coming off steroids properly."* Clearly he sees it all as quite a normal part of his current regime, quite a part of his make-up, his sporting life.

When challenged on the moral aspects he equivocates. *"We all know that teams at professional level and top amateurs in these sports are on it, so why not, often the coaches take the flak, or manage athletes cycles so they can proceed undetected."*

Harry has no time for the uncontrolled substances, protests that those marketing proteins and diet supplements are *"peddling a lies"*, using the biggest body builders in their promotions that are probably on steroids anyway.

"WE ALL KNOW THAT TEAMS AT PROFESSIONAL LEVEL AND TOP AMATEURS IN THESE SPORTS ARE ON IT, SO WHY NOT, OFTEN THE COACHES TAKE FLAK, OR MANAGE CYCLES SO THEY CAN PROCEED UNDETECTED."

The Respect

Episode 14: Rita's story

Rita is 28 years old. She has grown up with two brothers who were really keen on bodybuilding. Rita reflects that in the beginning, when she was 20-21 years old, all she wanted was to have a "beach body". She followed her brothers, joined the gym and started to work out - sometimes with friends, colleagues or just on her own. It was not until she joined a more "hard-core" gym with female bodybuilders that she got more serious about her workout.

Rita came in contact with bodybuilding drugs in the gym. She made friends fast and when they saw that Rita was serious about her workout regime, they had no problem freely talking about the drugs they took to enhance the effect of their training. Rita saw nothing wrong with these substances. She explains: "I was seeing the results of the other people that were on the 'juice', or the 'hot sauce' as we call it. After seeing that so many people were using and nothing was really wrong with them. This was how I started." She says - "I've taken quite a bit of stuff, you know, like test-e-cycle1, D-bol, winstrol and stuff like that, although I'm not on a cycle at the moment...".

Rita also wanted to lose some fat and asked about specific substances that might help with it. Someone at the gym recommended DNP. At first, Rita was skeptical about it. She turned to the Internet to get more information. when she recalls what she was thinking she asks: "Who wouldn't be skeptical? DNP was

described like a serious drug that kills you instantly.. but after seeing the guy during and after cycle being still alive and fine; and then seeing other bodybuilders taking it and not only do fine but getting good results. I wanted the fat loss quickly. If you ask anyone who trains, I think they would do it as well."

At the end, Rita decided to take DNP and T3. She got them from the Internet but she admits that she had no idea if the pills she got were the real thing. Reflecting on her experiences, Rita says that, at first, taking DNP was not very dramatic and she felt that it did not do much at all; but the second week was very hard. She asked one of her brothers to stay with her for the second week. Rita admits that "first he told me off for taking that stuff... but he was sort of curious too and he helped." Recalling her experiences, Rita continues: "I was sweating so much, and then I was getting cramp in my muscles, insomnia at night, lethargy during the day. That was the worst thing during work out. If I drank water, I got that horrible bloated feeling."

Also, Rita understands that no drugs do magic. "You have to control your lifestyle and you have to understand what those substances do to you" - she says, then adds - "you should only take DNP if you are serious about your workout regime. There is no point in taking it and going through all that hassle and lose the fat to just gain it back because your diet is poor... Your knowledge about general health has to be there. It would be much easier doing a liposuction if you don't actually want to work for your goal."

Rita also talks at length about the importance of a supportive broader environment. Other gym users and the person who sold the DNP to her explained all the side effects and helped her to use it safely. She says that it was "actually really nice of them to be honest as really they didn't have to, they could have just sold it to me and that's it."

Rita argues that the problem is not with the drugs per se, but the users. In her opinion, it is really important to be prudent and respect the drug. She believes that there is a need for reliable advice and guidance to help those who want to use substances and she feels lucky that her environment provided guidance for her journey.

The Balance

Episode 15: Jena's story

Jena is 24 years old. She is a committed athlete and regular gym goer. She enjoys weight training and circuits and has recently begun to enter into competitive weightlifting *"in a small way"*, she says. It's not clear how far she intends to go with this, or indeed whether she wishes for the *"competitive thing to take over from the recreational thing"*. It's all a matter of finding *"the right balance"*, she says.

She is proud to have developed an athletic physique, personal strength and argues that her regime has given her purpose and increased her self-esteem but that she doesn't want to go all out like other women she has seen, *"sure those super heavy weight lifting women are impressive but they're like objects"* - she says - *"and when you hear their voices crack ...nah I don't want that for me"*.

Clearly Jena wants to manage her sport and her physical appearance but keep on the right side of the feminine spectrum. She is relatively small too, short and powerful.

So like many young women Jena's first experience was with Efergen, and her motive was the 'oh-so-common' desire to lose weight- bought on the internet at a time when her image in the mirror was not how she wanted it to be, she recounts its horrendous effect on her, *"my heartbeat was racing, I had the jitters, it was mad"* however, she goes on to say *"it was terrible when I wasn't training, but great when I was"* the combination of the substance and physical exercise producing an experience that was dangerously good.

