

The use of Anabolic Steroids in men's recreational Fitness Training

Original Article

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ABSTRACT: Introduction: The aim of this study was to give general overview of using the anabolic steroids among the recreational sportsmen and at the same time to analyze other drugs used for immediate help to increase their individual fitness level. **Materials and Methods:** The questionnaire has been used to investigate the potential abuse of anabolic steroids among the recreational sportsmen, practicing non-competitive fitness training at the intermediate level 3 to 4 times per week. Randomly selected 80 men (21.6 ± 3.4 years) from various fitness centers were asked to fulfill the questionnaires anonymously. 80% (64) of questionnaires were returned. **Results:** The most significant finding of our study: use of anabolic steroids has been determined by 21% of all respondents; any of anabolic users use the drugs without any professional medical supervision; 36% of present anabolic users are decided to use drugs again in case of harder physical activity or fatigue; 36% of present non-users are decided to use the anabolics in case of physical performance; majority of information on anabolics effects is reached from professional athletes and "unofficial distributor" and common use of anabolics and stimulation drugs without any medical supervision. **Discussion:** The results of this study should alert to solve the dynamic expansion of anabolics abuse and evaluate the well-known use of anabolics and stimulation drugs to improve physical.

Keywords: Anabolic Agents, Steroids, Physical Fitness.

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RESUMEN

El uso de esteroides anabolizantes en deportistas recreativos

Introducción: El objetivo de este estudio es hacer una evaluación general sobre el uso de esteroides anabolizantes entre los deportistas recreativos y, a la vez, analizar otras drogas usadas para aumentar rápidamente el nivel de aptitud individual de los usuarios. **Materiales y Métodos:** Fue usado un cuestionario para investigar lo potencial de abuso de esteroides anabolizantes entre los deportistas recreativos, que practican ejercicios sin competir, entrenando en el nivel intermedio de tres a cuatro veces a la semana. Habían sido elegidos aleatoriamente 80 hombres ($21,6 \pm 3,4$ años) de diversas academias, los cuales habían sido solicitados a responder un cuestionario anónimamente. 80% (64) de los cuestionarios habían sido devueltos. **Resultados:** Las descubiertas más importantes de nuestro estudio, fueron: el uso de esteroides anabolizantes fue confirmado por 21% de todos los que respondieron; todos los usuarios de anabolizantes usan las drogas sin cualquier supervisión médica profesional; 36% de los usuarios de anabolizantes están decididos a usar drogas nuevamente, en caso de actividad física más pesada o fatiga; 36% de los actuales usuarios de anabolizantes están decididos a usar los anabolizantes en caso de desempeño físico; la mayoría de las informaciones sobre los efectos de los anabolizantes es conseguida a través de atletas profesionales y "distribuidores no-oficiales"; y es común el uso de anabolizantes y drogas estimulantes sin cualquier supervisión médica. **Discusión:** Los resultados de este estudio servirán para alertar sobre la expansión dinámica del abuso de anabolizantes y evaluar el conocido uso de anabolizantes y drogas estimulantes para mejorar el desempeño físico.

Palabras clave: Agentes Anabolizantes, Esteroides, Acondicionamiento Físico.

INTRODUCTION

The problem of using anabolic steroids by top-level athletes has been widely discussed at medical, ethical, behavioral and experimental levels for at least 20 years^{1,2,3,4}. Drug testing, strict policies and enforcement, and educational programs have continued to be the main responses to the problem. Despite this, drug abuse in competitive sport continues to be pervasive. Numerous explanations have been given for this and the reason range from performance enhancement to relieving stress and boredom. However the use of anabolic steroids in recreational sports and fitness is quiet new, and any relevant data is missing. Apart from a few selected case studies, a relative dearth of information has been provided concerning the subjective experience of people using anabolic-androgenic steroids^{5,6,7}.

