



## **On approval of the rules for medical examination of sportsmen for participation in sports competitions**

### *Unofficial translation*

Order of the Minister of Culture and Sport of the Republic of Kazakhstan dated December 24, 2020 No. 356. Registered in the Ministry of Justice of the Republic of Kazakhstan on December 25, 2020 No. 21902

Unofficial translation

In accordance with paragraph 2 of Article 144 of the Code of the Republic of Kazakhstan dated July 7, 2020 "On Public Health and Healthcare System" I HEREBY ORDER:

1. To approve the attached rules for medical examination of sportsmen for participation in sports competitions.

2. To declare invalid:

1) order of the Minister of Culture and Sport of the Republic of Kazakhstan dated November 24, 2014 No. 110 "On Approval of the Rules for Medical Examination of Sportsmen for Participation in Sports Competitions" (registered in the Register of state registration of regulatory legal acts under No. 10009, published in the Legal information system "Adilet" on March 11, 2015);

2) subparagraph 2) of paragraph 1 of the order of the Minister of Culture and Sport of the Republic of Kazakhstan dated October 23, 2019 No. 280 "On amendments and additions to some orders of the Minister of Culture and Sport of the Republic of Kazakhstan" (registered in the Register of state registration of regulatory legal acts under No. 19513, published in the Standard control bank of regulatory legal acts of the Republic of Kazakhstan on October 28, 2019).

3. The Committee for the affairs of Sport and Physical Culture of the Ministry of Culture and Sport of the Republic of Kazakhstan, in accordance with the procedure established by the legislation of the Republic of Kazakhstan, shall ensure:

1) state registration of this order in the Ministry of Justice of the Republic of Kazakhstan;

2) placement of this order on the Internet resource of the Ministry of Culture and Sport of the Republic of Kazakhstan;

3) submission of information on implementation of measures to the Department of legal service of the Ministry of Culture and Sport of the Republic of Kazakhstan within two working days after the implementation of measures provided for by this order.

4. Control over execution of this order shall be entrusted to the supervising Vice-Minister of Culture and Sport of the Republic of Kazakhstan.

5. This order shall be enforced upon the expiration of ten calendar days after its first official publication.

*Minister of Culture and Sport  
of the Republic of Kazakhstan*

*A. Raimkulova*

" A G R E E D "

M i n i s t r y  
of the Republic of Kazakhstan

o f

H e a l t h c a r e

Approved  
by the order of the  
Minister of Culture and Sport  
of the Republic of Kazakhstan  
dated December 24, 2020 No. 356

## **Rules for medical examination of sportsmen for participation in sports competitions**

### **Chapter 1. General provisions**

1. These rules for medical examination of sportsmen for participation in sports competitions (hereinafter - the Rules) have been developed in accordance with paragraph 2 of Article 144 of the Code of the Republic of Kazakhstan dated July 7, 2020 "On Public Health and Healthcare System" and shall determine the procedure for medical examination of sportsmen for participation in sports competitions.

### **Chapter 2. Types of medical examination of sportsmen**

2. Medical examination of sportsmen consists of:

- 1) in-depth medical examination;
- 2) staged medical examination;
- 3) current medical examination and medical-pedagogical supervision;
- 4) comprehensive functional testing;
- 5) pre-competition examination.

3. An in-depth medical examination of sportsmen shall be carried out by sports medicine organizations in order to obtain the most complete and comprehensive information about the physical development, health state of a sportsman, including functional state and indicators of his/her physical performance in dynamics.

4. The program of in-depth medical examination depends on the contingent of persons involved in physical culture and sport, the stage of sports training, sports specialization and shall be carried out in accordance with Appendix to these Rules.

5. Taking into account sports specialization, in addition to sportsmen:

1) ophthalmological examinations are carried out: fields of view, fundus, intraocular pressure, angle of fields of view, cycloscopy;

2) audiometry is carried out: of shooters (bullet shooting, trap shooting, archery), biathlonists, show jumpers, fencers, track and field athletes, swimmers, pentathletes, combatants and weightlifters;

3) as prescribed by a sports doctor, the following are carried out:

ultrasound examination of blood vessels, soft tissues and joints, pelvic organs, thyroid gland;

electroencephalography with functional tests, electroneuromyography;

electrocardiography (hereinafter - ECG) in orthostasis, ECG with a load on a treadmill (bicycle ergometry), daily ECG monitoring (Holter monitoring), 24-hour blood pressure monitoring, a straining test in weightlifting sportsmen (Valsalva test);

X-ray radiography;

CT scanning;

magnetic resonance imaging;

additional clinical laboratory examinations.