Jena also experimented with fat-burners and knew about appetite suppressors but she was not saying much about those. Her only comment was to say that they were all freely and readily available in the gym circuit and amongst her gym going female peers.

When the conversation turned to steroids, she admits that yes she had been tempted, been offered it regularly and yes she had seen a documentary and thought *"why not"*, but had been put off by tales of the side effects and observing others. *"I think it's all much more risky for women"* -

she says - *"yes there's that same threat of heart attack and stroke from prolonged use, but I just don't like that horrendous bloating effect, hairy back, spots and all that, but face it, sadly, you're not going to do too well in competitive weights if you look too angelic"*. Again, Jena is considering the issues around balancing her appearance and her sporting performance. She concludes *"The only way for me to achieve lean body mass is to keep training."* You have to know your body to decide what is best for you.

"THE ONLY WAY FOR ME TO ACHIEVE LEAN BODY MASS IS TO KEEP TRAINING."

The Purity

Episode 16: Annie's story

Annie is a 20 year old aerialist, studying for a degree in circus arts. She specializes in floor work and work high off the ground, like aerial silks and trapeze.

Growing up, she was always interested in trying different sports. She is a competent swimmer (although she does not like swimming) and she also tried horse-riding, skiing, parkour and many other sports. She did gymnastics and dance, in a sort of recreational way, once a week for a decade before she discovered circus.

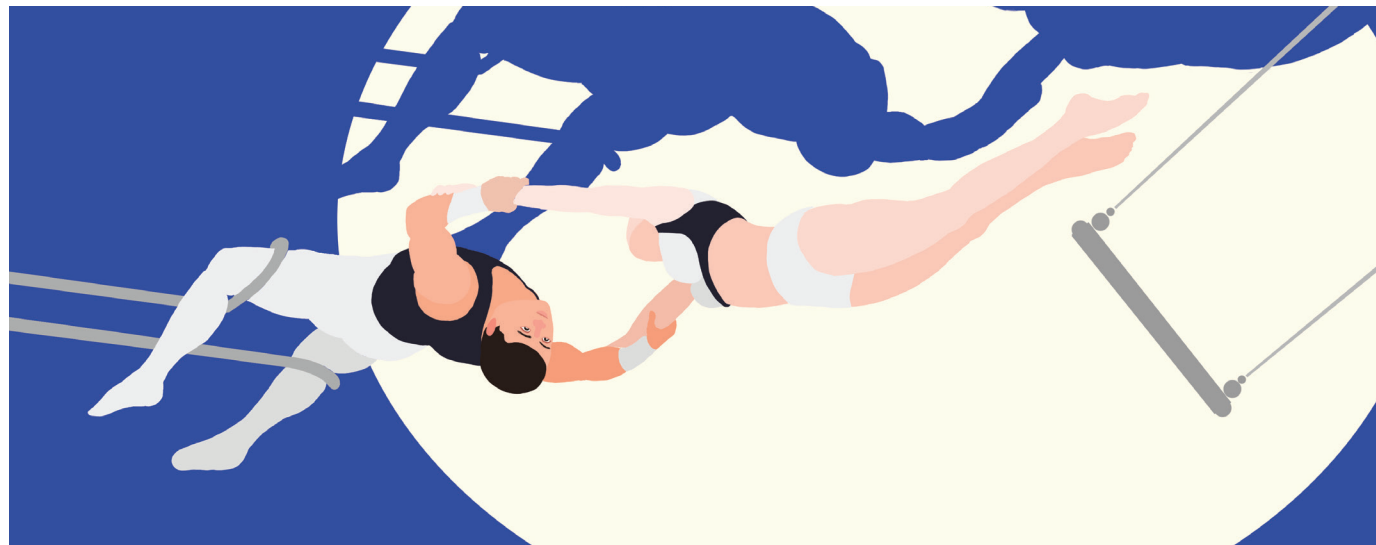
"My passion for circus sparked by a recreational off-school club sort of thing" - she said - "then I started getting really into it. Soon I was doing 12 hours training a week – circus skills, but concentrating more and more on my aerialist performance, and now I am in the degree programme so it's like classes having from 9.00 to 5.00 with an hour for lunch and dance and movement classes. Often we stick around to do long after hours work on our skills."

Annie acknowledges that it is competitive to get circus jobs, but in training for circus performance *"you're really just competing with yourself, pushing at it all the time, for yourself, proving what you can do. And if you get as good as you think you can be at one thing, you can always work on something else."*, she says.

Her dream is to get into one of the big companies, and then maybe start one of her own. In Annie's world, both strength and flexibility is critically important.

Because she does a lot of aerial work, specifically silks and trapeze, her shoulders have developed a lot different from an acrobat. She needs strength in her shoulders, but she also needs flexibility to bend and twist. In order to be strong yet flexible, Annie takes food supplements. She is a vegetarian and she does not like the vegetarian food that are rich in protein such as beans, peas and nuts that much so she supplements her diet with whey protein powder.

