



Active in Sport Again!

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GOVERNMENT OF THE REPUBLIC OF CROATIA
Office for Cooperation with NGOs



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AUTHORS AND RESEARCHERS



Croatia
Klaudija Bubalo
Eleonora Kovač
Marija Anzulović
Alojzije Janković
Tomislav Paškvalin
Rade Krnjeta
Sonja Krnjeta
Vladimir Ivančev
Branislava Resanović



Bulgaria
Yoanna Dochevska
Stefka Djobova
Ivaylo Zdravkov
Kalinka Gudarovska
Emilia Tzanova



Slovenia
Primož Sulič
Deni Stibilj
Sara Bensa
Kaja Bratina

ILLUSTRATIONS
Matija Kete



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For any comment on this report, please contact
Društvo sportaša veterana i rekreativca email: drustvo@drustvosportasaveterana.hr

TABLE OF CONTENT

COORDINATOR AND PARTNERS OF THE PROJECT **8**

INTRODUCTION **11**

ORGANIZATION IN SPORT **12**

THE ROLE OF MANAGEMENT AND ORGANIZATIONS IN THE FIELD OF SPORT **12**

NON-GOVERNMENTAL ORGANIZATION **14**

 Founding an NGO (in the field of sport)..... 14

 Types of NGO (in the field of sport)..... 14

 Financing of non-governmental organizations 15

 Employment opportunities in non-governmental organizations 15

COMPANIES **16**

 Making a business plan..... 16

 Funding a company 16

 Acquisition of financial resources 17

 Types of activities in entrepreneurship..... 17

PUBLIC SECTOR **17**

MANAGEMENT OF SPORTS ORGANIZATIONS **18**

PHYSICAL ACTIVITY **20**

POSITIVE ASPECTS/EFFECTS OF PHYSICAL ACTIVITY **22**

WARM UP **22**

HEALTH ASPECTS OF AEROBIC EXERCISE (musculoskeletal system, endocrine system, central nervous system)..... **23**

AEROBIC EXERCISE..... **23**

Musculoskeletal system.....	23
Endocrine system.....	24
So which are the most important hormonal benefits of physical exercise?.....	24
Cardiovascular system	25
HEALTH ASPECTS OF STRENGTH TRAINING	
(musculoskeletal system, endocrine system, central nervous system).....	26
Musculoskeletal system.....	26
Endocrine system.....	27
Central nervous system.....	28
HEALTH ASPECTS OF NEUROMOTOR EXERCISE	
(musculoskeletal system, endocrine system, central nervous system).....	29
STRETCHING	30
Flexibility, stretching and performance.....	30
Dynamic, static stretching and dosage.....	30
Positive aspects of stretching	31
Conclusion	31

THE IMPORTANCE	
OF MENTAL HEALTH	32
INTRODUCTION.....	32
BE PREPARED.....	34
COPING WITH STRESS AND ANXIETY.....	35
IN THE SEARCH OF A NEW IDENTITY	37
HOW TO SET YOUR GOALS AND STAY MOTIVATED?.....	38
BUILDING YOUR SELF-ESTEEM.....	40
STAYING CONNECTED	41

MEDICAL EXAMINATIONS IN COMPETITIVE AND RECREATIONAL SPORT 42

THE IMPORTANCE OF HEALTH CARE	
FOR ATHLETES AND RECREATIONALISTS	42
Definitions and terms.....	43
HEALTH INSURANCE OF ATHLETES	44
What are preventive examinations of athletes?	45
Types of athletes, health examinations	45
Preliminary examination.....	45
Periodic examination.....	45
Exceptional examination.....	46
THE IMPORTANCE OF PREVENTIVE HEALTH	
EXAMINATION FOR RECREATIONAL ATHLETES	47

CAREER AFTER SPORT	49
MANAGEMENT OF PERSONAL FINANCES.....	49
Incomes and expenses	51
Risks	51
Property.....	51
Planning the future	51
CONCLUSION.....	52
REFERENCES	53
DISCLAIMER.....	55



Dear athletes, friends of sports, partners and collaborators of the Active in Sport Again! project, we reached the very goal of our multi-month race where we had to overcome numerous obstacles.

At the beginning of the project our goal was to encourage social inclusion of former top athletes by organizing informal educational workshops and recreational sports activities in order to increase their involvement in the sports system and their reactivation in sports and everyday life. Our ultimate goal, of course, was to create a Handbook for the active inclusion of former top athletes in sports again.

Today, the Handbook has been finalized! It is intended for former top athletes, but also for all those who are in any way involved in the sports system.

When we talk about the re-inclusion of former top athletes in sports, we mean their involvement in sports and recreational activities, but also an active involvement in the sports system. In a broader sense, this Handbook presents topics on pursuing a career after the sports careers of top athletes. It contains instructions on how an athlete can continue to achieve his life goals after a sports career, but also presents the importance of proper education, health care and work experience.

Former top athletes can undoubtedly be good coaches, technical or administrative staff in clubs, federations and other sports associations. However, with adequate education, there is also a place for them in the public service as well as in the economy. Can a successful former athlete be an equally successful manager? Yes, he can, whether it is the position of the leader of a club or association, PR manager or director of a large company. And there are numerous good examples for this.

While preparing the Active in Sport Again! project our basic idea was to show that ending a sports career should not be the end of the life career of top athletes. This Handbook will surely be a valuable tool and a roadmap for everyone on the path from a sports career to what we call a “career after a sports career”.

I look forward to our encounters on this exciting and challenging journey!

Klaudija Bubalo,
President of the Društvo sportaša veterana i rekreativaca

Coordinator and partners of the project

PROJECT COORDINATOR



Club of Veteran and Recreational Athletes-DSVR is an association that embraces 200 members, which are current and former top athletes and recreational athletes from more than 30 sports with over 300 Olympic, World and European medals. DSVR established its Foundation in 2014 with the purpose of caring for older athletes, for providing them financial assistance, participation in the cost of medical assistance and the provision of assistance for rehabilitation purposes of injured former athletes and their care.

DSVR has been established for improving the quality of preparation and implementation of projects and programs in the field of sports, health, culture and economy, but also in the purpose of socializing and sharing experiences among members. The main goal of DSVR is improving and preserving grassroots and professional sports at local, national and international level. The emphasis of all DSVR activities is raising awareness of the importance of sports activities for children and youth in order to improve their social, physical and health status.

PROJECT PARTNERS



Bulgarian sports development association-BSDA was founded in 2010 and is a non-profit public benefit organization devoted to the development of Bulgarian sport and improvement of sport culture in Bulgaria. Employees are young, creative and full of innovative spirit devoted to the development of Bulgarian sport and the enhancement of the sport culture in Bulgaria. BSDA membership is voluntary and open to all physical or legal willing to contribute sport development with time, ideas, effort or financial support. The team of the organization consists of professionals from different fields: sport experts, media specialists, tourism and hospitality managers and employees, experts from the field of education, marketing and others. The team believes that sports should be part of the life of children and young people and should create motivation,



discipline and fair play in other aspects of life. Some of the organization's goals are: sustainable development of physical education and sport in Bulgaria, improvement of health, physical condition and sport culture of the nation, dealing with youth problems, protection of children, youth, professional athletes, coaches, sport figures and sport organization, development of prevention through sport.

Sports Federation of Ajdovščina-SFOA is the main NGO sport organization in the Municipality of Ajdovščina. It operates on the principle of volunteering, autonomy and non-profit association of individuals and sports clubs which merge together for common interests to shape the foundations and the organization of sport. The Sports Federation of Ajdovščina is also a member of the Slovenian Olympic Committee. The activities are reflected in the design and preparation of proposals for the co-financing annual sports program in the municipality, forming opinions for the construction and maintenance of sports facilities, organization of promotional sports events and informing and assisting members for the preparation of documentation for public tenders regarding the co-financing of their sports programs. The slogan of the federation is unity, organization and efficiency. It works closely with the Institute of Sport in Ajdovščina which performs key working tasks for the organization.

COLLABORATORS ON THE PROJECT



The Zagreb sports association



The public health institute - Andrija Štampar



The Zagreb association for sport for all



Rk Lokomotiva Zagreb



“Long life sports – Long life learning”: Career after sport is a strong tool which provides sense of security and has great impact on the progress of society

Picture of former sport athletes from Croatia



*“Man is only fully human when he plays!”
Friedrich Schiller*

Picture of former sport athletes from Bulgaria



*“A goal can not be reached in one step,
it consist of making it in small chapters”*

Picture of former sport athletes from Slovenia

Special thanks

Club board members of Veteran and Recreational Athletes-DVSR expresses special thanks to the former top athletes of Croatia which were part of co-creation of the manual and activities in the project. (In the picture) Vjekoslav Šafranić (karate, kickboxing), Rade Krnjeta (judo), Alojzije Janković (chess), Branko Peašinović (volleyball), Boško Lozica (water polo), Ante Čutura (karate), Željko Grabušić (athletics), Tomislav Paškvalin (water polo), Branislava Resanović, (doc. of med), Marija Anzulović (volleyball), Nikola Dragaš (bowling), Klaudija Bubalo (handball), Eleonora Kovač (athletics).

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INTRODUCTION

The project Active in Sport Again! aims to encourage social inclusion of former elite athletes by organizing non formal workshops and recreational sport activities in order to increase their capacity and support their reactivation in sport and everyday life.

The project involves three sports organizations from Bulgaria, Croatia and Slovenia. It is funded by the European Union Erasmus+ Sport. The holder of the program is the Association of Veteran and Recreational Athletes from Croatia. The project partners are Sports Federation of Ajdovščina from Slovenia and Bulgarian sports development association.

The manual will include a description of how athletes can continue to reach their life goals after the end of their sport careers and also the importance of appropriate education, health and work experience.

If athletes do not at least partially acquire the necessary skills during their sports career they could have trouble to overcome the challenges posted by lifestyle which happens outside the competitive systems. Inadequate

preparation for the end of a career leads to personal tragedies and losses. Individuals can risk depression or go through a long period of confusion linked to their needs and knowledge to change their lives.

Retirement from sports activities have to be conceptualized as a role of transition through which athletes disengage from some activities and relationships to seek others.

Reduced physical activity has negative consequences for athletes who end their careers. The way of life becomes different, so they have to find at least partial compensation in sports organizations in the local environment in order to maintain themselves healthy.

Health is the basis for upgrading the skills that athletes are supposed to acquire during their active career.

In the following chapters we will present the concept of management of some organizations and institutions. The description will cover also the maintenance of physical and mental health and planning to obtain an appropriate education as the importance of developing a dual career of athletes.

Organization in sport

THE ROLE OF MANAGEMENT AND ORGANI- ZATIONS IN THE FIELD OF SPORT

Šugman, Bednarik, Kolarič (2002) state that different concepts appear in relation to individuals and an organized group of people. We can define an organization as an institute, as an action, or as a network of relevant connections for the functioning of an organization and its system in a certain environment.

For every action, that is important for the growth and development of an individual or an organization, there must be a certain goal and qualified people. The result is the creation of a specific product, which leads to the acquisition of money.

Management is a process that interferes in a person's private life. We deal with it every day by planning our daily activities. Management is also defined as a one-way process. The person who manages must achieve certain goals and the manager has to tell what needs to be done.

Based on this, all questions of the organizations and their products fall under the science called management. Part of this is the management of sports.

In the history of sport is revealed that events in sport are the result of the constant development of activities. Sport has expanded to the point that it has become a need for making a kind of systematization, organization and digitalization under the name of management of sports activities.

All activities in the field of sport must be regulated. Competitors need to think about training which leads to results

and success. On the other side we have sports organizations which have to promote the results achieved by their athletes. As a consequence the process for obtaining funds from sponsors and other public institutions start to begin. With this mode of cooperation we create the basis for optimal implementation of further activities.

This has led to great economic growth, which is reflected in the sale and promotion of athletes, purchase of television rights, sports equipment and other things related to sports activities.

So the resources that we encounter in sports management are common people, competitors, coaches, doctors, psychologists, physiotherapists, sports facilities, sport devices, and finances.

These are the contents that the system has at its disposal to achieve the desired goals. It is a process of coordinating the effects of sports activities through economic laws. We must keep in mind that sport has grown into a powerful industry that would no longer exist without the profession called sports management.

Therefore, it is very important for athletes to develop or acquire the appropriate education in addition to a sports career.

Kolar and Robnik (2018) write that transition from a sports career to the labor market is a challenge. The first step for

such decisions is certainly the motivation of the athlete, and each individual must be aware of the necessary investment of time and energy.

Certainly, the beginning of an athlete's new career in a sport club in which he has spent years of involvement is one of the possible ways of transition to the labor market.

For a sports club, the former athletes should be very valuable. Organizations have been investing in their process of training for years. Such individuals have a lot of experience which they can use as a coach in their clubs.

The inclusion of individuals in the work environment depends on their level of education and past sports achievements. We could presume that the higher the individual is ranked in the past the greater are chances for creating a business career.

The opportunities to obtain a job are:

- employment in sports club from which they derives (NGO),
- employment in state administration (PUBLIC BODY),
- employment in the economy (COMPANY).

In the following, introduce the way of management in which specific knowledge work experience and education is required.

NON-GOVERNMENTAL ORGANIZATION

Organizations which are independent of government involvement are known as non-governmental organizations or non-government organizations (NGO). NGOs are a subgroup of organizations founded by citizens, which include clubs and associations that provide services to their members and others.



Founding an NGO (in the field of sport)

The definition of the idea of establishing an association is marked by the need to do certain activities in the environment. Of course, in the process of establishment we need to identify circumstances that will affect our organization. Availability of existing public sports infrastructure, the possibility of co-financing programs, the structure of potential users, environmental development plan, etc...

For registration of an NGO we need three or more founders depending on the country where we want to register it. After that we have to check if the name is available. In most countries the foreign words can not be a part of the name. Also we have to prepare the statute, mission, vision and check the document at the register agency.