4) an additional examination is carried out by specialized specialists as prescribed by a sports medicine doctor (therapist, pediatrician and (or) general practitioner): cardiologist, pulmonologist, gastroenterologist, endocrinologist, dermatologist, allergist, cardiac surgeon, neurosurgeon, urologist and specialists in the field.

6. A staged medical examination shall be carried out by a sports medicine doctor in order to determine the level of health, physical performance and fitness of sportsmen after completing a certain stage of preparation for a sports competition.

A staged medical examination includes the following examinations:

1) examination by a sports medicine doctor, examination of other specialized specialists according to indications;

2) laboratory researches of biological materials;

3) functional diagnostic and anthropometric studies:

ECG at rest;

testing to determine the PWC-170 submaximal power (Physical Working Capacity) or maximum

power (until refusal to work), testing to determine the maximum alactate power (hereinafter - MAP);

anthropometry, body composition analysis.

7. A current medical examination and medical-pedagogical supervision shall be carried out for the purpose of operational control over the state of health and dynamics of adaptation of a sportsman's body to training loads, individualization and increasing the efficiency of preparation process and recovery measures and include:

1) examination of a sportsman by a sports medicine doctor, conducting functional tests to determine the general physical performance in training sessions in accordance with Appendix to these rules;

2) functional and laboratory examinations of sportsman and examination of specialized specialists in the presence of medical indications.

8. A comprehensive functional testing shall be carried out to assess the functional state of a sportsman during special training camps of national teams of the Republic of Kazakhstan by types of sport (national teams by types of sport).

A comprehensive functional testing includes the following examinations:

1) examination by a sports medicine doctor (examination by specialized specialists as prescribed by a sports medicine doctor);

2) laboratory researches of biological material;

3) functional diagnostic and anthropometric studies:

anthropometry, body composition analysis;

plantoscopy;

spirometry;

multivariate analysis of the spine;

ECG;

echocardiography;

stress cardiac testing;

magnetic resonance imaging of the joints;

assessment of special endurance with gas analysis and lactate determination;

assessment of speed and power indicators.

Examinations for complex functional testing of a sportsman shall be prescribed by a sports medicine doctor in agreement with the head coach of the national team of the Republic of Kazakhstan for type of sport (national team for type of sport) in accordance with the type of sport, cyclicity of training camps and competitions, as well as taking into account individual characteristics of each sportsman.

9. A pre-competition examination of sportsmen shall be carried out by a sports medicine doctor in order to determine the true changes in the health and functional fitness of sportsmen in the process of extreme activity, the possibility of admission to participation in competitions, prescription of a system of means for recovery and increase in efficiency.

### **Chapter 3. The procedure for conducting medical examination of sportsmen**

10. An in-depth medical examination of sportsmen shall be carried out twice a year at the beginning of preparatory period and before sports competitions.

11. A staged medical examination of sportsmen shall be carried out depending on the number of stages of preparation during the annual cycle.

12. A current medical examination of sportsmen and medical-pedagogical supervision shall be carried out throughout the entire calendar year.

13. A comprehensive functional testing of sportsmen shall be carried out at least twice a year during special training camps of national teams of the Republic of Kazakhstan by types

of sport (national teams by types of sport) in preparation for international and republican sports competitions.

14. A pre-competition examination of sportsmen shall be carried out before each sports competition.

15. Based on the results of an in-depth medical examination of sportsmen in order to obtain admission to the training process and to participate in sports competitions, a sports medicine doctor shall draw up a conclusion (in any form), which includes:

1) assessment of health state and determination of belonging to a functional group:

healthy, sports activities are possible without restrictions;

practically healthy with an indication of the diagnosis that does not restrict physical activity during sports activities;

indication of the diagnosis requiring treatment, suspension from sports for the duration of rehabilitation;

indication of the diagnosis that restricts physical activity during sports activities and requires constant suspension from doing sports;

2) assessment of physical development (according to anthropometric data and the method of indices);

3) assessment of adaptive capabilities and functional state (physical performance, functional reserve of the heart, type of vegetative support, orthostatic stability, speed of sensorimotor reaction).