Annie does not think that drugs like steroids are really necessary for what she is doing. As she explains: *"We're not really competing and we so much need flexibility which that stuff doesn't help, bodybuilders and free runners maybe, that's all 'show-offy' stuff, but it's not for aerialists like me"*. Annie thinks that performance enhancers are not really common or even talked about within circus. *"You don't get it at all" - she says - "we just train really hard till we get the tricks"*. Even then, at the end of the day, being technically brilliant is still not enough. As Annie concludes: *"You can be super strong and do the tricks, but if you don't have the performance side, people won't remember what you did"*. Drugs do not replace talent.



04 SESSIONS SUMMARY



Themes in the SAFE YOU TOOL

The education provision of the SAFE YOU TOOL comprises twelve Sessions grouped in eight stand-alone Themes. Taken all together, these sessions explore PAES use in a broad environmental, political and social societal context.

The overarching aim of the education provision of the SAFE YOU TOOL is to increase the health literacy of young people about PAES by developing both cognitive and social skills underpinning the motivation and ability of individuals to gain access, to understand and to use information in ways which support considerate self-care for long-term health and well-being.

It is built on the importance of knowledge and revolves around our slogan “Know your body. Know your substances.” - which promotes making informed, evidence-based and holistic decisions about PAES that takes not only the performance- and image enhancing substances but also their effects on a young person’s physical and psychological well-being into account in a broader societal and environmental context. In this endeavour, the SAFE YOU TOOL recognises that PAES use is not a categorical, all-or-nothing decision but it manifests on a continuum along which individual decisions are made. In this continuum, some substances are more acceptable than others; or some substances may even be used in order to stay away from other substances.

Each Theme is supported by one or two detailed session plans, assorted teaching materials (e.g., PowerPoint presentation slides, suggested readings, case studies and videos) as well as assessment guides and assessment tools. The sessions adopt a critical view in order to encourage and maintain an open dialogue - as opposed to giving a lecture - about PAES use.

Within the Themes, each Session is designed for 45 minutes contact time with additional tasks set outside the workshop settings to facilitate independent learning. Although the Themes are primarily designed to be delivered by a facilitator, they are also suitable for self-directed learning.

The detailed Session plans and supporting teaching materials can be used stand alone or in any sequence or combination. The Session plans and teaching materials are freely downloadable from the SAFE YOU Project website (www.safeyou.eu).

Theme 1

Types of PAES & Associated Health Risks

This theme focuses on **differentiating between the different types of PAES** categories such as muscle growth promoters, pre-workout supplements; stimulants; appetite suppressants; fat burners, over-the-counter medications; hormonal boosters and painkillers. The Session is set to help young people **understand the distinction** between nutritional supplements and pharmaceuticals (medicines); to raise awareness of the health risks associated with the off-label use of pharmaceuticals as PAES and to dispel myths related to these substances by providing accurate accounts of what the different types of PAES can and cannot do.

This Theme contributes to functional health literacy by increasing self-efficacy to make informed and evidence-based decisions in relation to PAES. It wishes to **provide unbiased information** about the various types of PAES, deconstructing the belief that PAES use is harmless and critically examines being fit and healthy with the use of PAES.

Theme 2

Why PAES Are So Popular

This Theme explores - in two Sessions - the **reasons behind** the increased use of PAES along with the role of 'enhancement society', images, advertising and media on PAES popularity. The Sessions are designed to have an **open dialogue** about how the advertisement industry and social media often only offer a modified version of the 'reality' with the aim to push people to buy supplements either to achieve appearance related-standards or to enhance their performance in sport/fitness field. The message that is given overtly or covertly by society is that the best, perhaps the only way to obtain 'perfection' - regardless of the field - is by using PAES. The sessions are set out to demonstrate that society-made expectations are mostly not realistic. Participants in these sessions are **challenged to think critically about reasons to use PAES** and if PAES is not the only solution then to actively seek possible alternatives and solutions. These alternatives may very well be centred on having a more realistic individual view of what is 'perfect', set or readjust their expectations and set realistic individual goals.

This Theme contributes to critical health literacy by **developing self-efficacy** to make informed and holistic choices about PAES by encouraging young people to understand that striving for what others suggest or imply is not necessary; and by developing personally relevant plans for performance and/or appearance goal achievements. The Theme promotes the notion that everybody is different and has different needs, thus each individual must be responsible for his/her body and health.

Theme 3

Health Maintenance Or Human Enhancement

This Theme – in two Sessions - aims to increase awareness about the 'dark side' of exercise by **emphasizing the motivational difference** between taking supplements for health or for performance reasons, as well as the perpetual conflict between the goal to be fit and healthy and the goal to have a beautiful and sexually attractive body. The specific questions addressed in the Sessions revolve around **why people exercise and whether the healthy body is synonymous with a beautiful body**. Learners are encouraged to critically evaluate if PAES use was necessary for maintaining a healthy, fit and active body and how exercise can be self-regulated for achieving the intended health benefits. The Sessions recognise that in sport outside anti-doping regulations, the important divide is why one uses PAES; as opposed to whether it is prohibited or not. The Sessions also draw attention to the fact that people's mindset about supplementation changes with the reasons for supplementation (health maintenance vs. performance enhancement).

