# On approval of the Rules for aeromedical safety of state aviation of the Republic of Kazakhstan

*Unofficial translation*

Order of the Minister of Defense of the Republic of Kazakhstan № 699 as of September 5, 2019. Registered with the Ministry of Justice of the Republic of Kazakhstan on September 12, 2019, № 19372.

Unofficial translation

In accordance with subparagraph 25) of Article 15 of the Law of the Republic of Kazakhstan "On Use of Airspace of the Republic of Kazakhstan and Aviation Activity" as of July 15, 2010, **I hereby ORDER**:

1. To approve the appended Rules for aeromedical safety of state aviation of the Republic of Kazakhstan.

2. In accordance with the procedure established by the legislation of the Republic of Kazakhstan, the Office of the Commander-in-Chief of the Air Defense Forces of the Armed Forces of the Republic of Kazakhstan shall:

1) ensure the registration of this order in State Registration Register of Regulatory Legal Acts of the Republic of Kazakhstan;

2) within ten calendar days of the state registration, send this order to the Republican State Enterprise with the Right of Economic Management "Institute of Legislation and Legal Information" of the Ministry of Justice of the Republic of Kazakhstan for its official publication and inclusion into the Reference Control Bank of Regulatory Legal Acts of the Republic of Kazakhstan in Kazakh and Russian;

3) place this order on the website of the Ministry of Defense of the Republic of Kazakhstan after its first official publication;

4) within ten working days of the state registration, submit information on the implementation of measures, provided for in subparagraphs 1), 2) and 3) of this paragraph, to the Legal Department of the Ministry of Defense of the Republic of Kazakhstan.

3. The control over the execution of this order shall be assigned to the heads of state aviation authorities of the Republic of Kazakhstan.

4. This order shall be brought to the notice of officials to the extent it is applicable to them

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5. This order shall take effect ten calendar days after its first official publication.

*Minister of Defense of the Republic of Kazakhstan Major General* *N. Yermekbayev*

"AGREED"

Ministry of Healthcare of
the Republic of Kazakhstan
"____" _____2019
"AGREED"
State Security Service of
the Republic of Kazakhstan
"____" _____2019
"AGREED"
National Security Committee of
the Republic of Kazakhstan
"____" _____2019
"AGREED"
Ministry of Internal Affairs of
the Republic of Kazakhstan
"____" _____2019

Approved by
Order № 699 of the
Minister of Defense of the
Republic of Kazakhstan
as of September 5, 2019

**Rules for aeromedical safety of state aviation of the Republic of Kazakhstan**

**Chapter 1. General provisions**

1. These Rules for aeromedical safety of state aviation of the Republic of Kazakhstan ( hereinafter referred to as the Rules) establish the procedure for aeronautical safety of state aviation of the Republic of Kazakhstan.

2. It is necessary to ensure the aeromedical safety of state aviation in order to maintain the health and performance of aviation personnel in the interests of their effective and safe fulfillment of flight tasks during flight operations.

2-1. The following terms shall be used herein:

1) aviation personnel means persons specially and/or professionally trained to perform and maintain aircraft operations, air transportation and aviation work, aircraft maintenance, air traffic organization and maintenance and air traffic control;

2) aviation unit - republican state institution of state aviation of the Republic of Kazakhstan, responsible for organization and execution of flights of state aviation aircraft, their operation and storage;

3) military-medical (medical) units - structural subdivisions of central executive bodies and other central public authorities and their territorial subdivisions, as well as

military-medical (medical) institutions (organizations) and other subdivisions providing military-medical (medical) support;

4) military and medical (medical) support: a set of measures, including the organization and provision of military and medical (medical) care, medical examinations, and ensuring sanitary and epidemiological well-being, supply of medicines and medical devices, health expertise, and scientific and methodological development and training in military medicine for troops, units and agencies of special public and law enforcement agencies, with a view to restoring the combat capabilities and work capacity of personnel;

5) military-medical service - a set of military-medical (medical) units where the laws of the Republic of Kazakhstan provide for military service or a special type of public service intended for military-medical (medical) support to the activities of these bodies;

6) medical examination - determining or confirming the presence or absence of illness of aviation personnel, ascertaining their state of health as well as temporary incapacity for work and professional suitability for work.

Footnote. The Rules as supplemented by paragraph 2-1 under Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall enter into force ten calendar days after the date of its first official publication).

2-2. Medical support for flights shall be provided by the military medical service or a military medical (medical) unit of a military unit or institution of state aviation of the Republic of Kazakhstan (hereinafter, the medical service of an aviation unit).

Footnote. The Rules as supplemented by paragraph 2-2 under Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be put into effect ten calendar days after the date of its first official publication).

2-3. The chief of the military medical service of a military unit (institution) or the medical officer acting in his/her stead (hereinafter referred to as the chief medical service of an aviation unit) shall organise medical support for flights).

Footnote. The Rules as supplemented by paragraph 2-3 pursuant to Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be enacted ten calendar days after the date of its first official publication).