The most important document at the founding of the association is, of course, the statute where we define the bodies and the way of work of our organization.

Types of NGO (in the field of sport)

Non-governmental organizations in the field of sports are legal entities in the sports system. In the book *The Organization of Sport at Home and in the World* (Šugman 1998), the structure of the operation of sport is divided into local and international levels. In this manual, we will present some key stakeholders in the field of non-governmental organizations. Below is briefly presented the mode of operation of sports clubs, community associations, national associations, Olympic Committees, International sport associations and International Olympic Committee.

A sports club is established for the purpose of performing various sports activities. These include recreation of children and adults which is not part of a competitive program, competitive sports programs and other forms of activities such as the organization of sport events, education program, referees program, etc. They operate mostly at the local level. In sports that are commercially interesting, sport clubs can operate also at the international level.

Community sports associations are established by the local sport clubs mostly in some large communities where there is a greater number of sports clubs. The purpose of establishing is to represent the interests of clubs against the public sector. In addition to representing interests, they also organize program content, which is mostly intended for supporting member sport clubs.

National sports federations are also established by the sports clubs which bring together a particular sport or an activity. They are usually responsible for the development of a specific sport or some other activity at the national level. They organize national competitions and manage with the programs of national teams.

The Olympic committee is the main organization in the field of sport at the national level. It unites both national and community sports federations. Based on the proposals of sports federations, it sets the rules for the organization of sports in the country. The organization is involved in the development of all kinds of sport activities and mainly deals with the coordination of sports that are in the program of the Olympic Games.

International sports federations unites national federations of some specific sports. They organize international competitions such as European and World championships. We can also find some international sports federations for sports for all which provide support to sports organizations who are not engaged in competitive - agonist sports.

The International Olympic Committee is the most important organization in the world for the development of sports. It brings together all Olympic committees from all countries. It is in charge of organizing the Olympic Games which take place every 4 years.

Financing of non-governmental organizations

In the book *Sports Management*: Šugman, Bednarik, Kolarič (2002) it is explained that different NGO sports organizations fund their activities from different sources. They can be classified into different groups. Municipal funds, state funds, in some countries we can find sources called lottery

funds. These resources are called public money and are intended to co-finance sports activities.

However, as sport has a lot of diverse activities, they are in many cases co-finance from other funds from sponsors, donors, households, funds from the lease of TV broadcasts, gifts, etc...

Sports organizations are co-financed from both public funds and other funds.

The ratio of funding between public and other funds depends on the way that each organization operates. Competitive sport, which is interesting and has many spectators, is largely co-financed from other sources. The entrance fees, leasing TV rights and the interests of sponsors provide a generous source of funds with which an individual organization operates.

Sports that are less interesting for the audience are mostly co-financed from public funds. Sponsorship represents a smaller amount of co-financing activity. Mainly organizations in sport for all are co-financed from household funds. Public and sponsorship funds in most cases represent a smaller amount of the organization's income.

Employment opportunities in non-governmental organizations

(Šugman at al., 2002) says that employment in NGOs, of course, depends on the structure and dimension of the program. The more commercially interesting, recognizably, complex and diversified is the program, the more funds we can provide through our organization. As a consequence we have different "professional" staff who manage different areas.

The number of NGOs in the field of sports is quite large. Around 3300 sports organizations operate in Bulgaria, 11324 in Croatia and 8000 in Slovenia. A choice of offer of sports activities is different and is intended for different age and interest groups. Organizations that accumulate more money need to be managed in a more complex way, so also more professional staff is needed.

COMPANIES

To start a new company or expand your business to new activities, we have to check the opportunities and possibilities for realizing the idea. After that, it is necessary to make a good business plan and then carry out the process of establishing a new company.

Making a business plan

In the Slovenian business point (Portal e-vem b.d) is written that a good plan should include a description of the activities, the method of financing the company, which defines incomes and expenses, and also a description of the company brand.

A business plan is a written document which defines goals for a particular content in the business and the strategies for achieving defined goals.

A good plan can be compared to the phrase „business map“, which shows the right paths from thinking to achieving goals. So the consequences allow owners and employees a decent standard of living. A well-prepared business plan is an indispensable tool for every entrepreneur.

In the start-up phase, it draws attention to all key activities, such as market research or analysis. At the same time, it provides a theoretical basis and practical guidelines for carrying out all necessary activities. In an already operating company, the business plan can be the basis for the future operation of the company where we define our vision, mission, goals and details for their realization.

It should consist of brief statements relating to the following characteristics of the company:

- a brief description of the company,
- opportunity and strategy of the company,
- target markets,
- competitive advantages,
- management staff,
- economics, profitability and financial resources.

How extensively the chapters of the business plan will be prepared depends on the scope, as well as the size of the market, competition companies and the projected growth of the company.



A business plan is also often used to communicate with stakeholders such as investors or banks. The chapters for investors should be described in more details (team presentation, long-term financial projections and the relations customer-owner). In the case of the bank, they will be mainly interested in financial projections (income statement, balance sheet and cash flow statement) for at least the next 5 years or for the duration of the loan or guarantee.

Funding a company

In Slovenian business point (Portal e-vem b.d), it is written that when we have a clear vision of what our business would look like and when the plan is written we have the basic condition for establishing a new company. However, we can choose other paths regardless of the way of doing business. Before the beginning process, we must check the conditions and appropriate business premises which allow us to start performing our activity. The manner of establishment a company is regulated by the Companies Act.

PUBLIC SECTOR

Athletes acquire many qualities through their sports careers, which should be an advantage at the transition into the work environment. The athlete has to focus on various ways and specifics for entering into the labor market. A large number of athletes want to transfer their experience from sports to an activity in which they have been involved for years of their career.

Each country has its own specifics regarding the establishment of companies, so it is good to know significant details before opening a company.

Company laws state that it is common way to legally carry out an activity is to set up a company, for example in the form of a limited liability company or a self-employed person who can also be employed. In cases of performing certain activities and meeting the conditions provided for them, you can also obtain a special status. When you want to legally perform certain activities as a natural person, you can also operate through business contracts or employment contracts, or you can arrange the status of performing personal supplementary work.

Acquisition of financial resources

Slovenian business point Portal e-vem b.d states that to start a business successfully, in addition to our financial investment it is necessary to know where to obtain other financial resources. Therefore we have to identify all existing and potential investors in the company, possible debt sources of financing and possible grants (European funds) with which you plan to co-finance your company.



Types of activities in entrepreneurship

Slovenian business point (Portal e-vem b.d) states that the most common way to carry out an activity is to set up a company, or to be a self-employed person who can also employ others. When the amount of activities are less and we want to perform certain activities as a person, we can also operate through business or employment contracts, or we can also arrange the status of performing personal supplementary work.

Athletes can obtain appropriate titles for work in sport through national sports federations and also universities. Only a university degree and other titles after graduation allows them to get a job in the public sector after the end of a sports career.

In the public sector it is possible to get a job in the education process, as a professor of physical education, or as an office worker at the Ministry of Municipality in the field of organization in sport or at the university as a professor or young researcher.

In order to obtain a graduation at the university, it is necessary to have smart coordination during the education process with the obligations of training and competitions.

MANAGEMENT OF SPORTS ORGANIZATIONS

Šugman, Bednarik, Kolarič (2002) states that management interferes with human activity in all areas of his life. With knowledge of management, a person defines his time and daily activities. Within the organization, the activity is related exclusively to the work in the field of sports performed by the individual. This is how we talk about management in sports organizations where we have to coordinate sports resources. In the following, we will explain some connections and ways of coordination.

Also the history of sports reveals that some sports events are the result of the constant development of sports activities. Sport has been constantly expanding, so there is a need for its organization, systematization, digitalization, in short term we call this the management of sports activities. When a certain activity becomes too extensive, it needs to be regulated. If an athlete wants to achieve top results, he must submit to a training system, if a sports organization wants to do well, it must develop activities that are a kind of source of survival. We need to know that both today and in the past, nothing would have happened if there was no source of money. The difference is that the amount of money has increased to such an extent that, above all, agonistic sports have a “great taste” for money. Sports activity is not just a personal good but it determines the way of life and methods of earnings which are based on a good financial management knowledge.

The resources that we encounter in sports management are mostly people (doctor, coach, psychologist) so we can speak about knowledge of the coaching process, psychology, nutrition, physiotherapy, etc. On the other hand, we have things, such as sports facilities and finances. These are the things that define management and also the things that the manager has at his disposal. They connect all activities and needs with the business environment. It is a process of coordinating sports activities with the help of

knowledge of the economy. The current effect situation determines the value of each process. One of the main characteristics of the management of sports organizations is the result which in the process of sports management also represents the product.

Sports organizations also provide other types of products intended for active users such as entrance fee of fitness centres, guided exercises (aerobics, pilates..), big recreational events where the price is determined by the quality of the work performed. This means that users actively participate in a particular product.

On the other hand, in the process of sports management we are talking about passive users. These are the spectators at the sport events which watch and value the product.

The response to the product always leaves a certain imprint and the task of a sports manager is to make an impression as a challenge by getting every user to his side.

Management creates tasks and organizes the work that needs to be done. It provides the skills and coordination needed for the core of sports organizations. Ultimately, it connects different people into a productive team. The basis of sports management is the achievement of business and sports goals. Regarding this, are important the competencies of the sports manager who is in charge of managing the sports organization.

(Robinson, 2020, page 109-114) explains that the International Olympic Committee in collaboration with more than 150 world-renowned scientists and experts from sports management and 100 sports organizations tried to answer the question of what are the essential competencies for successfully performing the role of a sports manager.

The competencies of sports managers were divided into 6 basic areas:

- Organizing sports programs depending on the environment in which the organization is located and also defining the role and responsibilities of individual stakeholders in the organization,
- Consideration and definition of human resources in the organization is based on scheduling the work and tasks of individuals, introducing levers to motivate individuals and planning the method of staff education programs.
- Definition of strategic management in the sports organizations which include the creation of conditions, initiations and preparations for the planning process, diagnostics, development and implementation plans that achieve strategic goals, which further increases the effectiveness of the organizations.
- Financial management is also an important part of the system of our organizations. Financial responsibility is shown in preparation of the financial plan in accordance with the strategy, preparation of the projects budgets, defining of cash flows, evaluations of the financial plans, and transparency of financial reporting.
- Marketing is a branch of an individual organization which is intended to promote its activity and aims to increase turnover or sales of products or networking with organizations whose interests coincide with our activity. Nowadays, of course, digital marketing is in the forefront, where we reach customers digitally, through websites, social networks and other communication channels.
- In the process of organizing major sporting events, the sports manager must consider the whole process which is divided in to the phasis wich provided resources for co-financing material costs, preparation of a timetable for the execution of individual tasks and the distribution of tasks of staff-human resources which will participate in individual phases of event preparation.

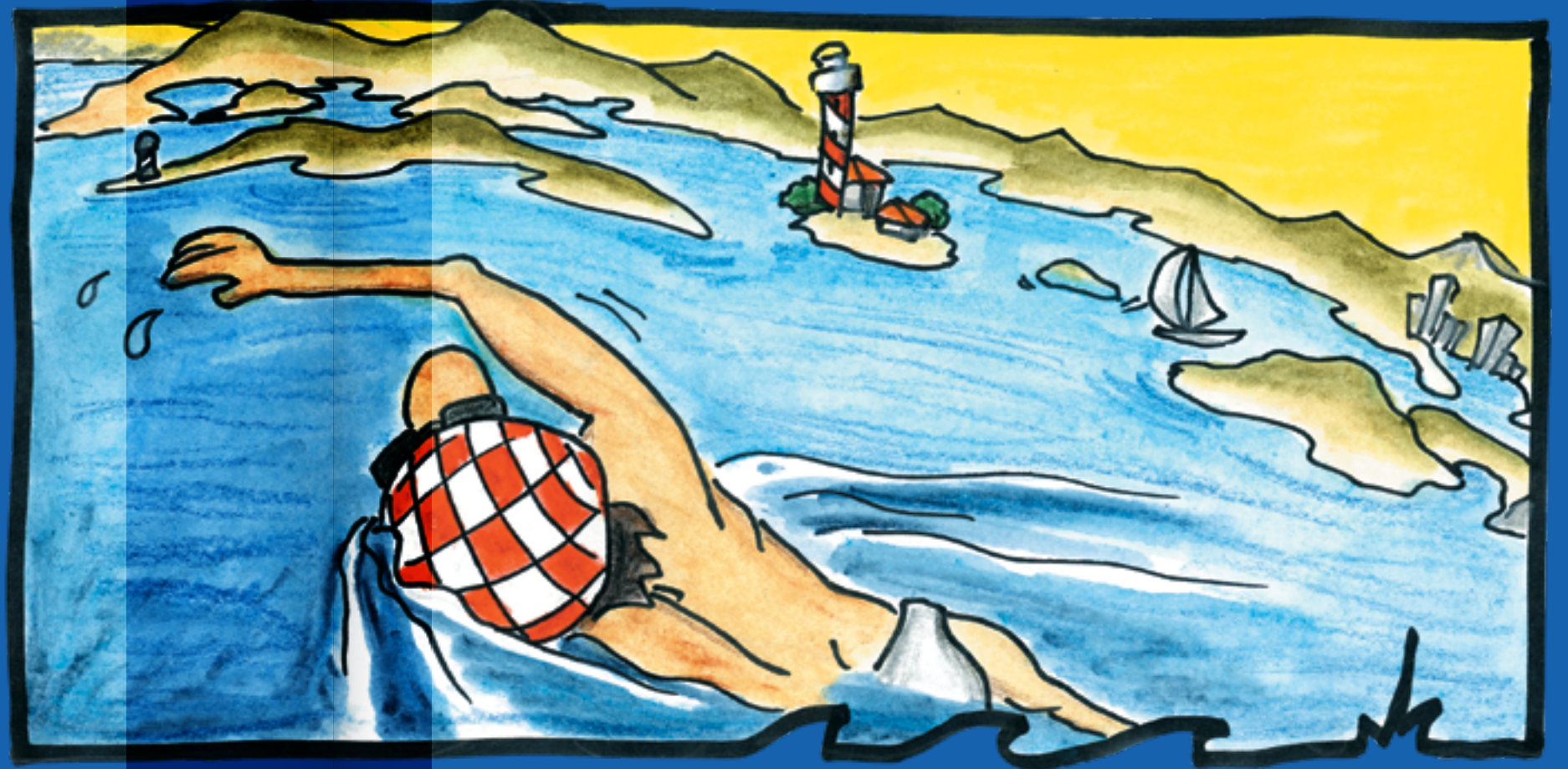
Of course, a good sports manager is a leading member in some organization, in which different profiles of staff are required. Below are some examples of staff who perform their work in sports organizations:

- administrator,
- PR responsible for public relations,
- coach,
- assistant coach,
- technical staff responsible for the maintenance of sport and leisure infrastructure.