This Theme enhances self-efficacy to make **informed, evidence-based and holistic decisions about PAES** by prompting learners to reflect on their own exercise/sport participation goals and helping them defining the relative importance of PAES use accordingly; and thus contributes to interactive health literacy. It is expected that upon completion of the Sessions, learners will develop better awareness of the 'dark side' of sport and exercise, leading to increased attention to both health

and psychological consequences of PAES or stronger refusal/avoidance efficacy beliefs toward harmful substances.

Theme 4

Body As Machine

This Theme represents the view that with **medical and pharmaceutical advances that characterise today's enhancement society, the body can be changed**. Thus the body we are born with is no longer a constraint but an opportunity. Whilst the Session content acknowledges the possibility of such advancements, it also **challenges the notion that fixed human capacities can be expanded indefinitely** and argues that whilst body-modification with pharmaceutical aids is certainly more possible than it was a century ago, it is not limitless. For example, the outcome of hard training - with or without PAES use - is partly determined by the individual's genetic makeup (e.g., body composition, body type, reaction to training and PAES).

With a carefully facilitated, dynamic debate around this controversial view, self-efficacy to make informed, evidence-based and holistic choices about PAES is augmented via enforcing personal value systems and disciplines in relation to employing PAES to reach the 'ideal' body. By recognising, being thoughtful of and personally evaluating different points of views about the human body and the risks associated with these views, learners will be better equipped to **comprehend**

a realistic model of the human body and understand to what extent one can intervene and modify his/her own body – leading to increased critical health literacy.

Theme 5

Behind The Scenes: Exposing The Truth

This Theme **critically evaluates whether the ideal body portrayed in media and advertisements is realistic** or rather, it is only an augmented version of reality. For example, a perfect body image can only exist for a short period of time while the photo is taken and is not achievable with dietary supplements only, despite marketing claims. The Session explores the **ideas people and athletes have about product/PAES advertising's use of human body** and whether these ideas are spread across society and valid. Participants are asked to consider if changes in how advertising depicts the human body are desirable and feasible; and encouraged to think of alternative ways to think about and show the human body in advertising campaigns.

This Theme builds **critical health literacy through better self-efficacy to make informed and holistic decisions about PAES** by helping participants feel more confident of their physical appearance and their capacity to recognize the dangers of using PAES, as well as to understand that what they see in the media is not realistic. Through collectively developed action plans that suggest a more realistic and respectful use of the human body in different product advertisements

(i.e. cars, PAES, perfumes), participants become more aware of their personal views, biases and subconscious reactions – which in turn allows for the adjustments necessary for an increased PAES self-efficacy.

Theme 6

Consequences of Using PAES

This Theme focuses on the **physical and psychological consequences of using PAES** and draws attention on the paradox that surrounds dietary supplement use in general; and in particular in sports and exercise. On one hand, the fact that a significant subcategory of PAES (specifically nutritional supplements) is regulated as food often creates the false perception that they are harmless. On the other hand, the same makes supplement formulations, safety, quality control and marketing claims unregulated. In the associated Session, participants learn that pharmaceutical and nutritional, legal and illegal, controlled and uncontrolled PAES have side-effects. The session aims to **help learners reflect on their judgments in relation to the outcomes and consequences of using controlled/uncontrolled PAES**. An open dialogue around the issue prompts participants to consider not only the consequences of PAES use but also the consequences of wanting to withdraw from PAES use.

This Theme contributes to interactive health literacy by building self-efficacy to make informed and evidence-based decisions on PAES by providing evidence on potential side effects regardless of the type and legal

status and by deconstructing the optimistic belief that those side-effects 'will not happen to me'.

Theme 7

Becoming a PAES Expert

This Theme – in two Sessions - **emphasises the importance of obtaining information on PAES from trusted and reliable sources**. Participants learn – in a group setting - how to create a set of criteria to evaluate the advice given by their friends and peers on PAES and the information available on the Internet; and whether they should consider **soliciting a different perspective** (regarding advantages as well as disadvantages). A strategy/plan for the **effective evaluation of alternative information sources** will be practiced. They will be then invited to adapt these in accordance to their individual information seeking processes in order to strengthen and support personal decision-making. Participants are also instructed to apply these criteria in accordance to their individual situation. The focus is on emphasizing the individuality of each person and thus their capacity of making informed decisions.

This Theme builds functional e-health literacy directly through self-efficacy of critically evaluating the information available on the Internet, including how to search for reliable information; how to know if the information is impartial and scientifically accurate; and where to go for personal advice - and thus making evidence-based decision.