Aim of the study

The aim of this study was to give general overview of using the anabolic steroids among the recreational sportsmen and at the same time to analyze other drugs used for immediate help to increase their individual fitness level. The benefits or adverse of this phenomenon is generally well known, but not discussed by specific conditions in recreational sport.

In our study we also tried to find out the level of information about the effect of supportive drugs in sportsmen, and the sources when they come from.

RESUMO

O uso de esteróides anabolizantes em esportistas recreativos

Introdução: O objetivo deste estudo é fazer uma avaliação geral sobre o uso de esteróides anabolizantes entre os desportistas recreativos e, ao mesmo tempo, analisar outras drogas usadas para aumentar rapidamente o nível de aptidão individual dos usuários. **Materiais e Métodos:** Foi usado um questionário para investigar o potencial de abuso de esteróides anabolizantes entre os desportistas recreativos, que praticam exercícios sem competir, treinando no nível intermediário de três a quatro vezes por semana. Foram escolhidos aleatoriamente 80 homens ($21,6 \pm 3,4$ anos) de diversas academias, aos quais foi solicitado responder um questionário anonimamente. Dos questionários enviados, 80% (64) foram devolvidos. **Resultados:** As descobertas mais importantes do nosso estudo foram: o uso de esteróides anabolizantes foi confirmado por 21% de todos os que responderam; todos os usuários de anabolizantes usam as drogas sem qualquer supervisão médica profissional; 36% dos usuários de anabolizantes estão decididos a usar drogas novamente, em caso de atividade física mais pesada ou fadiga; 36% dos atuais usuários de anabolizantes estão decididos a usar os anabolizantes em caso de desempenho físico; a maioria das informações sobre os efeitos dos anabolizantes é conseguida através de atletas profissionais e "distribuidores não-oficiais"; e é comum o uso de anabolizantes e drogas estimulantes sem qualquer supervisão médica. **Discussão:** Os resultados deste estudo servirão para alertar sobre a dinâmica expansão do abuso de anabolizantes e avaliar o conhecido uso de anabolizantes e drogas estimulantes para melhorar o desempenho físico.

Palavras-chave: Anabolizantes, Esteróides, Aptidão Física.

MATERIALS AND METHODS

Approval

This study was approved by the Ethics Committee of the Faculty of Pharmacy, Comenius University - Bratislava, under the No 659/2006.

Characterization of the study

The questionnaire has been used to investigate the potential abuse of anabolic steroids among the recreational sportsmen, practicing non-competitive fitness training at the intermediate level three to four times per week. Randomly selected 80 men (21.6 ± 3.4 years) from various fitness centers were asked to fulfill the questionnaires anonymously. 80% (64) of questionnaires were returned.

Questions were divided into four groups and concerned following topics:

1. Health state and basic somatomerical parameters, periodicity and length of performed sport activities
2. Presence and frequency of drugs use between athletes
3. Information on expected "positive" actions and possible side effects of used anabolic steroids
4. Evaluation of noticed effects of anabolic steroids use by anabolic users themselves.

Table 1 - Health status of anabolic steroids users

Health problems	% of anabolic steroids users
Motion organs pain	63
Regular headache	9
Regular fatigue	9

RESULTS

Somatometrical parameters and health status of anabolic steroids users

As expected, the comparison of somatometrical parameters has shown that the average Body Mass Index in anabolic steroids users was significantly higher than in non-users: $27.9 \pm 2.1 \text{ kg.m}^{-2}$ and $22.3 \pm 2.7 \text{ kg.m}^{-2}$, respectively.

Analysis of health status of anabolic users is shown in Table 1.

DISCUSSION

Use of anabolic steroids for their proteoanabolic effect

The results (Figure 1) has shown that 21% persons involved in our investigation has used anabolic steroids like stonazol, testosterone, derivatives, superanabolone, andriol, sustanone, nandrolon, and metandrostone, 18% used drugs parallel together with some other kinds of pre-scribed pharmacotherapy.