The number of professional staff in our organization, of course, depends on the size and mode of our set program. Higher content dimension and consequently cash flow than is produced by our organization more staff is needed for task performing.

Also the employment of staff should be carried out on the basis of an appropriate job classification. This should be made by the general manager based on appropriate education and work experience.

Physical activity



The World Health Organisation defines physical activity as any bodily movement produced by skeletal muscles that requires energy expenditure. This includes activities that are undertaken while working, playing, carrying out household chores, travelling and engaging in recreational pursuits. However, PHYSICAL ACTIVITY should not be confused with EXERCISE, which is a subcategory of physical activity which is planned, structured, repetitive and aims to improve or maintain one or more components of physical fitness. Beyond exercise, any other physical activity that is done during leisure time, for transport to get to and from places or as a part of one's work – has a health benefit. It is known that, both, moderate and vigorous-intensity physical activity are health beneficial. In other words – moderate- and vigorous- intensity physical activity, improve health (World Health Organisation, 2020).

General recommendations regarding physical activity for adults

Mentioned age group should aim to do at least 150 minutes of moderate-intensity physical activity throughout the week. It is also recommended to do at least 75 minutes of vigorous-intensity physical activity throughout the week or an equivalent combination of both intensity activity. For additional health benefits, they should increase moderate-intensity physical activity to 300 minutes per week, or equivalent. Strength workout should be done involving major muscle groups, 2 or more days a week. Also, those with poor mobility, should perform balance exercises to prevent falls, 3 or more days per week. Lastly, in order to improve cardiorespiratory health, all activities should be performed in bouts of at least 10 minutes duration.

POSITIVE ASPECTS/EFFECTS OF PHYSICAL ACTIVITY

Nowadays, insufficient physical activity (IPA) is one of the leading risk factors for worldwide death. IPA is also a key risk factor for noncommunicable diseases such as cardiovascular diseases, cancer and diabetes. Because of health benefits, physical activity can contribute to prevention of noncommunicable diseases (NCDs). WHO has found that globally, 1 in 4 adults is not active enough. This pattern can be found also in adolescents. Aproximately 80% of the world's adolescent population is insufficiently physically active. (WHO 2020)

Therefore, we can conclude that nowadays, the physical fitness of humanity has decreased and is a main cause of many diseases and poor health in general.

Regular physical activity and higher cardiorespiratory fitness decrease overall mortality rates in a dose-response fashion. Issoma et al. (2001) claims that the human body is built for movement. Human organs and tissues are affected by physical activity and adapt to regular exercise. He also explains that regular physical activity significantly reduces the risk of premature death.

Let me just quickly draw you, what happens to the body during exercise. As explained in Issoma et al. (2001), during physical exertion, the pulse rises and cardiac output increases. Ventilation multiplies, blood pressure increases, body temperature rises, perfusion in the heart and muscle increases, more lactic acid is formed and the secretion of hormones such as adrenaline, growth hormone and cortisol increases.

However, we must narrow down factors that actually determine the response to exercise training. These are: frequency, duration, intensity and type of exercise.

In the next sub-chapters, health aspects of exercise will be presented, focusing mainly on health aspects of aerobic exercise, strength training and neuromotor exercise on the musculoskeletal system, endocrine system and central-nervous system.

WARM UP

Every sports activity requires prior preparation of the organism before starting exercises. The main essence of warming up is to increase muscle flexibility and nutrition of connective tissues. As the temperature and heart rate in the body increase, the muscles and other tissues become ready for further activities. Warming up takes 10 to 15 minutes. Exercise includes low intensive running and some exercises for stretching muscles and joints.

HEALTH ASPECTS OF AEROBIC EXERCISE

(musculoskeletal system, endocrine system, central nervous system)

Aerobic exercise

Aerobic exercise, as well known as »cardio exercise«, is a type of physical activity that requires pumping blood by the heart to work around the body to deliver oxygen to working muscles. Aerobic exercise stimulates the heart rate and ventilatory rate to increase in a way that can be sustained for the exercise session. Most common aerobic exercises include: running, swimming, walking, hiking, aerobics, dancing, cross country skiing and kickboxing.

Aerobic exercise improves fitness, physical and emotional health. Aerobic exercise is a helpful tool in prevention for many chronic diseases such as cancer, diabetes, depression, cardiovascular disease, osteoporosis and of course a great tool for weight management.

Recommendations regarding weekly volume of aerobic exercise for health benefits by World Health Organisation (2020):

- Adults should do at least 150 to 300 minutes of moderate intensity aerobic physical activity; or at least 75 to 150 minutes of vigorous intensity aerobic physical activity; or an equivalent combination of moderate and vigorous intensity activity throughout the week, for substantial health benefits.
- Adults may increase moderate intensity aerobic physical activity to more than 300 minutes; or do more than 150 minutes of vigorous-intensity aerobic physical activity; or an equivalent combination of moderate and vigorous intensity activity throughout the week for additional health benefits.
- Older adults should do at least 150 to 300 minutes of moderate-intensity aerobic physical activity; or at least 75–150 minutes of vigorous intensity aerobic physical activity; or an equivalent combination of moderate and vigorous-intensity activity throughout the week, for substantial health benefits.
- Older adults may increase moderate intensity aerobic physical activity to more than 300 minutes; or do more than 150 minutes of vigorous-intensity aerobic physical activity; or an equivalent combination of moderate and

- vigorous intensity activity throughout the week, for additional health benefits.
- For beginners and the elderly is performed up to the pain. It means that when doing the exercises breathing is not intense and during the performance we can also talk. It is recommended to perform the activities at least up to one hour.
 - Physically prepared adults can perform in addition to less intense longer workouts, also more intense and shorter training. Activities and type of training can be longer than an hour.

Musculoskeletal system

The ability to sustain an exercise task such as running or cycling requires that the energy utilization within the active muscle (i.e., the rate of adenosine triphosphate (ATP) breakdown) is fully matched by energy supply processes (i.e., ATP resynthesis). If the energy demand is not met, muscle fatigue ensues (Ronald, 1995).

- Quoting Ronald (1995), when we train for some time, our heart adapts but so do muscles. Adaptation in muscle is reflected in:
- Adaptation in muscle mitochondria: fundamental biomechanical adaptation induced by exercise training is an increase in the mitochondrial content throughout the trained muscle fibers. This greater mitochondrial content increases the capacity for aerobic energy provision from both fatty acid and carbohydrate oxidation and so improves muscle performance.
 - Adaptation in muscle capillarity: exercise training increases the number of capillaries surrounding individual muscle fiber. Therefore, when a fiber is recruited it becomes more effectively included in the flow of blood delivered to the muscle. This also helps to increase maximal oxygen uptake.
 - Adaptation in muscle metabolism: the increase in mitochondrial content of trained muscle has metabolic effects that serve to improve performance, at least during prolonged exercise.

Endocrine system

Charmas, Opaszowski, Rozanska and Jowko (2018) list that hormonal stimulation is the inner organism signal to the central nervous system. The feeling of tiredness and exhaustion has its roots in biological and hormonal changes and may serve as the first signal to the verification of exercise.

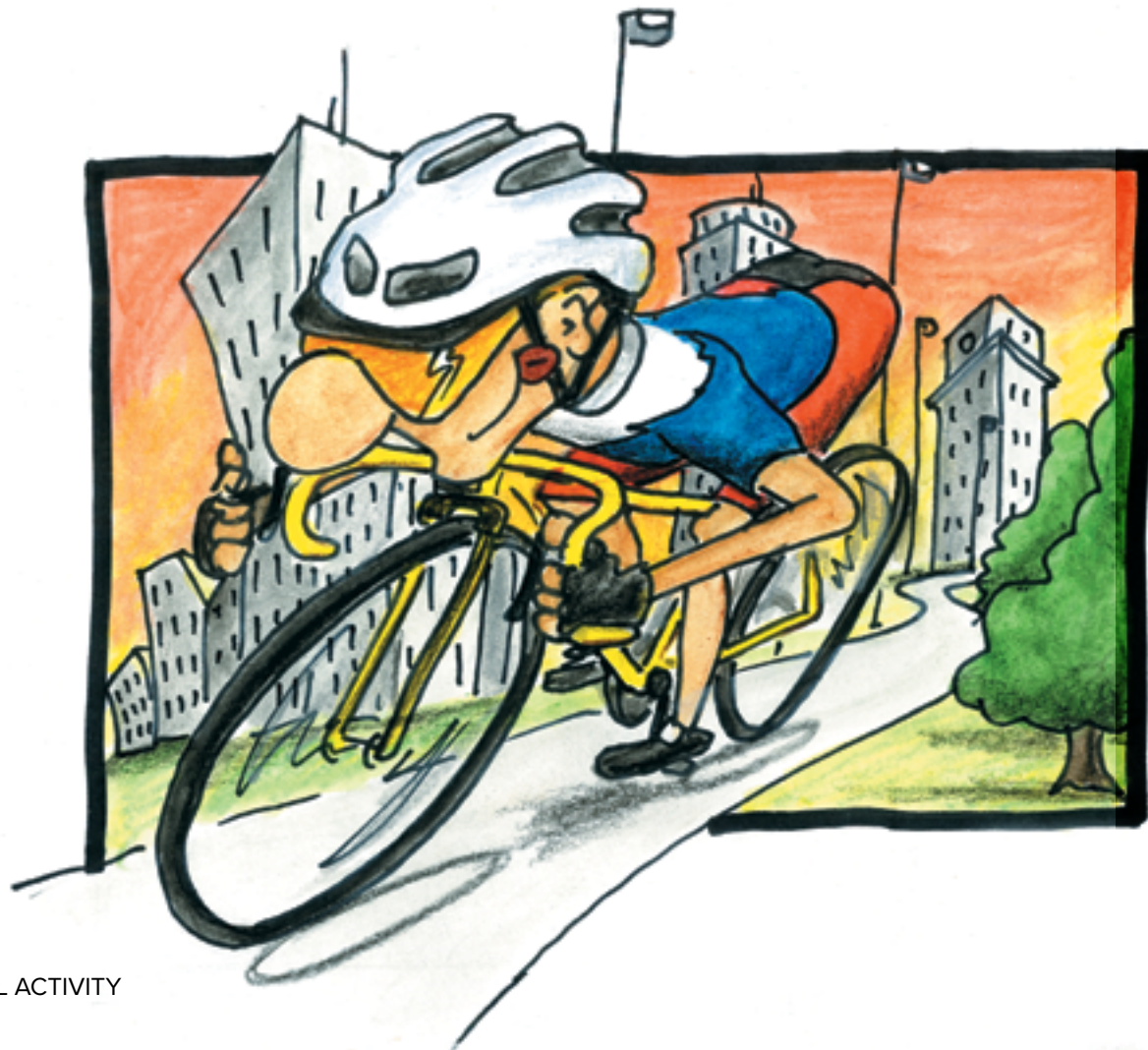
Several hormone systems are activated under exertion and physical activity entails increased plasma concentrations of multiple hormones (Professional Associations for Physical Activity, 2010).

So which are the most important hormonal benefits of physical exercise?

Firstly it makes us feel good, scientifically proven. Endorphins are hormones of happiness which are increased during prolonged aerobic exercise. These increased levels of beta endorphins during prolonged exercise can be of significance to well-being and blood pressure reduction in connection with an exercise session.

Naturally, lower hormone responses at a given workload are observed among well-trained than among untrained individuals. This applies to the increase in noradrenaline, adrenaline, growth hormone, ACTH and glucagon as well as the reduction in insulin (Professional Associations for Physical Activity, 2010).

Well-trained individuals have lowered insulin concentrations in plasma, both basally and after sugar intake, due to both a reduced release of insulin and an increased tissue sensitivity to insulin. The increased insulin sensitivity is strongly linked to the reduced risk of having cardiovascular disease that is characteristic of physically trained individuals. Moreover, regular exercise leads to an increased capacity for reducing fat tissue. In other words, the body easier uses fats as a fuel. Regular exercise has a carbohydrate-saving effect by a large part of the energy needed being met with the burning of fat. This is registered by the liver and after just 10 days of exercise, the liver glucose release during two-hour exercise bout can be reduced by 25% (Professional Associations for Physical Activity, 2010).



Cardiovascular system

According to Professional Associations for Physical Activity (2010) the effects of exercise training on the heart, like the majority of organs and tissues, depends on the frequency, intensity and duration of exercise sessions. After a few months of sufficiently intensive exercise, it is typical for the resting heart rate and the pulse during submaximal exertion to be 5-20 beats per minute lower, for the stroke volume to increase by 20 percent or more and for the heart's contractility to improve, which is reflected in a greater ejection fraction (the % of the heart's blood volume that is pumped out in one heartbeat) at maximum exertion intensity. The maximum heart rate is unaffected or only slightly decreased. Structurally, the heart's internal volume increases significantly and its wall thickness increases somewhat, which altogether means greater cardiac muscle mass, due to individual cardiac muscle cells increasing in size. In addition, the number of capillaries and mitochondria increases. With aerobic exercise training the capacity of the vessels is also improved.