Theme 8

“Au Naturel”

Sports Without PAES

This Theme acknowledges the **drive and motivation for training without any supplementation or drugs**. The two Sessions explore what can be achieved without PAES; and whether PAES are necessary for achieving the desired goals. Participants are expected to learn to describe in general terms what outcomes are reasonably expected without the use of PAES in amateur/fitness sports and they are exposed to the concept of late gratification.

In addition to increased awareness of what can and cannot be achieved, the Sessions also offer information on **setting realistic and achievable goals and resisting temptations to seek immediate gratification**. By considering personal values and value systems when it comes to make decisions about PAES, this Theme contributes to interactive health literacy by enhancing self-efficacy to make informed and holistic decision about PAES.

Session Plan			
Tutors		Date	
Location		Cohort	
Topic		Where session comes in the module	

Key question:

Who are the learners? Group composition and description:

What is the learning outcome?
At the end of the session, participants are expected to:

-
-
-



Expected contribution to self-efficacy through PAES literacy:

Time	Learning activities	Teaching material provided	Notes
Starter (connect / hook)			
Series of learning activities (demonstrate & activate)			
	Activity 1:		
	Activity 2:		
	Activity 3:		
Plenary (consolidate & evaluate)			

Purpose and nature of independent study:
Core reflection:

Optional further reading:

Problem Based Learning activity:

How will the learners know the level of their knowledge/ understanding and how to make further improvements?

- 1 How will you know how much progress ALL students have made during the session?
- 2 How will the participants know how much progress they have made?
- 3 How will the learners know the level of their knowledge/ understanding and how to make further improvements?

Resources required:

Session evaluation (reflect on what went well and what could be improved or changed):

Safe You: Know your body. Know your substances.

05

SELF-EFFICACY SCALE

Assessment of impact

Below is a short survey that assesses trainee's self-efficacy to make informed choices about PAES use. Please follow the scoring instructions given below the Scale. The SAFE YOU Self-Efficacy Scale survey can be downloaded in printable pdf format from the project website: www.safeyou.eu.

SAFE YOU Self-Efficacy Scale

The SAFE YOU training tool is built on the importance of gaining and reflecting on knowledge about PAES use in exercise settings, and it embraces the concept of "Know your body. Know your substances." Our goal is to help you to understand the pros and cons of using PAES, gain and utilise knowledge independently, and develop critical thinking towards PAES use.

Instruction for completing the SAFE YOU Self-Efficacy Scale before SAFE YOU training:

Before you start your SAFE YOU training, please complete the short survey to gauge how confident you are when it

comes to making informed and evidence-based decision about PAES use.

Instruction for completing the SAFE YOU Self-Efficacy Scale after the completion of the SAFE YOU training:

Based on the knowledge that you have derived from the SAFE YOU training, how confident are you that you can make an informed and evidence-based decision about PAES use?

Instructions on how to complete the SAFE YOU Self-Efficacy Scale:

Please consider each statement carefully and rate your level of agreement by selecting the response option that corresponds the most to your agreement. There are no right or wrong answers. Because you are assessing your own efficacy to make an informed and evidence-based decision about PAES, it is very important to be honest. Honesty is the only meaningful way for this exercise.

Key

A	Strongly disagree
B	Disagree
C	Neither agree or disagree
D	Agree
E	Strongly agree

Theme		Stem Position	Rating Scale				
			A	B	C	D	E
		I feel confident in making an informed and evidence-based decision about PAES use...					
1	Q1	...because I know how PAES use can impact my health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	Q2	...because I am aware that PAES can be harmful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	Q3	...because I know that PAES' effects on my performance and appearance may come at a personal cost to my health and wellbeing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Q4	...even when I feel pressured to use PAES by others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Q5	...even when I think that most exercisers of my age and gender are using PAES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2,4	Q6	...even when I think that PAES can provide a quick solution to achieving a "perfect" body	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Theme		Stem Position	Rating Scale				
			A	B	C	D	E
3,4	Q7	...because I know that I can have a healthy and fit body without using PAES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Q8	...because I know that PAES are not a necessary part of being physically active and fit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Q9	... because I understand the difference between supplementing diet and using PAES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Q10	...even when I feel the need to use PAES to recover quickly after hard trainings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Q11	...even when I feel that PAES can help me push myself to the "limits" in training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2,4	Q12	...because I appreciate that my body can be in harmony with my exercise goals without the use of PAES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Q13	...because I appreciate that my body can be in harmony with my exercise goals without the use of PAES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Q14	... because I understand and respect my body	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Theme		Stem Position	Rating Scale				
			A	B	C	D	E
6	Q15	...because I know that even nutritional supplements can sometimes contain harmful ingredients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Q16	...because I know that even nutritional supplements can sometimes be harmful to the body if excess amount is taken or if taken in wrong combinations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Q17	... because I am aware how PEAS affects my physical and psychological wellbeing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Q18	... because I know where to find trustworthy and accurate information on PAES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Q19	...because I can critically evaluate information about PAES use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Q20	...because I feel that I have a more holistic understanding of PAES use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Q21	...because I know that I can achieve my performance goals without using PAES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Q22	...because I know that I can achieve my physical appearance goals without using	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Theme		Stem Position	Rating Scale				
			A	B	C	D	E
8	Q23	...because I know that PAES is not the only way to achieve my exercise goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Q24	... even when I want results fast	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scoring instructions