16. Based on the results of in-depth, staged, current, complex-functional testing and pre-competition medical examinations of sportsmen, form No. 052/y "Medical card of an outpatient patient" (sportsman) shall be filled out, approved by the order of the acting Minister of Healthcare of the Republic of Kazakhstan dated October 30, 2020 No. KR HM-175/2020 "On Approval of Forms of Accounting Documents in the Field of Healthcare" registered in the Register of state registration of regulatory legal acts under No. 21579 ( hereinafter - Order No. KR HM-175/2020).

17. Based on the results of an in-depth medical examination for participation in sports events, a certificate shall be issued in the form No. 027/y, approved by the order No. KR HM-175/2020.

Appendix  
to the rules for  
medical examination of  
sportsmen for participation  
in sports competitions

### **Program of in-depth medical examination**

No	Category of sportsmen	Frequency of conduct	Doctors specialists	Clinical-laboratory and functional-diagnostic methods of examination

1.	Sportsmen involved in the stage of sports and fitness training	once a year	Pediatrician or therapist (by age), general practitioner, orthopedic traumatologist, surgeon, otorhinolaryngologist, dentist, ophthalmologist, neurologist, cardiologist, physical therapy doctor, sports medicine doctor	Clinical blood test (hereinafter - CBC), clinical urine analysis (hereinafter - CUA), anthropometry, electrocardiography (hereinafter - ECG), echocardiographic examination (hereinafter-ECHOCG)
2.	Sportsmen involved in the initial training stage	once every six months	Pediatrician or therapist (by age), general practitioner, orthopedic traumatologist, surgeon, otorhinolaryngologist, dentist, ophthalmologist, neurologist, cardiologist, physical therapy doctor, sports medicine doctor	C B C , C U A , anthropometry, E C G , E C H O C G , manual dynamometry, back ( hereinafter-dynamometry), ultrasound examination of the abdominal organs and kidneys (hereinafter - ultrasound of abdominal organs and kidneys), fluorography or radiography of the lungs (from 15 years old, no more than once a year) Functional tests to determine general physical performance : PWC-170 by L.V. Karpman, test Martine, Letunov, Harvard step test, 3-minutes jogging at place with a high hip lift, 3 minutes shadow boxing
3.	Sportsmen involved in the stage of educational training	once every six months	Traumatologist-orthopedist , surgeon, otorhinolaryngologist, ophthalmologist, dentist, gynecologist, urologist, neurologist, cardiologist, sports medicine doctor	C B C , biochemical blood test (total protein, creatinine, uric acid, glucose, total cholesterol, total bilirubin , direct bilirubin alanine aminotransferase (hereinafter - ALT), aspartate aminotransferase (hereinafter - AST), creatine phosphokinase (hereinafter - CPK), alkaline phosphatase, phosphorus, sodium, calcium, potassium, magnesium, iron, cortisol, testosterone, thyroid-stimulating hormone (TSH), free T4 (FT4 ) , C U A , anthropometry, E C G , Stress E C G , E C H O C G , dynamometry, Ultrasound of abdominal organs and kidneys, s p i r o g r a p h y fluorography or radiography of the lungs (from 15 years old, no more than once a year) Functional tests to determine general physical performance :

				<p>PWC-170 by L.V. Karpman, test Martine, Letunov, Harvard step test, 3-minute jogging at place with a high hip lift, 3 minute shadow boxing</p>
4.	Sportsmen involved in the stage of sports improvement	once every six months	<p>Traumatologist-orthopedist, surgeon, otorhinolaryngologist, ophthalmologist, dentist, gynecologist, urologist, neurologist, cardiologist, psychologist, sports medicine doctor</p>	<p>C B C ,          biochemical blood test (total protein, creatinine, uric acid, glucose, total cholesterol, high-density lipoprotein cholesterol (hereinafter - HDLP), low-density lipoprotein cholesterol (hereinafter - LDLP), total bilirubin, direct bilirubin, ALT, A S T ,          C F K ,          creatine phosphokinase-MB (hereinafter-CPK-MB), alkaline phosphatase, lactate dehydrogenase (hereinafter-LDH), the 1st isoenzyme of LDH; phosphorus, sodium, calcium , potassium, magnesium, iron, highly sensitive C-reactive protein (CRP), ferritin; cortisol, testosterone, TSH, FT4).          Blood test for viral hepatitis, syphilis, C U A ,          anthropometry and body composition analysis, E C G ,          Stress E C G ,          E C H O C G ,          dynamometry,          Ultrasound of abdominal organs and kidneys, spirometry,          fluorography or radiography of the lungs (from 15 years old, no more than once a year). Physical performance and exercise tolerance testing: step-by-step bicycle ergometry with gas analysis for types of sport, where muscles that dominate when pedaling a bicycle ergometer can limit; step-by-step manual bicycle ergometry with gas analysis for types of sport where the muscles of the torso and arms can be limited, step-by-step testing on a treadmill with gas analysis for types of sport where running is present; testing the maximum alactate power (MAP) of the muscles dominant when pedaling the bicycle ergometer .          Study of psycho-emotional status</p>
				<p>C B C ,          biochemical blood test (total protein, creatinine, uric acid, glucose, total cholesterol, high density lipoprotein cholesterol (HDLP), low density lipoprotein cholesterol (LDLP), total bilirubin, direct bilirubin, ALT, A S T ,          C F K ,          creatine phosphokinase-MB (CPK-MB), alkaline phosphatase, lactate dehydrogenase (</p>