Summing up, aerobic exercise is great training for your body but even more for your heart muscle. According to Mersy (1991), major benefits of aerobic exercise are:

- Decreased resting heart rate and blood pressure,
- Decreased heart rate and blood pressure during submaximal work,
- Increased stroke volume and cardiac output throughout exercise,
- Faster recovery to baseline heart rate and blood pressure,
- Increased maximum oxygen uptake.

In conclusion, we can certainly say that aerobic exercise is a general type of exercise that not only makes you feel good (due to endorphin secretion) but also has some major health benefits on our most important organ systems:

- Our muscles become better at absorbing oxygen,
- Our general stamina is improved so we can easier perform activities of daily living,
- Our hormones, especially insulin, become more responsive,
- Our heart becomes stronger and healthier.

So for the most part, aerobic exercise is a great way to prevent and conventionally treat chronic diseases especially cardiovascular chronic diseases and diabetes.

Summing up weekly dosage of aerobic exercise that is needed to be performed for health benefits:

- 3-5 times a week,
- 60%-90% of maximum heart rate,
- 15-60 minutes of continuous activity such as running, jogging, walking, cycling, swimming, aerobics etc...



HEALTH ASPECTS OF STRENGTH TRAINING

(musculoskeletal system, endocrine system, central nervous system)

Strength training is a system of physical conditioning in which muscles are exercised by being worked against an opposing force (lifting weights) to increase strength.

Experts say that strength training is very beneficial or even essential to the overall well-being of people at any age.

Major health-benefits of strength training are:

- Increase in bone density,
- Increase in metabolism rate,
- Improved mobility and posture,
- Increase in lean body mass and decrease in fat,
- Great tool for chronic disease management (rheumatoid arthritis, multiple sclerosis, metabolic syndrome ect.)
- Reduction in anxiety and depression levels,
- Improved self-image.

Recommendations regarding strength training: 2-3 times a week, targeting major muscle groups.

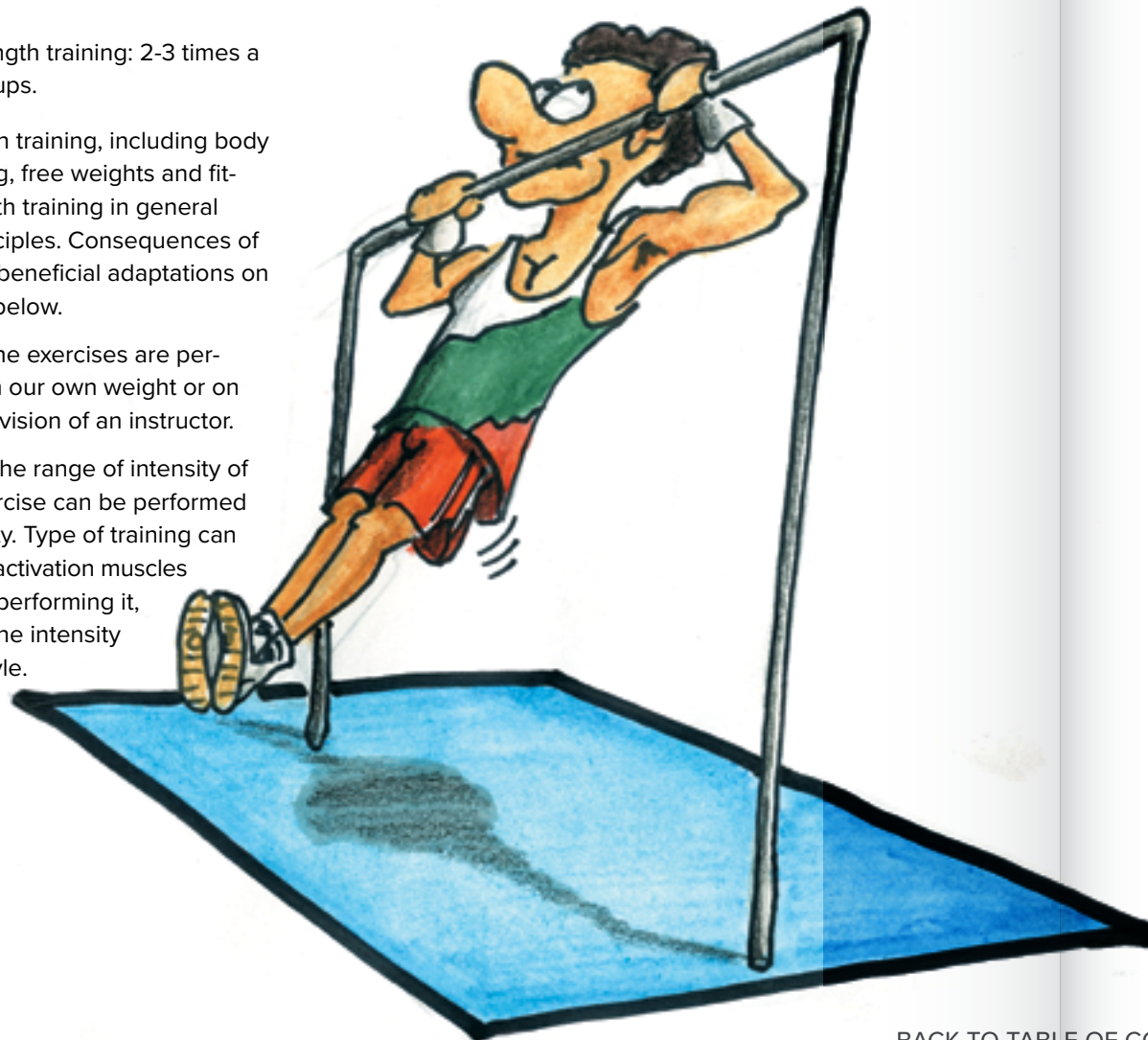
There are several types of strength training, including body weight exercises, resistance tubing, free weights and fitness machines. Either way, strength training in general affects the body with specific principles. Consequences of strength training are some health-beneficial adaptations on human organ systems, explained below.

- For beginners and the elderly the exercises are performed with lower intensity with our own weight or on fitness devices under the supervision of an instructor.
- For physically prepared adults the range of intensity of exercise can be larger. The exercise can be performed with greater weight and intensity. Type of training can be upgraded with exercises for activation muscles and also plyometric training. In performing it, we have to take care to adopt the intensity of training to our age and lifestyle.

Musculoskeletal system

Skeletal muscles in addition to skeletal bones, are our major tool for performing locomotion. So in order to improve our locomotion we must strengthen the major muscle groups. According to Baechle and Earke (2008), skeletal muscle adapts to strength training primarily by increasing its size, facilitating fibre type transition and enhancing its biochemical structural components. These changes then result in enhanced muscular strength, power and muscular endurance.

Muscle growth or the process in **hypertrophy** involves both, an increase in specific structural proteins and also an increase in the number of muscle cells (called myofibrils) in the muscle fiber. (Baechle and Earke, 2008)



Endocrine system

Strength training elicits hormonal responses critical to acute muscular force and power production as well as tissue growth and remodelling. Strength training has also chronic health-beneficial effects on the hormonal system, listed below (Kraemer and Ratamess, 2005).

Experts like McLeod, Stokes and Phillips (2019) say that there is an emerging body of evidence showing that resistance exercise training appears to be effective in reducing risk of several chronic diseases due to adaptations on various organs systems, also endocrine systems.

Major adaptations result in acute increase in testosterone and growth hormone, which stimulate muscle growth but also on insulin levels and glycemic control, which is very beneficial for people with diabetes type 2. Studies show that following a few weeks of circuit high intensity interval training program, not only increases muscle strength, cardiorespiratory fitness but also helps with glycemic control. In many studies, interventions show that glycated hemoglobin and fasting blood glucose statistically meaningful decreased (McLeod, Stokes and Phillips, 2019).

To conclude, strength training is not only beneficial for improving your fitness, strength, posture, but also a great tool for preventing some hormonal-chronic diseases such as diabetes, because of its influence on insulin sensitivity and glycemic control.



Central-nervous system

According to Baechle and Earke (2008), **strength training** is a subtype of anaerobic training and it is known that anaerobic training elicits specific adaptations in the nervous system, leading to greater recruitment rate of firing, synchronization and enhanced muscle function that enable increases in **strength** and **power**.

As Baechle and Earke (2008) believe, strength training may elicit adaptations along the neuromuscular chain beginning in the higher brain centers and counting down to the level

of individual muscle fibers. An increase in neural drive is critical to the athlete striving to maximize strength and power. The increase in neural drive is thought to occur via increases in agonist muscle (major muscles involved in a specific movement or exercise) muscle recruitment, firing rate and the timing and pattern of discharge during high-intensity muscular contractions. Also here, a reduction in inhibitory mechanisms, makes a difference. Although authors claim, that is not clear how these mechanisms coexist, it is apparent that **neural adaptations** are complex and typically occur **before** structural changes in **skeletal muscle tissue** occur.

On this point, we can sum up, how is adaptation in CNS crucial for strength-training related benefits:

- Changes in CNS happen before any structural changes, so these changes are necessary conditions for muscle growth.
- After applying strength training in your exercise routine, you will improve your major muscle activation, which is direct again for muscle growth and improvement in muscle power.
- Your muscles will firstly become strong, before they will get bigger.

HEALTH ASPECTS OF NEUROMOTOR EXERCISE

(musculoskeletal system, endocrine system, central nervous system)

Neuromotor exercise training is one of four components of physical activity beyond everyday activities. These are: strength-training, aerobic training, flexibility training and neuromotor exercise training. Neuromotor exercise training incorporates motor skills such as balance, coordination, gait, agility and proprioceptive training. It is speculated that neuromotor exercise may have a great effect on neural survival and neurogenesis (Garber et al., 2011).

Neuromotor exercise training is very beneficial as part of a comprehensive exercise program for older persons, especially to improve balance, muscle strength, coordination and reduce the risk of falls. Agility and balance training may reduce the risk of falling, fear of falling and potentially reduce the number of falls (Garber et al., 2011).

Neuromotor exercise training, as opinionated in Garber et al. (2011) is not only beneficial for older adults but has many benefits on health in younger adults. Limited evidence suggests that exercise involving balance and agility may reduce anterior cruciate injury and reduce recurrent ankle injury in men and women athletes. It is very beneficial for younger adults, who participate in physical activities requiring agility, balance and other motor skills.

So how much volume of neuromotor exercise on a weekly dosage is eventually beneficial for improving health aspects?

Garber et al. (2011) say that the frequency and duration of neuromotor exercise training to acquire health and fitness benefits is not exactly defined. Dosage that had statistical good outcomes on improvements in physical function:

- 2-3 times a week,
- 20-30 minutes in duration, for a total of 60 minutes of neuromotor exercise per week,
- Exercise involving motor skills (balance, agility, coordination and gait), proprioceptive exercise training and multifaceted activities (tai ji, yoga).

To sum up, here are health aspects of performing neuromotor exercise training, listed below:

- Positive effect on neural survival and neurogenesis,
- Improved balance, muscle strength, coordination and reduced risk of falls in older adults,
- Reduced risk for injuries, especially anterior cruciate ligament injury and ankle sprain.
- To perform the exercises, we need the appropriate tools (balance plate, balance pillow, balance ball...). In order that exercise has the desired effects, we need to carry out the balance throughout the whole process. Exercises should be designed to allow joint movements in all ways (frontal and lateral, lifting and lowering and also moving left and right). Exercises can be performed three to five times a week. With this type of exercise, we can bring a lot of creativity into our workout program.



STRETCHING

Stretching is a segment that is very important after performing the exercise. It reduces the possibilities of further injuries, and helps to improve the flexibility of our muscles. The exercises could be done anywhere.

The most common form of performing stretching is to stretch the muscle until the pain and hold it in position for 15 to 30 seconds. Exercises for such a muscle group can be performed at least two to three times per unit and can be performed for all muscle groups.

For improving your ROM (range of motion) and flexibility, stretching should be performed 3 to 4 times a week as a separate training. For maintaining flexibility and positive health aspects stretching should be performed 2 times a week as a separate or as a part of other physical activity.

Flexibility, stretching and performance

According to Baechle and Earke (2008), flexibility is a measure of ROM (range of motion) and has static and dynamic components. Static flexibility is the range of possible movement about a joint, and its surrounding muscles during a

passive movement. Static flexibility requires no voluntary muscular activity; an external force such as gravity, a partner or a machine that provides the force for a stretch. Dynamic flexibility refers to the available ROM during active movements and therefore requires voluntary muscular actions. Dynamic ROM is generally greater than static ROM.

Dynamic, static stretching and dosage

Dynamic stretching would be the preferred option for stretching during a warm-up.

On the other hand if our goal is to improve flexibility, additional separate stretching sessions may be needed. In this case, stretching should be preceded by a thorough warm-up to allow for the increase in muscle temperature necessary for effective stretching. For improving flexibility static stretching is a preferred option (Baechle and Earke, 2008).

Stretching should also be performed following exercise training. It should be performed within 5-10 minutes after practice. The increased body temperature increases the elastic properties of collagen within muscle and tendons,

which allows for a greater stretch magnitude. Post-practice stretching may also decrease muscle soreness (Baechle and Earke, 2008).

Positive aspects of stretching

Mayo Clinic experts in Stretching: Focus on flexibility (2020) claim that research has shown that stretching can help improve flexibility and the range of motion of your joints. Among these major aspects, improving your flexibility has some benefits:

- Improved performance in physical activities.
- Decreased risk of injuries.
- Help your joints move through their full range of motion.
- Enable your muscles to work more effectively.
- Increased muscle blood flow – useful for better regeneration of muscle tissue.