Strongly disagree = -2

Disagree = -1

Neither agree or disagree = 0

Agree = +1

Strongly agree = +2

Calculate the average score by **adding the scores together and divide by the number of items** included in the assessment:

Theme	Construct	Score calculation
All 8	Global PAES Decision-making SE	= (Sum of Q1 to Q24) / 24 Decision-making SE
1	PAES Decision-making SE based on knowledge about various substances	= (Q1+Q2+Q3) / 3
2	PAES Decision-making SE based on ability to recognise and manage external pressure	= (Q4+Q5+Q6) / 3
3	PAES Decision-making SE based on ability to differentiate between motives for PAES use	= (Q7+Q8+Q9) / 3
4	PAES Decision-making SE based on a personal holistic view of the body	= (Q6+Q7+Q10+Q11+Q12) / 5
5	PAES Decision-making SE based on the ability of critically evaluate marketing claims	= (Q12+Q13+Q14) / 3
6	PAES Decision-making SE based on knowledge about the effect of various substances	= (Q15+Q16+Q17) / 3
7	PAES Decision-making SE based on the ability to search and find accurate and reliable information	= (Q18+Q19+Q20) / 3
8	PAES Decision-making SE based on the understanding of late gratification and developing a holistic view of training and body	= (Q21+Q22+Q23+Q24) / 4

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Glossary of terms

AAS	<i>Anabolic Androgenic Steroid</i>
Abuse	<i>Taking a drug, especially at higher doses than prescribed, in order to get a desired effect (e.g., taking a drug to 'get high').</i>
Aerial silks	<i>Aerial silks is a type of performance in which one or more artists perform aerial acrobatics (climbs, wraps, drops) on the suspended fabric without the use of safety lines.</i>
Aerialist	<i>A person who performs acrobatics high above the ground.</i>
Amino Acids	<i>Amino Acids are biologically important organic compounds which are regularly consumed via dietary protein. Amino Acid supplements are isolated amino acids or groups of isolated amino acids which are typically consumed in lower doses than protein supplements and are more specific.</i>
Appetite suppressant	<i>Substances that reduces your appetite. Also known as anorectic, anorexigenic or anorexiant.</i>
Aromasin	<i>Commercial name for exemestane. It is a steroidal Aromatase Inhibitor (AI). It lowers estrogen levels and is used to treat advanced breast cancer in postmenopausal women.</i>

Aromatase Inhibitors	<i>Aromatase Inhibitors (AIs) are drugs that inhibit the enzyme (aromatase) which synthesizes estrogen. It is commonly used in the treatment of breast cancer in postmenopausal women and gynecomastia in men. Its off-label use aims to mitigate the increase of estrogen conversion during cycle with external testosterone.</i>
Beta blocker	<i>Beta blockers are a class of drugs which affects the sympathetic nervous system and mediates the 'fight-or-flight' response.</i>
Bulking	<i>Gaining weight by increasing muscle mass. A bulking cycle involves consuming lots of calories and train very intensely to build as much muscle as possible.</i>
Buscopan	<i>It is the commercial name of hyoscine butylbromide (also known as scopolamine butylbromide) is a medication for treating cramps, abdominal pain, renal colic, and bladder spasms.</i>
Carbohydrates	<i>In dietary terms, carbohydrates refer to foodstuff that is rich in the complex carbohydrate starch (e.g., cereals, bread or pasta) or simple carbohydrates, such as sugar.</i>