**Chapter 2. Procedure for medical supervision of the health status of aviation personnel**

3. Medical observation of the health status of aviation personnel shall be performed for the purpose of:

1) early diagnosis of changes in health and work capacity, linking these changes to occupational activity and implementing the necessary preventive, therapeutic and rehabilitative measures;

2) identifying and investigating occupational factors that have an adverse effect on functional status, health and performance and taking measures to eliminate them;

3) studying the psycho-physiological characteristics of;

4) studying and preventing aviation accidents and incidents;

5) studying the body's reactions to flying (flight tolerance);

6) studying the organisation of work, rest and nutrition.

Footnote. Paragraph 3 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be enacted ten calendar days after the date of its first official publication).

4. Medical observation of the health status of aviation personnel includes:

1) daily on-the-job observation;

2) routine medical examinations;

3) medical examinations during flights (pre-shift, selective).

5. Aviation personnel, departing and newly arrived in aviation units, as well as upon arrival from their basic annual paid leave, business trips (24 calendar days or longer) or treatment, are subject to extraordinary (unscheduled) medical examination.

Footnote. Paragraph 5 as reworded by the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 (shall be put into effect ten calendar days after its first official publication).

6. Aviation personnel (pilots and navigators), who are retrained and master combat use on new aviation equipment, and aviation personnel newly arrived at the aviation unit are subject to monthly medical examination during the first 3 months.

7. Pilots, navigators, flight attendants, cadets (students) of flight training institutions, and officials performing duties as part of the aircraft crew (hereinafter – flight personnel), persons responsible for flight supervision and management, air traffic control operators, unmanned aerial vehicle (UAV) operators (hereinafter – UAVs), and parachutists with diagnosed illnesses or injuries preventing the performance of professional activities shall be suspended from flying, flight control, air traffic management, operation of UAV, or parachute jumps and shall be sent to the military medical (medical) units of the military unit or institution ( hereinafter medical units of the aviation unit) for medical examination or treatment.

The medical service of an aviation unit, in case of admission of aviation personnel and parachutists to professional activities upon recovery from previously sustained illnesses and injuries, shall be guided by time limits, as specified in Appendix 1 to these Rules.

Footnote. Paragraph 7 as reworded by the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 (shall be put into effect ten calendar days after its first official publication).

8. Aviation personnel with health deviations shall be prescribed therapeutic physical training for preventive and/or medical purposes. Flight crew members and parachutists who, due to their health condition, require restrictions on physical activity and are included in the therapeutic physical training group, shall not be permitted to perform flights or parachute jumps.

Footnote. Paragraph 8 as reworded by the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 (shall be put into effect ten calendar days after its first official publication).

9. Periodic medical examinations of flight crew members shall be conducted at the medical unit of the aviation unit once every 3 months in accordance with the dynamic monitoring plan for state aviation personnel, approved by the commander of the military unit or the head of the institution (hereinafter – the commander of the aviation unit) in the form according to Appendix 1-1 to these Rules.

Footnote. Paragraph 9 as reworded by the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 (shall be put into effect ten calendar days after its first official publication).

10. Flight crew members, persons responsible for flight supervision and control, air traffic control operators, UAV operators, and parachutists shall undergo a medical examination with the participation of a general practitioner and a neurologist no later than 6 months after their last scheduled medical assessment at the medical unit of the aviation unit. Specialized medical professionals may be involved based on medical indications.

Footnote. Paragraph 10 as reworded by the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 (shall be put into effect ten calendar days after its first official publication).

10-1. Aviation ground specialists engaged in ground support of aircraft operations, aviation work, aircraft maintenance, and operation of ground-based air traffic control, navigation, landing, and communication equipment shall undergo a preventive medical examination once a year.

Footnote. The Rules were supplemented with Paragraph 10-1 in accordance with the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 ( shall be put into effect ten calendar days after its first official publication).

11. The results of medical examinations shall be recorded in the medical record book of the state aviation personnel of the Republic of Kazakhstan (including flight crew, persons performing flight management and control, air traffic controllers, unmanned aerial vehicle operators, and parachutists) in the form according to Appendix 1-2 to these Rules, in chronological order, indicating the following data:

1) examination date;

2) complaints about the state of health;

3) past diseases (injuries) between medical examinations and their outcomes;

4) study of body responses to flights (flight tolerance);

5) the impact of existing medical conditions on work capacity and the quality of flight performance;

6) the results of anthropometric measurements and studies of the functional capacity of the cardiovascular system;

7) brief objective data from medical examinations. For persons with health deviations, objective data are recorded in accordance with the nature of the disease and changes that have occurred between examinations;

8) the result of a functional stress test;

9) a conclusion on the state of health and a diagnosis;

10) a decision on admission to professional activity.

Footnote. Paragraph 11 as reworded by the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 (shall be put into effect ten calendar days after its first official publication).

11-1. Requests by aviation personnel for aeromedical safety, results of medical examinations, treatment provided, and post-recovery medical check-ups shall be recorded in the insert to the medical record book of the state aviation personnel of the Republic of Kazakhstan (including flight crew, persons performing flight management and control, air traffic controllers, unmanned aerial vehicle operators, and parachutists) in the form according to Appendix 1-3 to these Rules.