In all cases of recreational sportsmen, anabolic steroids were used for their proteoanabolic effect without any medical control, supervision or consultation. Therefore, all steroids were obtained from unofficial sources. 63% of our respondents used drugs for a limited period of time as a test, 9% used them regularly. One of the most significant facts is that 36% subjects are open to use steroids in the future. Conversely, only 27% claimed not to use steroids again. Additionally, 72% of all respondents have confirmed knowledge of positive and unwanted effects.

The information about drugs and anabolic steroids sources

As it is shown in Figure 2 the most information came from professional athletes (81%), magazines (72%), and unofficial distributors (63%). None of recreational sportsmen took the drugs with at least little information about it.

Contrary, unofficial distributors are the most frequent source for buying the steroids (90%).

Expected and side effects of anabolic steroids

The most frequent expected effects by taking the anabolic steroids are increase of physical performance (100%) and decrease of fatigue (81%). Then, as it is shown in Figure 3 the reason for using the drugs are as follows:

- Reduce of joint mobility soreness: 54%

Figure 1 - Use of anabolic steroids for their proteoanabolic effect

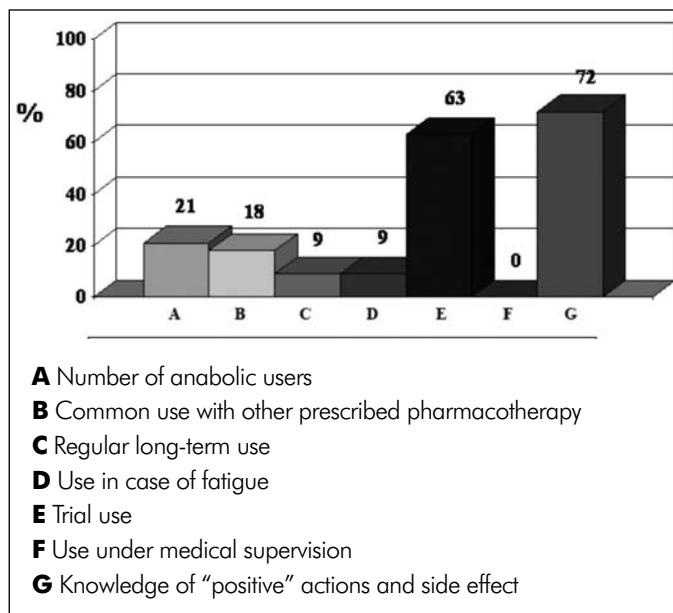
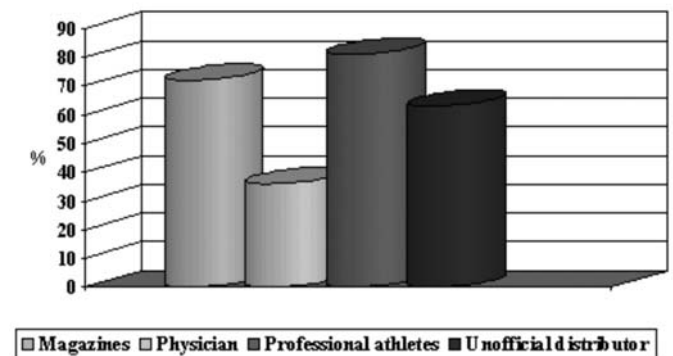