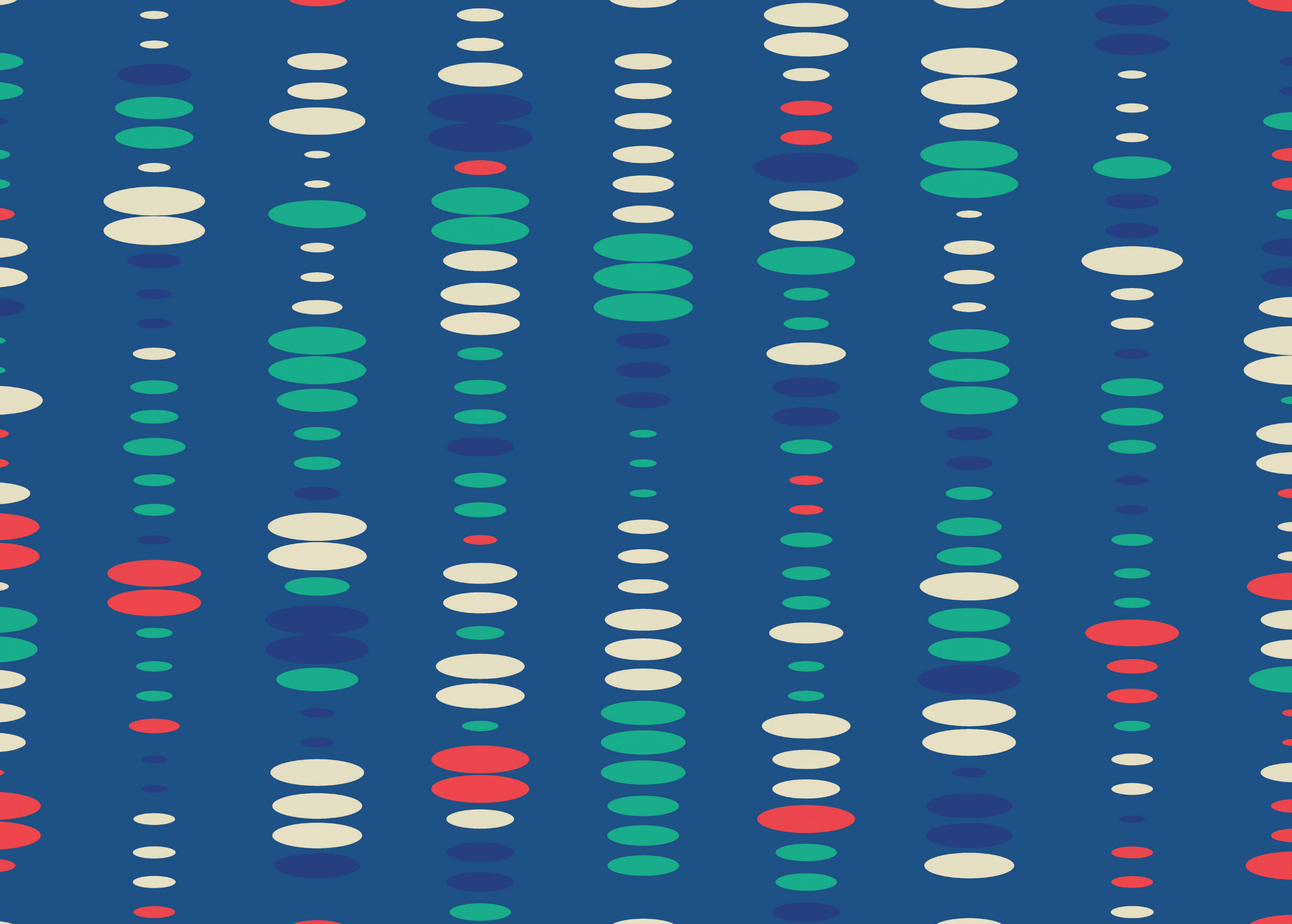
Casein	<i>Proteins are commonly found in mammalian milk (approximately 80% of cow's milk).</i>	D-bol	<i>Dianabol (also called Dbol). It is an oral anabolic steroid that offers massive gains in very short periods.</i>
Clen	<i>Clenbuterol. It is a B2 agonist used to treat breathing problems. It is a decongestant and bronchodilator. Off-label, it is used as a weight-loss drug (i.e., by bodybuilders in cutting cycles).</i>	Deca	<i>Deca Durabolin, a synthetic anabolic androgenic steroid.</i>
Creatine	<i>Creatine is a naturally occurring molecule which helps to supply energy to all cells in the body, primarily in muscles. It is available through diet that contains meat, egg and fish. Creatine supplementation is often used in exercise to increase both power output and lean mass.</i>	DNP	<i>2,4-Dinitrophenol (or 2,4-DNP) is a yellow, crystalline organic compound with a sweet, musty odour. It is a precursor to other chemicals and is biochemically active. It promotes fat loss by inhibiting energy (adenosine triphosphate, ATP) production in cells with mitochondria but its use in high doses as a fat burner has been identified with severe side-effects, including deaths. It is not licensed for human consumption.</i>
CrossFit	<i>CrossFit is a branded fitness regime which incorporates elements from high intensity interval training, various weight- and powerlifting, plyometrics, gymnastics, calisthenics, strongman and other exercises.</i>	Efergen	<i>Weight loss tablets.</i>
Cutting	<i>Losing body fat. A cutting cycle includes lower caloric intake and cardiovascular exercise to burn excess fat and reveal newly gained muscle.</i>	Ester	<i>This is a compound joined to the actual steroid which dictates how long it takes for effects to show up and/or for the AAS to leave your system.</i>
Cycle	<i>When someone says they are running a 'cycle', they often mean they will be running AAS (and perhaps other PEDs) for a specific length of time. Often they will have certain goals, for example, to bulk, to cut (lose body fat), or to 'recomp'. Example: an athlete is running a cycle of testosterone enanthate for 12 weeks.</i>	Fat burners	<i>A group of substances which are utilised to either a) increase your metabolic rate (so you burn more calories) or b) suppress appetite (so you eat less) or both.</i>
		GH	<i>Growth hormone (GH) is a peptide hormone that stimulates growth, cell reproduction, and cell regeneration. It is also known as somatotropin or as human growth hormone (hGH).</i>