Stretching as a separate training session for improving flexibility should be performed 3 to 4 times a week for major muscle groups. Static stretching exercises should be held for 30 seconds in 3 to 4 series.

As a part of a warm-up, dynamic stretching is preferred. Common and clever choice is performing dynamic exercises for major muscle groups that would be loaded later on in the training session.

Static stretching exercises should be performed as a cool-down after every workout session for optimal regeneration of the muscle tissue. We should stretch major muscles, therefore muscles that were activated during the workout. Static stretching exercises should be held for 15 to 30 seconds in 2 to 3 series as a part of a cool-down.

Conclusion

Physical activity is a very important aspect of maintaining the health of individuals even after the end of their sport careers. In addition to the positive health aspects, this also has an impact on an individual's integration into society.

According to the latest Eurobarometer survey from 2009, which was based on two questions, one on the frequency

of participation in sports and recreational activities and the other on participation in other physical activities in the fields of leisure, household and transport, which included 27 EU countries, 27% of the population is regularly involved in exercise 5 or more times a week. According to the same source, 34% of EU residents never or rarely engage in exercise.

The highest number of residents who regularly get involved in exercise was recorded in Latvia (44%), Denmark (43%) and the Netherlands (43%), and the lowest in Italy (7%).

Regular physical activity is one of the most important factors even for further athletes for maintaining health and preventing disease. So as a conclusion, it is important that athletes remain active even after the end of their careers.



The importance of mental health

INTRODUCTION

The sports career termination can be seen as a process of one's adaptation to life after sport (Taylor & Oglivie, 1994, as cited in Cecić Erpič, 2002). It can be influenced by many factors, such as chronological age, injuries and health issues, personal choice. The transition is not influenced only by one factor, but rather by a varying combination of causes, reasons and circumstances; among these non-athletic factors, such as social roles, education, job market and family, play an important role as well (Cecić Erpič, Wylleman & Zupančič, 2004). Therefore, when talking about sports career termination the whole picture should be taken into account.

One of the most frequent reasons to terminate a sports career is **chronological age** (Schlossberg, Waters & Goodman, 1995, as cited in Cecić Erpič, 2002), even though the age when athletes decide to finish their competitive sports career differs among sports disciplines. When age changes appear and start to affect an individual's performance, athletes can still to some extent extend their participation in competitions with increased time and quality of practice (Svoboda & Vanek, 1982, as cited in Cecić Erpič, 2002).

Injuries and health issues are often the key factor for career termination (Alfermann, 2000, as cited in Cecić Erpič, 2002). They can occur unexpectedly and that is why they have an important influence on adaptation to life after retirement from sport. Athletes who were forced to finish their sports career due to an injury or health problems may also encounter mental issues with depression, alcohol and drug abuse or in some cases even suicidality (Ogilvie & Howe, 1983, as cited in Cecić Erpič, 2002). Such sudden shifts in physical ability can potentially cause changes in one's identity, emotional stability, fear, anxiety, lower self-esteem.

If these previous two factors are perceived as more negative, **personal choice** as a reason for sports career termination presents the most desirable manner of it (Cecić Erpič et al., 2004). There are many things that go hand in hand with the final decision. Athletes often sense a decrease in their motivation for training or entering a competition (Alfermann, 2000, as cited in Cecić Erpič, 2002). They can also feel they

have achieved the most of their set goals and therefore their value system can alter (Werthner & Orlick, 1983, as cited in Cecić Erpič, 2002). In connection to the developmental stage they are in, they start to acknowledge social contacts outside of their work-related social context (Cecić Erpič, 2002). They start to express interest in other life areas beside sport and become more engaged in personal life, for example focusing on friends and creating their own family.

In addition to these crucial factors the reasons for sport retirement can also be **financial difficulties**, lack of **emotional support** from family, **conflicts** and weak **relationships with colleagues**, poor relationships with **sponsors, sports associations** (Werthner & Orlick, 1982, as cited in Cecić Erpič, 2002). In some researches, the third most often reason for career termination that has been reported is a bad **relationship with an athlete's coach** (Cecić Erpič et al., 2004).

When athletes leave their competitive sports they may often experience loss in many areas such as identity, public attention, everyday training and social network (Kadlcik & Flemr, 2008). In case of an injury being the reason for career termination individuals are forced to end their career without any preparation. It is evident that such events require considerable psychological adjustment to the life after competitive sport.

There are various theories of career transition out of (elite) sports, which emphasize either negative or positive per-

spective of the process (Cecić Erpič, 2002). It can namely be experienced as troublesome and individuals can face some difficulties along the way whilst adjusting to the new way of everyday life. However, that is, fortunately, not always the case. Plenty of athletes report this career transition being experienced not significantly different than other life transitions (for example the end of education, starting or ending a relationship, getting married, moving house) (Perna et al., 1999, as cited in Lally, 2006). Findings from various studies conclude that athletes with resources for a successful transition are having a feeling of relief when ending a career, voluntary decision to retire and perceiving self to be more in control of their adaptation process (Park, Lavallee & Todd, 2013).

Another thing worth mentioning here is that some athletes create a **pre-retirement plan** before the actual career termination process. It can be a part of their double career or separated from it. However, it usually includes vocational, psychological and financial concerns and such planning was found to be positively linked to post-sport life adjustment (Cecić Erpič et al. 2004; Kadlcik & Flemr, 2008; Park et al., 2013; Stambulova, Ryba & Henriksen, 2020). The key factors in pre-retirement planning are psychological preparation and setting clear goals for life after elite sport, what is normally just what elite athletes lack at the end of their elite career.

BE PREPARED

No one transition is the same. You may not have an idea how you will feel about it until you reach the point of beginning the process. How well would you say you are prepared for your sports career termination? Do you feel this is something you are looking forward to although feeling a bit nervous? Do you maybe feel anxious, a bit lost and with low motivation? Are you lost in the way of establishing life after retirement?

Even though retirement from sport is one of the only certainties in a career of a competitive athlete, many of them may resist planning for career termination (Cecić Erpič et al., 2004). The number of researches and attention on transitions in athletes' lives have increased concurrently with the researches to develop career transition programs for athletes (Stambulova et al., 2020). Among career counseling interventions at the end of an elite sports career, the most frequently used approaches are individual counseling, account-making, mentoring and life developing intervention (Cecić Erpič, 2002). In regard to this, several career assistance programs offering support and guidance have appeared in recent decades (Cecić Erpič, 2002), such as the Athlete career and education program (ACE), Career assistance program for athletes (CAPA), Olympic job opportunity program (OJOP). Recommendations for psychological interventions from the literature mainly propose identity exploration, socio-emotional support, identification of (stress regulation) strategies and skills that athletes have already accumulated, and how to transfer them into current situations, self-efficiency boost.

There is no other way to put it: just as you did for your sports career, you will also need to put time and energy into preparation and adaptation for a life after a sports career. You may be successful in that alone, with support from your family and friends, but do not hesitate if you perceive that you might need some help from a professional. In that case consider **seeing a psychologist or a career counselor**. That is completely ok, too! Counselling can be a great boost with your coping process of sports career termination and a counselor can provide you with personalized support that you might not get from your family and friends.[P1]

In this chapter you can read about the psychosocial perspective of the process of sports career termination and later life of an athlete. The most important concepts of this process according to the literature are included, focusing on the guidance and strategies to provide an alleviation for former elite athletes.

COPING WITH STRESS AND ANXIETY

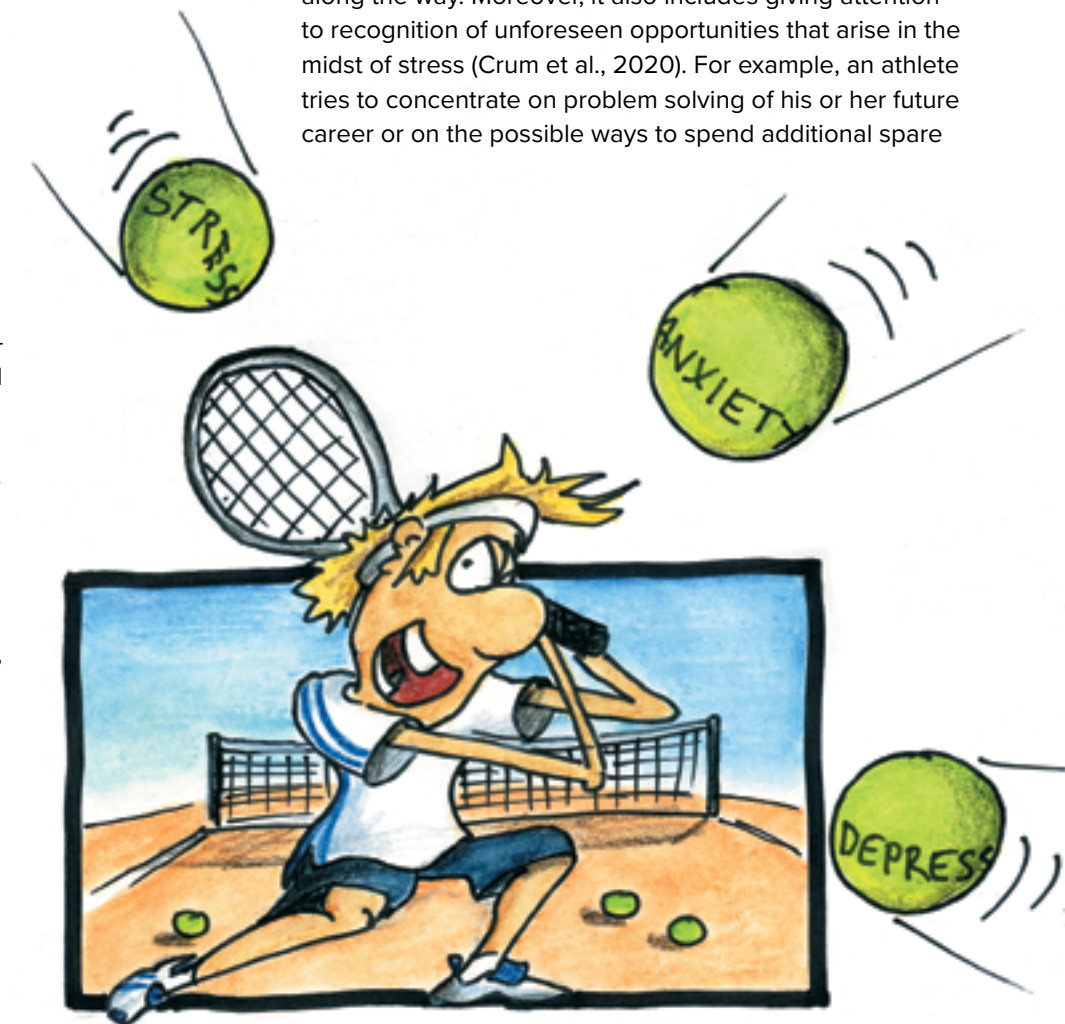
Each life event either positive or negative, comes with somewhat experienced stress or anxiety. Life transitions as well as aging per se, demand adaptation to new life circumstances and order energy to do that. When we are facing (an unknown) future we normally tend to feel uncomfortable, even scared. Nevertheless, there are also many coping strategies for stress and anxiety from the simplest ones, such as breathing techniques (Perciavalle et al., 2017) and relaxation exercises (Buzler, Voracek, Hos & Tran, 2018) to more complex ones - many of them are available for free on various websites and easy to find.

The dominant personal and cultural validation on stress is inclining in the negative perception of it, as being something bad to experience (Crum, Jamieson & Akinola, 2020; Witte, Spruit, Hooren, Moonen & Stams, 2020). Stress is often associated mostly with negative consequences, although beneficial associations with stress have been found, such as personal initiative, productivity, and improved relationships, and even greater appreciation for life in cases of life-threatening stressful events (Dienstbier, 1989 & Calhoun, 2004, as cited in Crum et al., 2020). Crum et al. (2020) have proposed an **integrated theoretical model of stress optimization** as a means to make the best or most effective use of situations, opportunities or resources. Stress optimization can be achieved by many strategies, such as situation selection, attentional deployment, cognitive change and response modulation strategies, all emerging in goals of optimizing stress.

1) The intention of **situation selection** is to seek situations that create opportunities to grow, learn and discover, regardless of the stress they might cause. In the case of an athlete

in career transition, a person could purposely look for different possibilities of support and help, even if one is not used to and feels reluctant to ask for help (Crum et al., 2020). In the case of a senior athlete that could be seeing an opportunity to reevaluate past small and big achievements, experiences and discover what one can offer to the community with all that has been accumulated over the years. Remember, we feel nervous solely if we assess the situation, goal or object that causes stress as valuable. Therefore, it does not mean that stressful emotions must be suppressed, but rather be perceived only as an indicator for things that are important.

2) **Attentional Deployment** stands for directing attention to underlying goals rather to stressing emotions that come along the way. Moreover, it also includes giving attention to recognition of unforeseen opportunities that arise in the midst of stress (Crum et al., 2020). For example, an athlete tries to concentrate on problem solving of his or her future career or on the possible ways to spend additional spare



time, not focusing on the unpleasant emotions of anxiety. The athlete gives consideration to the main aim, that is, for instance, to create and continue a sports career in other fields of workspace; or how to adapt to decreases in physical performance.

3) Cognitive change represents a broad array of strategies of thoughts altering. An individual would attempt to regulate stress by reappraisal strategies, which aim at optimizing rather than reducing or ignoring stressful situations (Crum et al., 2020). For athletes that means to acknowledge the transition out of sport as a stressful event, but also finding thoughts that support competence (e.g. 'every athlete goes through this', 'stress is only pushing me to move and act'). Another example of cognitive change for senior athletes would be recognizing their shifting values and explore positive sides of it (e.g. 'Although I miss my golden years in career, I have learnt to value many other things in life now', 'I can dedicate my time in energy more towards building strong relationships for which I have not had time before').