Figure 2 - The information about drugs and anabolic steroids sources



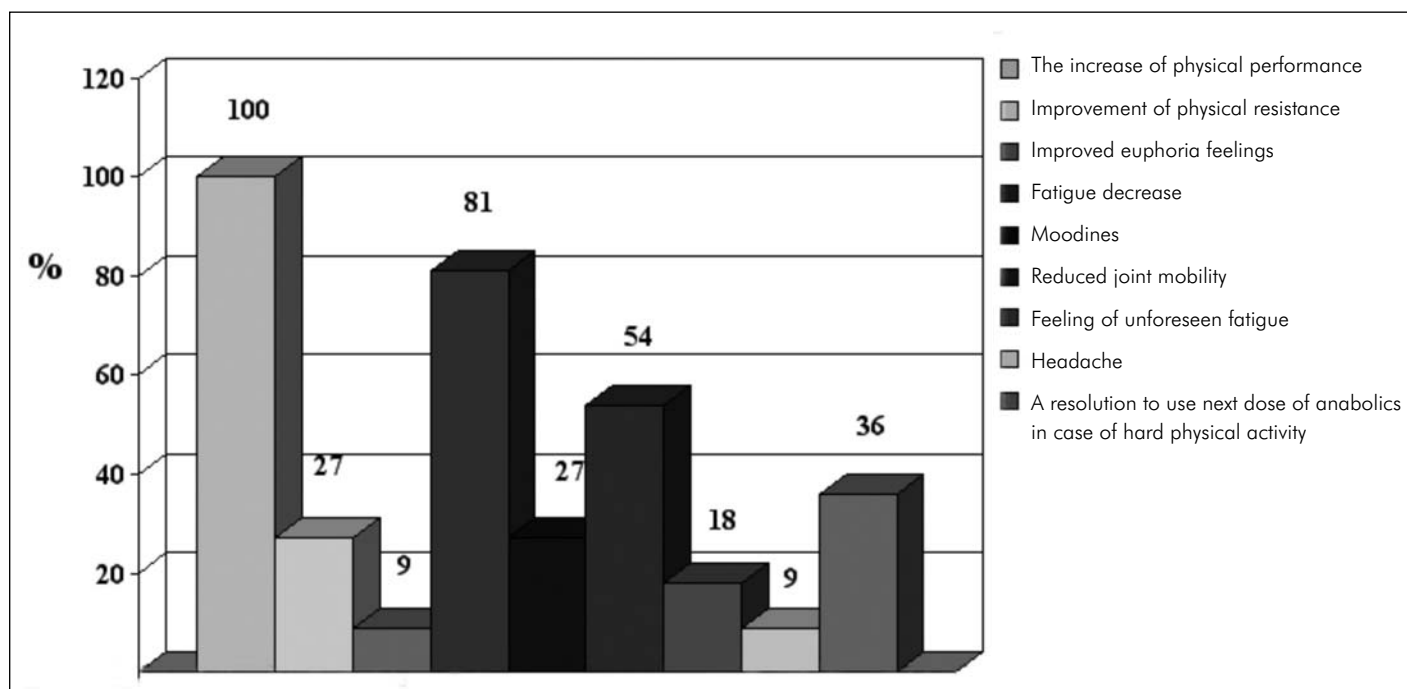
- Improvement of psychical resistance: 27%
- Moodiness: 27%
- Feeling of unforeseen fatigue: 18%
- Improved euphoria feelings: 9%
- Decrease of headache: 9%

Despite of knowledge of negative side effects, 36% respondents are decided to use next dose of anabolics in case of hard physical activity.

The most significant finding of our study

1. Use of anabolic steroids has been determined by 21% of all respondents. Any of anabolic users use the drugs without any professional medical supervision.
2. 36% of present anabolic users are decided to use drugs again in case of harder physical activity or fatigue.
3. 36% of present non-users are decided to use the anabolics in case of physical performance.

Figure 3 - Expected and unwanted effects of anabolic steroids



4. Majority of information on anabolics effects is reached from professional athletes and "unofficial distributor"
5. Common use of anabolics and stimulation drugs without any medical supervision.

On the base of our investigation we conclude that the level of information about either the wanted or most importantly, the negative effects of drugs among potential users in non-competitive fitness training is very low. We suggest to clearly open the problem of using anabolic androgenic steroids in this area.

The results of this study should alert to:

- solve the dynamic expansion of anabolics abuse
- evaluate the well-known use of anabolics and the stimulation regarding the use of drugs to improve physical performance at recreation level.

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