Glutamine	<i>It is an α-amino acid which is used in the biosynthesis of proteins. Dietary sources of glutamine are meat (beef, pork, chicken, fish), eggs, milk and dairy products; wheat and some vegetables (e.g., spinach, cabbage, beans).</i>
Hepatoprotectives	<i>Hepatoprotectives are typically prescribed medications with protective and regenerating effect on the liver cells.</i>
Martial arts	<i>Codified systems and traditions of combat practices, which are practiced for a variety of reasons, including spiritual and mental development. In sport, there are various forms and grouped by the techniques (e.g., unarmed or weapon-based).</i>
Misuse	<i>Taking a prescription medication for a purpose other than the reason it was prescribed, or taking a drug not prescribed to the person.</i>
Muscle hyperplasia	<i>Formation of new muscle cells.</i>
Muscle hypertrophy	<i>Muscular growth.</i>
Novatest	<i>Testosterone booster putatively works by maximising testosterone and blocking oestrogen.</i>
NSAID	<i>Non-Steroidal Anti-Inflammatory Drug.</i>
Off-label use	<i>Use of medications (both prescription and over-the-counter) for reasons other than the intended and approved indications;</i>

PAES	<i>Performance- and Appearance Enhancing Substances (collectively, without differentiation between legal/illegal status).</i>
Parkour	<i>Also called free running, it is a non-competitive training discipline that aims to move freely over and through any terrain without any apparatus, using only functional strength and fitness, balance, spatial awareness, agility, coordination, precision, control and creative vision. It encourages self-improvement on all levels, revealing one's physical and mental limits while simultaneously encourages finding ways to overcome them.</i>
PCT	<i>Post Cycle Therapy. It is method of employing a combination of drugs which stabilise and restore a user's hormones back to normal after a suppressive anabolic androgenic steroid cycle.</i>
PEDs	<i>Performance Enhancing Drugs.</i>
Permanent side effects	<i>Symptoms that are irreversible.</i>
Pre-workout supplements	<i>Collective name for supplements which are specifically formulated with ingredients to increase energy, endurance and strength, to promote muscle growth and to burn body fat.</i>
	<i>or use in unapproved dosage or route of administration; or for unapproved age groups.</i>

Primobolan	<i>Commercial name for methenolone, a long-acting anabolic steroid with weak androgenic properties.</i>
Prolactin	<i>Prolactin is a hormone. In many mammals, including humans, this is the hormone responsible for milk production from breast tissue.</i>
Prolomet	<i>A beta blocker that is commonly used to treat high blood pressure, cardiac conditions and migraines.</i>
Protein supplements	<i>Protein supplements are available as protein powders which can be from either animal or plant sources. Specific types of protein are for slow-release (e.g., Casein Protein) or faster release (e.g., Whey Protein). They are typically used to supplement the normal diet and increase dietary protein intake.</i>
Proviron	<i>Commercial name for mesterolone, a synthetic anabolic androgenic steroid, common in cutting cycles.</i>
Recomp	<i>Maintaining the same weight but gaining muscle and losing fat.</i>
Rugby hooker	<i>It is one of the positions in a rugby league football team, a specialist forward position. A rugby hooker usually wears jersey number 9.</i>
T3	<i>A thyroid hormone called triiodothyronine, produced by the thyroid gland. Along with its prohormone thyroxine (T4), T3 is responsible for regulation of metabolism.</i>

Temporal side effects	<i>Symptoms that wear off once a user has taken an appropriate time off cycle.</i>
Test-e	<i>Testosterone Enanthate.</i>
Testosterone	<i>Naturally occurring steroid hormone.</i>
Testosterone Enanthate	<i>It is an injectable oil based steroid designed to release testosterone from the injection site slowly.</i>
Tribulus	<i>Tribulus terrestris. It is an invasive plant (a weed) which is widely distributed around the world. It has many names, including goat's head, devil's thorn, puncturevine, tackleweed. Its extract is commonly sold as a dietary supplement for its putative libido enhancing and testosterone boosting properties.</i>
Voltaren	<i>It is one of the many commercial name of diclofenac, which is a nonsteroidal anti-inflammatory drug (NSAID). It is taken or applied to reduce inflammation and used as an analgesic to reduce pain in certain conditions.</i>
Winstrol	<i>Commercial name for the synthetic anabolic steroid stanozolol. Commonly sold under the name Winstrol (oral) and Winstrol Depot (intramuscular).</i>
ZMA	<i>It is a supplement comprises Zinc Monomethionine Aspartate, Magnesium Aspartate and Vitamin B6. It is used as a recovery aid by athletes, exercisers and bodybuilders.</i>



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