4) Response Modulation refers to modifying behavioral, physiological and psychological stress responses. Stress optimization encourages people to utilize stress to facilitate goal attainment rather than using strategies to suppress stress responses (Crum et al., 2020). Many athletes use strategies of warmups, pep talks, deep-breathing techniques, relaxation techniques before competitions, why not transfer these tactics into current stressful situations outside the competitive sports world?

Recent neuroscientific studies provide insights into how **music** interventions may lead to stress reduction and increased well-being (Yehuda, 2011; Kappert, Wuttke-Linne-mann, Schlotz & Nater, 2019; Witte et al., 2020). Music listening as well as music making (playing instruments, singing) have been associated with decreases of physiological arousal in lower cortisol levels, heart rate and blood pressure (Witte et al., 2020). Researchers have found psychological outcomes of musical interventions in state anxiety, nervousness, restlessness, feelings of worry. Music has been claimed to be as equally effective in reducing perceived stress and perceived relaxation as lan-

guage-based techniques (such as guided meditation) (Kappert et al., 2019). When choosing types of music, the preference, familiarity or past experiences with music should be taken into consideration (Witte et al., 2020; Kappert et al., 2019). Music experienced as pleasant can increase the intensity of emotional valence, which has a stress-reducing effect. These results have been explained by the mechanisms in the reward brain system (Witte et al., 2020). Increased dopamine activity has been associated with feelings of happiness in response to high-valence music. Another explanation sees listening to music as a distraction activity from stress-increasing thoughts or feelings (Yehuda, 2011). There is still space for future research on music characteristics (such as music tempo, musical style, live or prerecorded music), but the present results are quite promising, since the crucial practical value of musical interventions is highlighted (Yehuda, 2011; Kappert et al., 2019; Witte et al., 2020).

Mindfulness as a concept is the awareness that emerges through paying attention on purpose in the present moment in a nonjudgemental way. Lately it has been broadly studied and has been proven to have positive effects on mental health in different populations (Burzler et al., 2018). Mindfulness as practice has been proposed to be a great way of improving psychological well-being, self-regulation, self-exploration and decreasing stress. The goal of first mindfulness programs that were tested on the population of retired athletes was to teach them to accept their cognitions, emotions and sensations and consequently committing themselves to action rather than fighting against negative thoughts or unpleasant emotions (Norouzi, Gerber, Masrour, Vaezmosavi, Pühse, & Brans, 2020). The researchers have found positive outcomes from an 8-week course of mindfulness-based stress reduction. Participants have reported of improved psychological well-being, reduced symptoms of stress, anxiety and depression. There were also other studies that confirmed shorter mindfulness meditation as an antecedent to stress reduction and increase in hope (Munoz, Hoppes, Hellman, Brunk, Bragg, Cummins, 2016). Mindfulness exercises and meditations are now widely accessible on the various websites and can be found available for free.

IN THE SEARCH OF A NEW IDENTITY

Identity is a multidimensional structure of a person's self-concept, composed of feelings and thoughts about the self across various aspects of life. It is one of the most important factors in the process of career termination and the adaptation to life after sport (Cecić Erpič, 2002; Heird & Steinfeldt, 2013). **Athletic identity** is a psychic construct within 'general identity' that all athletes develop during their career. In case of an athletic career, the concept of identity is by some authors defined as 'the degree to which an athlete identifies with the athlete role' (Brewer, Van Raalte and Linder, 1993, as cited in Heird & Steinfeldt, 2013), whilst other authors interpret it quite exclusively as 'a degree to which individuals perceive themselves through sportive achievements.' (Brewer, Van Raalte & Linder, 1993, as cited in Cecić Erpič, 2002). It has two aspects: cognitive and social (Menke & Germany, 2019). As a cognitive structure it provides a framework for interpreting information, coping with situations, and direct behavior consistent with the athlete role (Heird & Steinfeldt, 2013). On the other hand, social roles consist of perceptions of people who are close to the person (family, friends, coaches) and also emphasize athletic dimension (Stryker, 1980, as cited in Menke & Germany, 2019).

Since athletes dedicate the majority of their time to training, preparations and competitions they are mostly focused on their sport discipline (Danish, Petipas & hale, 1990, as cited in Cecić Erpič, 2002). That can lead to the point when someone starts reducing other activities that are not connected to their work in order to fulfill the plan and achieve optimal results. In time it seems likely they decrease or give up their other leisure activities, hobbies or habits and therefore their athletic identity becomes even more evident and vivid, replacing identity in all spheres. Athletic identity remains a core aspect of identity utilized in interpreting information, providing a structure of expectations and planning behaviors (Heird & Steinfeldt, 2013). Such closed or limited identity is often prompted by coaches (Cecić Erpič, 1998, as cited in Cecić Erpič, 2002), who in a good faith try to motivate their athletes to remain intent. In sum, an individual who has restrained opportunities to explore, develop and experience diverse roles outside the sports world could be a great advantage when terminating a sports career.

What happens with this strong and persistent athletic identity after career termination? In some cases, specifically when athletic retirement is predictable, athletes begin this redefinition of self long before their actual sport career termination (Cecić Erpič et al., 2004; Kadlcik & Flemer, 2008; Lally, 2006). It has been shown that the experience of an identity crisis following sport career termination is not impending, suggesting athletic retirement is one of many life transitions (Taylor & Ogilvie, 1994, as cited in Cecić Erpič, 2002; Perna et al., 1999, as cited in Lally, 2006). This life event has even prompted athletes to explore neglected, abandoned or entirely novel identity dimensions, being given this opportunity for self-exploration (Lally, 2006). However, transition to the end of a competitive career can pose a challenge especially for those who have constructed strong athletic identities (Grove, Lavallee & Gordon, 1997; Cecić Erpič et al., 2004; Park et al., 2013). In comparison to athletes with low athletic identity, a strong athletic identity has been found to be associated with mental and behavioral disengagement, denial, but also with more seeking of social support (Grove et al., 1997). It can result in feelings of grief and loss requiring accommodation and assimilation to the discrepancy between what I was and what I am now. Suddenly, it hits the new reality, where it is not in line with life after a terminated sports career anymore. Athletes may feel confused and disconcerted and it should be emphasized that all these feelings are completely normal. As it took years to develop identity, salient in an athletic area which was convenient then, it will surely take some time to reconstruct it and adapt to a diverse career path.

Studies suggest that there is no clear evidence for certain coping strategies to be more effective than others (Grove et al., 1997; Park et al., 2012). However, **searching for new careers and interest** is an exception (Hickey & Roderick, 2017). Exploring new career paths and interests was found to be related to the identity shift process (Van Raalte & Petitpas, 2000, as cited in Cecić Erpič, 2002). So, let's boost self-exploration on vocational interests, spare time activities and the new place for sport in everyday life! Take a look at 'Little helper: In the search of a new identity'.

Active in Sport Again!
Little helper: In the search of a new identity

HOW TO SET YOUR GOALS AND STAY MOTIVATED?

Athletes spend an enormous time training, building up their fitness but once they transition out of the competitive sport environment they find it challenging to maintain healthy levels of physical activity participation. Research showed that athletes who view sport and **exercise as a key aspect of their self-identity** are more likely to be persistent in physical activities even after they finish participating in sports competitions (Reifsteck & Davis Brooks, 2018). That means they value physical activity and they perceive it as a part of what they are, and it is consistent with their goals and lifestyle. On that note, it is important to emphasize that when athletes are still in their competitive sport career, their goals for physical activity and training are mainly aimed directly toward

the best possible performance. They may see the purpose of all hard work in results and health is often measured as one's ability to compete. Athletes are often willing to sacrifice their physical health for career and do not necessarily link physical activity to maintaining their health. It all changes later on when they drop out of competitive sport, they do not target the same goals anymore or maybe they do not have any clear goal (Cecić Erpič et al., 2004). They do not feel prepared to pursue physical activity for health-related reasons. Thus, it is essential to develop a broader field of motivational reasons which includes regular exercising as an important value, part of a lifestyle and a character of who they are. Moreover, cultivating motivation for physical activity that focuses on health resulting in promotion of mental and physical health is extremely important regardless of age.

So, let's have a look at how human motivation works. Self-determination theory, by authors Deci and Ryan (2008), in particular may come in handy in this case. It namely explains motivation as a continuum from being motivated by external factors to more self-determined and volitional factors for motivation. Even though all types of motivation might sometimes cause the exact same result, the main distinction between both sides is in the sources of the motivation. Controlled motivation consists of external regulation of behavior by reward or punishment, avoidance of shame, contingent self-esteem. On the other hand, autonomous motivation includes reasons that people identify with an activity's value and connect to their self-perception. Both types of motivation are in contrast to amotivation, which presents any lack of intention and motivation (Kobal Grum & Musek, 2009).

If we transfer this knowledge to the field of sports, we can see how the reasons behind motivation change from one side to the other side of this continuum:

Authors Deci and Ryan (2008) also point out next findings. In regard to types of motivation here also come three basic and universal psychological needs that need to be fulfilled to help individuals develop more self-determined motivation for engaging in physical activity: **autonomy** (feeling a sense of ownership over self-behavior and choices), **competence** (effectively mastering challenging tasks within one's environment) and **relatedness** (feeling a meaningful connection with others). When someone is motivated more by self-determined reasons they are more likely to maintain behavior over time (Deci & Ryan, 2008; Edmunds, Ntoumanis & Duda, 2006). If they perceive they are in control of decisions for performed activity, competent in performing it and feeling connected to others in the meantime, they are more likely to develop self-determined motivational regulations and pursue them with exercising over time.

One of suggestions made to athletes when terminating professional career is to maintain physically active at an optimal level that can be accomplished at given conditions.

There is no argument that regular physical activity in older age not only prevents physical and mental problems, but increases the comprehensive quality of life as we emphasized in earlier chapters. Although there is unfortunately a decrease of physical activity level with advancing age, over the past two decades, there has been an increase in one type of physical activity – competitive sport.

The Masters sport has developed in the United States in athletics during the 1960s but continued to grow since and becoming the fastest expanding sector of sport (Dionigi et al., 2011). Masters sports allow older people to compete against others within similar age range at local, national or international level. Competitive sport is often associated with young people, but can it have the same benefits and advantages among older adults?

We can say that much of the literature on Masters sport and older athletes has focused on physiological and psychological health outcomes associated with sustained in-

volvement in regular physical activity (Baker, Horton, & Weir, 2010) and not many focused on the meaning competitive sports participation holds in the lives of older people and how sport has the potential for benefits above and beyond those gained from general physical activity.

Researchers have only recently started exploring competitive sport as an optimal activity.

for maintenance of health, functioning and identity management among older adults and discovered that competitive sport in older adulthood extends the benefits of regular exercise.

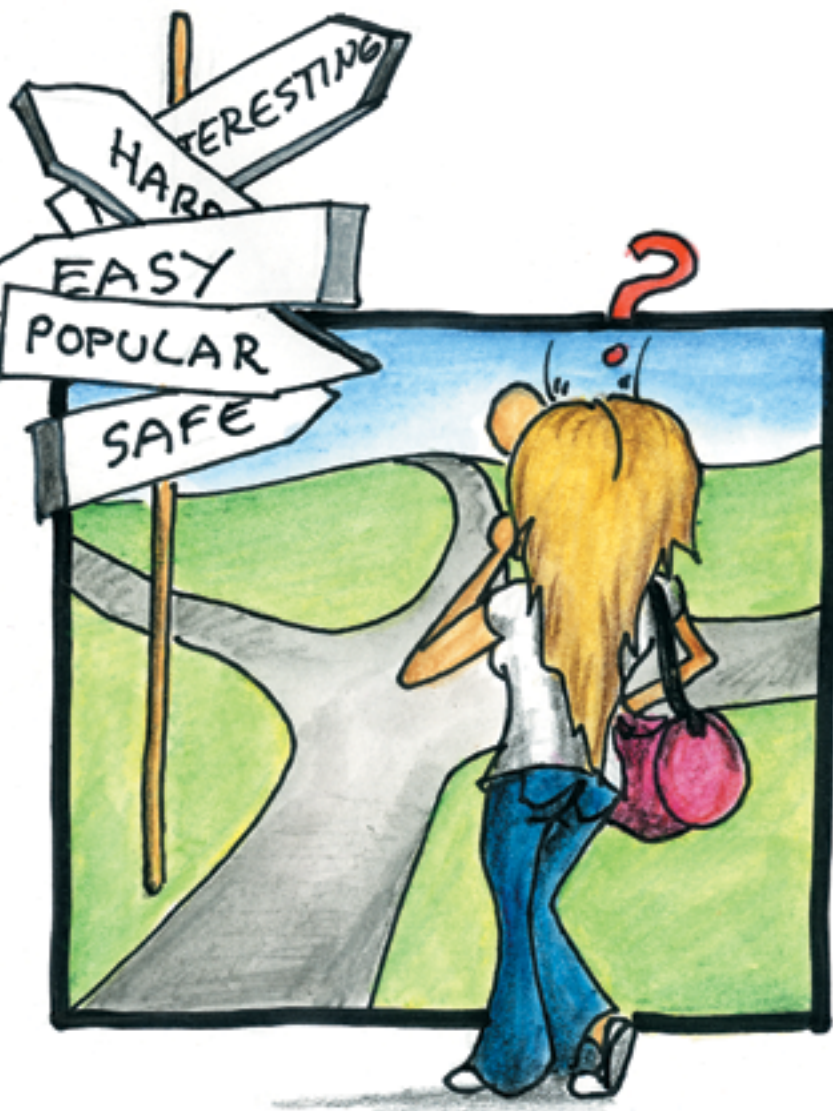
Masters sport allows older people to test their boundaries, and enjoy a challenge, competing and self-proofing. This includes not only former athletes who once retired from (professional or semi-professional) sport, but also offers a place for people who never competed in sports to try out for themselves and experience the success of victory for the first time.