<p>5. Sportsmen involved in the stage of higher sports skills</p>	<p>once every six months</p>	<p>Traumatologist-orthopedist , surgeon, otorhinolaryngologist, ophthalmologist, dentist, gynecologist, urologist, neurologist, cardiologist, psychologist, sports medicine doctor</p>	<p>hereinafter-LDH), the 1st isoenzyme of LDH; phosphorus, sodium, calcium, potassium, magnesium, iron, highly sensitive C-reactive protein (CRP), ferritin; cortisol, testosterone, T S H , F T 4 ) . Blood test for viral hepatitis, syphilis, C U A , anthropometry and body composition analysis, E C G , S t r e s s E C G , E C H O C G , d y n a m o m e t r y , Ultrasound of abdominal organs and kidneys, s p i r o g r a p h y , fluorography or radiography of the lungs (from 15 years old, no more than once a year). Physical performance and exercise tolerance testing: step-by-step bicycle ergometry with gas analysis for types of sport, where muscles that dominate when pedaling a bicycle ergometer can limit; step-by-step manual bicycle ergometry with gas analysis for types of sport where the muscles of the torso and arms can be limited, step-by-step testing on a treadmill with gas analysis for types of sport where running is present; testing the maximum alactate power (MAP) of the muscles dominant when pedaling the bicycle e r g o m e t e r . Study of psycho-emotional status</p>
<p>6. Sportsmen of the national teams of the Republic of Kazakhstan by types of sport</p>	<p>once every six months</p>	<p>Traumatologist-orthopedist , surgeon, otorhinolaryngologist, ophthalmologist, dentist, gynecologist, urologist, neurologist, cardiologist, psychologist, sports medicine doctor</p>	<p>C B C , biochemical blood test (total protein, creatinine, uric acid, glucose, total cholesterol, high density lipoprotein cholesterol (HDLP), low density lipoprotein cholesterol (LDLP), total bilirubin, direct bilirubin, ALT, A S T , C F K , creatine phosphokinase-MB (CPK-MB), alkaline phosphatase, lactate dehydrogenase (LDH), the 1st isoenzyme of LDH; phosphorus, sodium, calcium, potassium, magnesium, iron, highly sensitive C-reactive protein (CRP), ferritin, cortisol, testosterone, TSH, FT4). Blood test for viral hepatitis, syphilis, C U A , anthropometry and body composition analysis, E C G , S t r e s s E C G , E C H O C G , d y n a m o m e t r y , Ultrasound of abdominal organs and kidneys, s p i r o g r a p h y , fluorography or radiography of the lungs (from 15 years old, no more than once a year). Physical</p>



			<p>performance and exercise tolerance testing:  step-by-step bicycle ergometry with gas analysis  for types of sport, where muscles that dominate  when pedaling a bicycle ergometer can limit;  step-by-step manual bicycle ergometry with gas  analysis for types of sport where the muscles of  the torso and arms can be limited, step-by-step  testing on a treadmill with gas analysis for types  of sport where running is present;  testing the maximum alactate power (MAP) of  the muscles dominant when pedaling the bicycle  e r g o m e t e r .  Study of psycho-emotional status</p>
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Note: The program of in-depth medical examination for sportsmen with disabilities varies depending on the type of health disorder in terms of functional diagnostics, stress tests and the specifics of examinations by specialized specialists.