Competitive masters sport involves regular competing that provides an athlete with long-term and short-term goals for participation and training which is one of the most powerful techniques in maintaining focus and motivation in sports. Training that is structured and with a purpose makes it harder for athletes of any age to give up. Competitive sport provides opportunities for social comparison, gives one an opportunity to establish friendships, social interactions and motivates a person to socialize and have fun with other adults.

We can say that older athletes are at the moment rare and privileged group because they possess the time, ability, health and disposable income to train and travel to competitions, but because of all the benefits that derive from competitive masters sport, improvement of institutional framework and support should be one of developmental goals in senior's mental and physical health strategies. (Dionigi et al., 2011).

Take a moment here and explore your motivation for staying active with the next exercise:

Active in Sport Again!
Little helper: Let's stay motivated!



BUILDING YOUR SELF-ESTEEM

Through this chapter we have learnt about the great influence that career termination has on mental and physical state. It is only logical to assume it would affect one's self-esteem as well. Authors have warned that perceived physical condition and self-worth, global self-esteem decrease shortly after the transition out of elite sport (Cecić Erpič, 2002). Due to decreased training and lost confidence in capacity transitional athletes reported significant differences in five months after the beginning of the process (Stephan, Bilars, Ninot & Delignières, 2003). It is positive that these perceptions lead to reduced feelings of pride, self-respects, satisfaction with oneself. With a new assignment to find another job hanging in the air all that unfortunately cannot be helpful.

A research that was carried out on the Slovenian sample revealed that the majority of former elite athletes take part in the education system (Cecić Erpič, 2002). Almost all of them finished secondary or tertiary education, a third managed to attend it regularly, although a few did not complete their education. This is still above average education levels that were found in older studies from abroad which can indicate greater possibilities when seeking employment (Cecić Erpič, 2002).

Athletes are normally involved in the employment process outside sport during their elite sports career. Slovenia joined other EU countries at employment practice and already in 1996 reached an agreement of athletes and coaches' employment (Olimpijski komite Slovenije, n.d.). Since then, most frequently, athletes are employed in state or government organizations which enable them to train and compete without disturbance. In exchange for that, athletes compensate for the flexibility of their job by activities that are beneficial to the organization, such as promotion. The International Olympic Committee developed the Athlete Career Programme, which was adopted in many countries.

In Slovenia the content is included in the national program of sport, the implementation of the program of top athletes is taken care by a human resource organization, Adecco. (Žinkovič, Videmšek & Meško, 2015). The National Olympic committee also developed the manual of dual career for athletes.

Bulgarian Olympic Committee has started its activities in the field of dual career with the implementation of an Erasmus+ project Smart Sport which support the implementa-

tion of EU Guidelines on Dual Careers (DC) of athletes by setting up a transnational network of stakeholders who will elaborate, implement and test an Innovative Dual Career Program (DCP) as a new educational and training opportunity for athletes and coaches.

Also the Croatian Olympic Committee manages the program of dual careers for athletes. In order to better achieve the goals and structure of the areas related to the dual career, a manual was made under the auspices of the Croatian Olympic board. The programme in all countries of the project was evolved for elite professional athletes who are in the transition from elite sport. It facilitates the process by acknowledging an athlete's resources, competences and transferring these into other areas, it includes career counselling and decision support interventions.

For a veteran athlete it is important to realize what an individual can provide in the business world outside sport. There are plenty of advantages when hiring a former elite athlete, the decisive solution is to find out how to transfer and use them in divergent situations. What are your favorite personal characteristics? What qualities are you most proud of? Do you have any suggestion how to use them in everyday life for a new job?

In order to achieve extremes accomplishments one must simply exhibit extreme skills and qualities. Just to name a few: **persistence, endurance, working habits, experience of high stressful conditions, teamwork, goal orientation and motivation, organization competences, flexibility, patience, enthusiasm ...** (for more see: Conley, Danish, Pasquariello, 2010). Even if athletes perceive these qualities as essential mostly in the sports word, it should be pointed out that previously stated characteristics are transferable and useful in any type of working field. In a Slovenian study in which Slovene veteran athletes were interviewed, the researchers found interesting results (Žinkovič, et al., 2015). The participants recognized following personal assets of **discipline, self-management, motivation,**

competences of public speaking and exposure, performance, communication skills, fine concentration and broad social connections and social recognition. These qualities are highly requested by employers or at human resource departments. A great amount of lack in specific knowledge and working experience can be compensated by these desirable features (Žinkovič et al, 2015). Hence, these excellent acquired skills from sports careers ought to be stressed in the job application.

The study also explored the best possible job positions for former elite athletes. The authors concluded that some of the suitable work for athletes would be a position that includes communication with people, teamwork, public appearance and necessitate self-discipline and self-organization, foreign languages (Žinkovič et al, 2015). The proposed work positions outside the sports environment were in marketing, public relation, working as a clerk, a seller, or an ambassador. Although the study focused on the profession outside sports, Megraoui (2019) suggested other many opportunities for career choices within sports as well (for example sports coach, personal trainer, physical education teacher, sport and exercise psychologist, health promotion specialist or health improvement practitioner etc.).



STAYING CONNECTED

Having spent an enormous amount of time together with teammates, coaches and athletic staff, athletes develop strong relationships with people inside their work environment. A cross-countries research has indicated that many transitional characteristics affecting the transition quality were influenced by socio-cultural context (Kuettel et al., 2017). Social networks play an important role in athletes' career transitions (Park et al., 2013). Among athletes in the transition process, searching for psychosocial support and getting support from others was one of the most frequent coping strategies (Brown et al., 2018). Being supported by close others and having a strong social support network ease transition difficulties during the post-sport adjustment period (Park et al., 2013). Social relationships are reported to be a key element of well-being and recognized as having far-reaching and cumulative effects on health over the life course (Antonucci, Ajrouch and Birditt, 2013). Athletes seek emotional and esteem support through storytelling, account making or mentoring. In the case of younger athletes, authors report that experiences of feeling cared for and understood can help towards more positive transition. Even if athletes expressed some struggles with asking for help or support, especially concerning their mental health, those who did, claimed to find it easier to adjust (Brown et al., 2018; Cecić Erpič, 2002; Žinkovič et al., 2015).

Even if one may not be aware of this, **elite athletes have made many connections and acquaintances** during their career and therefore built **a strong social network** (Conley et al., 2010). It can all be taken as an advantage in the adaptation process and when seeking a new job. In addition to this, they have **the advantage of recognition** (Žinkovič, Videmšek & Meško, 2015), which can be beneficial. When in the process of career termination, it is crucial to maintain these existing contacts and use them to even expand connections in the desired direction.

There are various ways of finding social connections, support and help. You can also find more information on possibilities for networking, joining a club or other form of organization for athletes in previous chapters. Maybe 'Little helper: Staying Connected!' can serve you when reasoning who you might include and contact in case of feeling the need to stay connected. (The exercise is based on the findings of The Convoy Model by the authors Antonucci et al., 2013).

Active in Sport Again!
Little helper: Staying Connected!

Medical examinations in competitive and recreational sport

THE IMPORTANCE OF HEALTH CARE FOR ATHLETES AND RECREATIONALISTS

Definitions and terms

„SPORT means all forms of physical exercise aimed at, through optional or organized participation, expressing or improving physical abilities and mental well-being, making social connections or achieving results at all levels of competition.“

(European Sports Charter, 1992)

In the guidelines of the Croatian Society for Sports Medicine, Ivančev (2021) defines some important ways and methods of medical examinations for athletes, about which we will write about in this chapter.

- **ATHLETE** is a natural person in the sports system who prepares and participates in sports competitions through the training system, as a member of a sports organization or independently, in accordance with the rules of sports federations.
- **RECREATIONAL SPORT** (sports recreation, sports for all, mass sports) is a part of sports that includes voluntary exercise, i.e. engaging in sports activities for rest, improving health, meeting the needs for movement, play and socializing.
- **COMPETITIVE SPORTS** includes sports activities that include a system of training and competition with the aim of achieving results and sports quality in accordance with the rules of school and national sports federations.

- **SPORTS MEDICINE** is a multidisciplinary and problem-oriented medical activity, focused specifically and primarily on preventive medical activities according to age groups, type of sport and the level of risk of specific functional requirements of each sport. The goal of sports medicine as a multidisciplinary medical activity is to maintain and improve the health of all participants in sports activities. In that sense, the preventive function of sports medicine has a priority function.
- **MINIMUM SCOPE OF ATHLETE EXAMINATION** is a health examination (clinical and diagnostic) based on scientific knowledge that provides a clear insight into the health ability of athletes, i.e. participants in competitive, recreational or health-oriented physical activities. It is determined based on specific physical and functional requirements of individual sports disciplines in relation to chronological and actual biological age.

HEALTH INSURANCE OF ATHLETES

Sport or regular physical activity reduces the risk of many diseases such as coronary heart disease, high blood pressure, colon cancer, obesity, diabetes and premature death in general. Sometimes sports or any physical activity, even health-oriented ones, also carry certain risks in terms of overload, which are reflected in the increased frequency of musculoskeletal injuries or, unfortunately, sudden cardiac death. Sport or physical activity in an appropriate form, adapted to each individual, has a therapeutic effect on the human body. Inadequate physical activity that is not adapted to humans in terms of intensity, volume, duration and frequency increases the risk of impairment of health and dysfunction of certain organ systems.

Therefore, there is a need for systematic monitoring under the professional supervision of kinesiologists and physicians of both sports medicine and other specialists.

Extremely important is the quality and continuous health care of athletes, which includes measures to protect and improve physical and mental health in relation to their sports activities and the environment, taking into account other daily professional and personal activities. It contributes to maintaining and improving the level of motor, functional and work abilities, mental and social well-being and includes the prevention of injuries and diseases caused by sports risk factors.

Medical examinations to determine the medical fitness of athletes are performed in health care institutions and companies registered to perform occupational and sports medicine activities by doctors, sports medicine specialists or occupational and sports medicine specialists.



What are preventive examinations of athletes?

Preventive examinations of athletes are an important mechanism for protecting the health of athletes during which the sports doctor determines the current health status of the athlete, his functional abilities and risk factors crucial for the prevention of disease, musculoskeletal injuries and sudden cardiac death.

In case of suspicion of a certain health disorder detected at the preventive examination of athletes, cooperation with specialists at the secondary and tertiary level is crucial for the quality care of athletes.

In order for the medical treatment of athletes to be fully covered, it is necessary to cooperate with specialist branches: cardiology, traumatology, orthopaedics, physical medicine and rehabilitation, internal medicine, neurology, neurosurgery, paediatrics, gynaecology, dental medicine...

Types of athletes, health examinations

The types of medical examinations that determine the medical fitness of athletes are:

- Previous,
- Periodic and
- Exceptional preventive medical examination.

Preliminary, periodic and exceptional examinations are performed for assessing the ability for a specific sport and age category, taking into account the loads on the organ systems, hazards, harmfulness and stress. Ability is assessed for competitions and training (sports preparation) for a specified period or shorter if there are indications for it.

Preliminary examination

Preliminary medical examination is performed before the beginning of competitive practice in a particular sport, or after the cessation of activities for more than a year.

Preliminary examination of athletes to determine their medical fitness includes at least:

- Identification of athletes
- Anamnesis
- Anthropometry
- Hand dynamometry
- Clinical examination (by organ systems)
- ECG at rest (for older than 40 years ergometry / spirometry according to sports requirements)
- Spirometry
- Orientation examination of vision
- Laboratory tests of blood and urine
- Assessment of health ability to engage in a specific sport / physical activity in a specific age category
- Issuance of a Certificate of Medical Fitness

Periodic examination

Periodic medical examination is performed no later than 12 months after the last medical examination.

Periodic examination of athletes to determine their medical fitness includes at least:

- Identification of athletes
- Anamnesis
- Anthropometry
- Clinical examination (by organ systems)
- ECG at rest
- Laboratory tests of blood and urine -assessment of health ability to engage in a specific sport / physical activity in a specific age category
- Issuance of a Certificate of Medical Fitness

Exceptional examination

Exceptional medical examination is carried out in accordance with the scope containing clinical, functional and laboratory tests to determine the health status of athletes depending on the reason for referral to the examination, or according to the assessment of the competent specialist in occupational medicine and sports.

Exceptional examination of athletes includes:

- Identification of athletes
- Anamnesis
- Anthropometry (height and weight, body mass index)
- Clinical examination (by organ systems - oriented according to the anamnesis and the reason for referral to an extraordinary medical examination)
- Diagnostic procedure according to the working diagnosis
- If additional diagnostic procedures and consular specialist opinions are required, the patient is referred to an appropriate health institution
- Assessment of health ability to engage in a specific sport
- Issuance of a Certificate of Medical Fitness

Monitoring the health of athletes from the beginning of their sports career is the basis for a safe and long-term stay in competitive sports, especially elite sports, but also as a prevention of many diseases that are caused by excessive physical activity, inappropriate stress on the body or poor monitoring of health status.

In order for the health care of athletes and recreationists to be implemented at the highest level, the continuity and sustainability of financing the health care system from the state budget or local community budgets is one of the essential preconditions for successful implementation of health care for athletes and recreationists.

It should be noted that the protection of the health of athletes-competitors up to 18 years of age is a public health and national interest for which a better legislative framework must be prescribed that will ensure better availability, quality and efficiency at all levels of health care while strengthening the role of primary and preventive health care. In addition, prescribing the Ordinance on health examinations of athletes and recreational athletes and establishing the Register on health examinations of athletes, is the basis of a comprehensive model of health care according to the highest standards. Such an approach of establishing quality health care for athletes and recreationists is a prerequisite for the successful development of sports from an early age, through recreational to elite and professional sports.

THE IMPORTANCE OF PREVENTIVE HEALTH EXAMINATION FOR RECREATIONAL ATHLETES

Resanović (2021) states that regular physical activity significantly contributes to the preservation and improvement of health and disease prevention.

The task of preventive medical examination of former elite athletes and recreationists is to determine the current health status and identify possible risks associated with physical activity.

In this way, safety during exercise is increased, and the recommended physical activity, which is appropriate to the health status and abilities, contributes to the improvement of physical, mental and social health, while also increasing the quality of life of a recreational athlete.

Preventive medical examination enables the selection of physical activity appropriate to the health status. Physicians, kinesiologists and nutritionists are included in the examination.

Preventive medical examination aims at determining those health and functional characteristics that will enable both the user and the activity manager to choose the most appropriate health-oriented physical activities with the maximum reduction of adverse events.

Preventive health examination for recreational athletes includes:

1. Health status - doctor:

- Questionnaire on personal and family health and previous sports and recreational activity
- Review of existing medical documentation
- Physical examination of the heart and lungs, abdomen, locomotor system
- Blood pressure measurement
- ECG (at rest and after exercise)
- Spirometry
- Blood glucose measurement
- Complete blood count
- Basic anthropometric measurements, body mass index
- Optometric examination

2. Kinesiological status - kinesiologist;

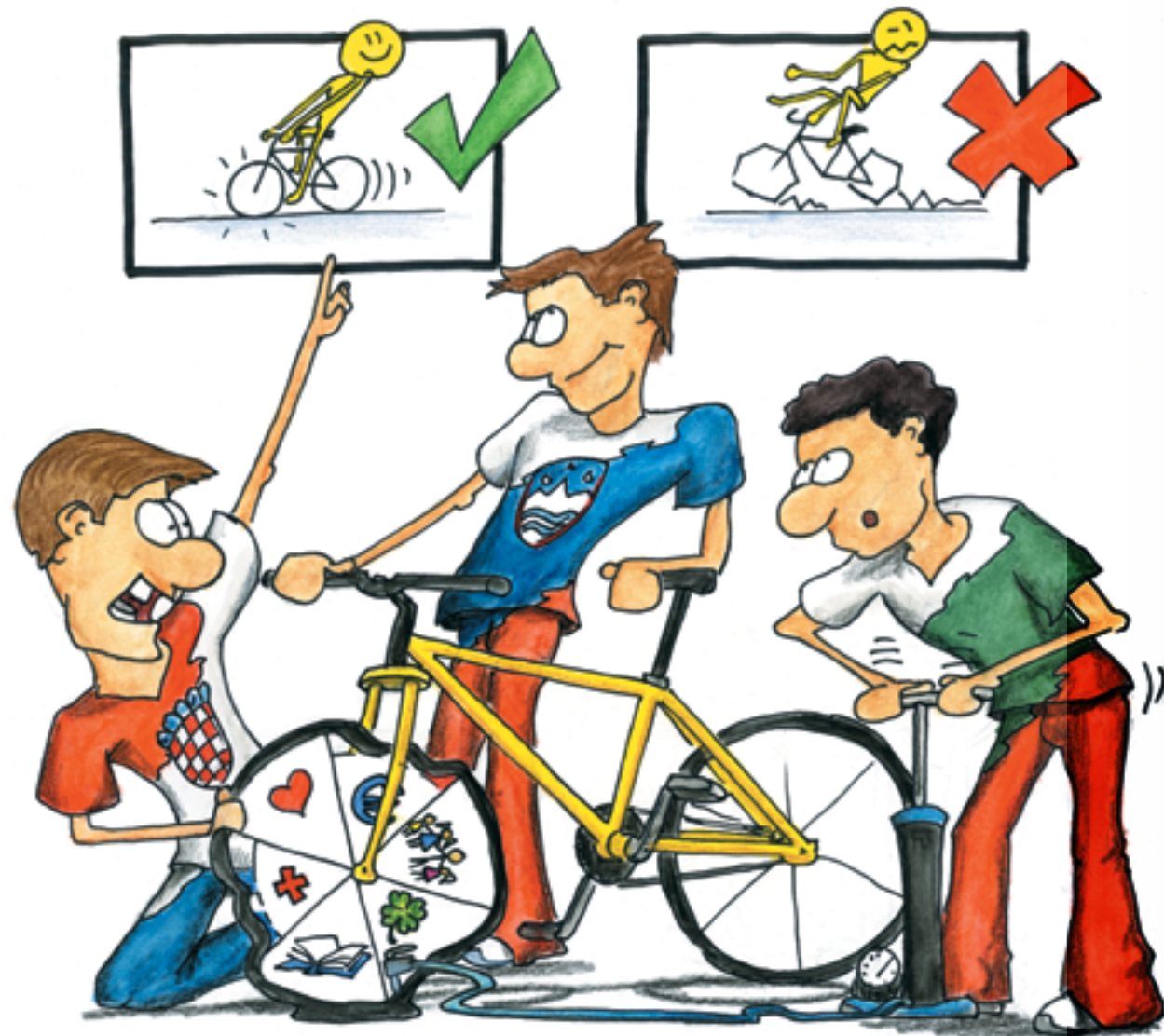
3. Nutritional status - nutritionist;

4. Concluding opinion with recommendations for the necessary additional medical procedures, on proper nutrition and appropriate physical activity.

Examinations will enable preventive and early detection of the disease, i.e. risk factors for the occurrence of the disease. The better psychological state of individuals is also indirectly influenced, because the examinations themselves are a sign that society cares about them - they are not left to themselves.

It is certainly important to note that preventive health examinations increase safety during exercise and contribute to the improvement of physical, mental and social health, creating habits for regular preventive examinations.

Career after sport



MANAGEMENT OF PERSONAL FINANCES

Kolar and Robnik (2018) state that sport develops many skills, teamwork, self-discipline, and as a consequence, people are not so exposed to influence negative social phenomena. The development of new education programs also contributes to the social component and sustainable development of (self) employability. But the definition of the success of an individual athlete cannot be defined only by the number of medals, and amount of money in the bank account or completed some education programs.

The athlete must be aware that success out of the field of sport is important like a success in the sports competitions. Optimal planning for a sport and life success consists in skills that we have already met in the previous chapters. So after that we can say that quality planning requires a lot of knowledge on which we could define different paths and questions.

In general, we can say that professional athletes experience at least five stages during their life;

- the young athlete,
- young professional athlete,
- professional athlete,
- retired athlete,
- development career after career.

Each period of an athlete's life path has its own particularities. The way of managing one period leaves certain consequences in the others. The human body and mind are a holistic system so consequently the areas of our lifestyle interact to each other. That is why we must pay attention at all times to how we manage our living resources. The parts that influence our lives are shown in the form of a wheel. "The rounder and bigger is our wheel, better is our quality of performance."

Many professional athletes face financial difficulties or even bankruptcy at the end of their careers. The main reason for their problems is a level of knowledge of personal finances. Most athletes do not educate themselves in a way of saving money and how to manage their expenses, also they do not plan their future and consequently spend money uncontrollably. For a lot of athletes with higher incomes, the standard could drop after the end of their careers.

With improving knowledge in the field of personal finance we can avoid many problems during the sport career and also after that. Athletes need to understand the knowledge of personal finance and also the responsibilities and the consequences for making decisions.

Therefore, the preparation of a career plan is crucial for the transition of an athlete from a sports career to the labor market.

In the previous chapters, we saw possibilities and also ways for preparing a career plan. A lot of athletes enter the labor market with good work habits and a high level of motivation. In order to achieve the goals, it is necessary to have elaborated contents of the life and also the training plan. Management of personal finance requires an acquisition of knowledge. Sometimes also patience is required because it is important to know that things do not happen at once and all. Therefore, the main contents and directions of planning are shown in the table;



Incomes and expenses

- Controlling of cost management,
- saved money-reserve,
- debt reduction.

Risks

- Family protection by taking insurance in case of serious illness, or heavy injuries,
- property insurance.

Property

- Creating property and savings,
- management of property,
- incomes of property.

Planning the future

- Planning of retirement,
- planning study of the children,
- planning to buy a house or apartment,
- treatment in retirement,
- other goals.

During their careers athletes build their image, and also way of life. It is important that they know how to maintain themselves in a proper physical condition. Regular exercise, and organized goal settings are key elements to continue and maintain a successful life path.

Conclusion

The way of sport is a concept that defines the activities of all generations in our society. In the organization of sports, as in a national and community level we usually manage the contents such as competitive sports, sports for youth and children, sports recreation and also the organization of sports events.

According to the practices of implementing annual sports programs in the way of dual career for athletes some contents for coordination education and competing processes were applied especially by national Olympic committees. The practice of Olympic committees of Bulgaria, Croatia and Slovenia, are that the programs are intended mostly for the top athletes.

Dual career programs in local communities are implemented rarely depending on the ability and interest of some organizations. In most cases, the implementation of content depends on the success of approved projects in public tenders of Erasmus+ sport programs.

With the funds of the European Union project, both partners and the coordinator introduced new contents into local environments, which were intended for athletes who have already finished their sports career.

The project itself stimulated the activities of veteran sports, which are not formally defined in the program

contents of local communities. One of the contents of the program was also the implementation of sports recreational activities with inclusion of 150 former athletes from three countries.

Some of these have had already top sporting results in the past as they have also competed in the Olympic games. These were also specially exposed in order to present the sports path and habits of life to the children.

The activities we carried out in the project had a positive response to former top athletes. Through the program, we found that some athletes were active in the way of sport even after the end of their careers. However, still most of them were not physically active because of their way of lifestyle.

Thus, with the project we have created a new program for which we expect that the offer in the local environment will become permanent and will be included in the annual sports program of local communities.

It is certainly important that sports organizations do not only think about the duration of sports careers. Creating programs that cover activities even after the end of a sports career could be a great added value for the organization, the environment and also for the athletes.

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Active in sport again! Little helper: In the search of a new identity

How would you describe yourself now?

How would you describe yourself in 5, 10 years?

What do you wish for yourself in the future?

How do you see sport included in your life in the future?

How does physical activity fit with your current view of yourself and vision for the future outside of your role as a competitive athlete?

What interests do you have outside sports? What do you enjoy doing?

What are your alternatives instead of elite sports career?



Active in sport again! Little helper: Let's stay motivated!

What keeps you motivated for staying active and exercising?

What does sport mean to you? What are your most important values?

What are all possible physical activities you could engage in?

What kind of activities are you great at? What do you enjoy the most?

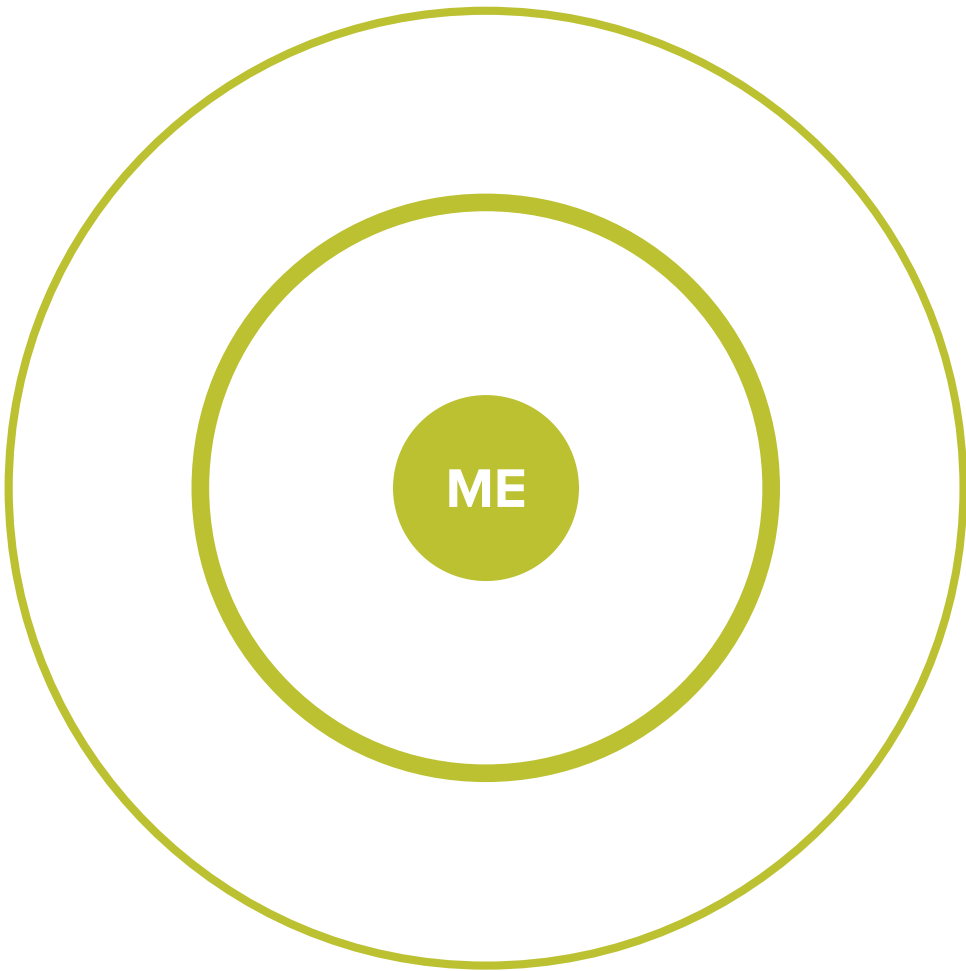
Who can join me? What clubs and other organizations can I enroll in?



Active in sport again! Little helper: Staying connected!

Follow the steps below and write the names of the people:

1. to whom you feel so close you cannot imagine life without them in the inner circle
2. to whom you do not feel quite that close, but who are still very important to you in the middle circle
3. who you have not mentioned and are not so close to you but still part of your life outside the circle



How can you stay connected with persons that are important to you?
How can you nourish your relationships with others?

Who can you ask for help and support? Who can you rely on?
In what way can your social connections reinforce you?

What are the ways for you to expand your connections if you feel that would benefit you? Who could you turn to for help outside your social network?



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