Footnote. The Rules were supplemented with Paragraph 11-1 in accordance with the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 ( shall be put into effect ten calendar days after its first official publication).

12. Pre-shift medical examination (hereinafter referred to as the preflight medical examination) includes:

1) the checking of a certificate issued by the medical-flight commission;

2) individual interviewing on the state of health, compliance with the regime of work, rest and diet, complaints about the state of health;

3) identification of emotional problems and signs of fatigue (in appearance, behavior, form of communication);

4) measurement of body temperature;

5) examination of open skin and visible mucous membranes, examination of the pharynx, nasal breathing;

6) examination of arterial pulse in the radial artery (during 30 seconds). Aviation personnel with a heart rate of up to 50 beats or more than 90 beats per minute are suspended from flights, flight control or parachute jumps;

7) blood pressure measurement. Aviation personnel are allowed to fly, control flights or make parachute jumps with the following blood pressure indicators: systolic - not more than 140 and not less than 100 millimeters of mercury, diastolic - not more than 90 and not less than 60 millimeters of mercury.

For medical reasons, the volume of preflight medical examination can be increased because of the use of ancillary methods, including tests for the indication of alcohol, narcotic and psychotropic substances.

13. Between and after flights, aviation personnel are subject to selective medical examination in the volume of preflight medical examination (hereinafter referred to as between-flight and post-flight medical examination). Given indications, the between-flight ( post-flight) medical examination can be increased because of the use of ancillary methods or reduced to individual interviewing and visual examination.

14. Pilots and navigators shall undergo an inter-flight (post-flight) medical examination:

1) pilots and navigators shall undergo an inter-flight (post-flight) medical examination:

1) those retraining and mastering combat use of new aircraft - for 10 flying shifts;

2) those newly arrived in an air unit - for 5 flying shifts;

3) those starting to fly after in-patient or out-patient treatment - for 2 flying shifts;

4) the first year of service in the unit after graduation - at least once a month for 1 year of flying service in the unit;

5) after a break in flying of more than 4 months - for 5 flying shifts;

6) those of interest to the doctor (medical officer) in terms of individual flight tolerance ( flights in night vision goggles, with overloads exceeding 7, with aeroplane refuelling, at extremely low altitudes with terrain rounding, in minimum landing conditions, after holidays or business trips).

Footnote. Paragraph 14 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be enacted ten calendar days after the date of its first official publication).

15. Aviation personnel going on combat duty are subject to medical examination in the volume of preflight medical examination. In this case, the regime of work, rest and diet shall be similar to the preflight regime.

16. Preflight medical examination is reduced to individual interviewing and visual examination in case of bringing the aviation unit into highest levels of combat readiness, urgent departure. The personnel are interviewed and visually examined out of ranks.

17. The results of medical examinations of aviation personnel (preflight, between-flight or post-flight ones, before going on combat duty, when making parachute jumps or training ejections, before special studies and trainings) are recorded in the register of medical examination results in accordance with the form in Appendix 2 to these Rules.

18. Based on the results of the medical examination, the following decisions are made:

1) to admit to professional activities;

2) to suspend activities;

3) to take prophylactic, curative and rehabilitation measures;

4) to give rest;

5) to refer to consultation, medical examination or treatment;

6) to carry out extraordinary medical examination.

## Chapter 3. Procedure for aeromedical safety before and during flights

19. Aeromedical safety before and during flights is carried out in order to timely identify persons with initial forms of acute disease or exacerbation of chronic diseases, with performance decrement and suspend them from flights, flight control, parachute jumps or maintenance of aircraft equipment.

20. Aeromedical safety during the flight preparation period includes:

1) study of the planned flight table for compliance of the planned flight load with the state of health and physical endurance of the aviation personnel scheduled for flights;

2) Planning of aeromedical safety for flights in accordance with the conditions and nature of the upcoming flights;

3) informing aviation personnel about the psychophysiological features of upcoming flights in the form of lessons (conversations), conducting classes on aviation medicine and survival under conditions of autonomous existence, special studies and trainings in relation to the nature of the planned flights;

4) selection of protective equipment and its adjustment, checking of operation, sanitary and hygienic condition and storage conditions of protective equipment;

5) checking for deficiencies and condition of the property of the airdrome medical post, the medical equipment of the rescue parabattle group and the ground search and rescue team, on-board medical first-aid kits and emergency reserve medicine group;

6) checking the diet's compliance with the nature of upcoming flights;

7) checking the adequacy of the diet and observance of the preflight diet;

8) Before supplying oxygen to an aircraft, check the oxygen (documents confirming its quality) supplied for refueling the life support system on the aircraft, in accordance with Appendix 1-4 to these Rules, as well as the hygienic condition of the oxygen supply (charging ) equipment, which affects the safe operation of aircraft.

Footnote. Paragraph 20 as reworded by the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 (shall be put into effect ten calendar days after its first official publication).

21. For the flight period, a duty doctor (medical worker) is assigned to attend flights and a doctor (medical worker) is assigned to be part of the rescue parabattle group; an airdrome medical post is arranged. The duty doctor (medical worker) attending flights simultaneously heads the airdrome medical post and participates in search and rescue operations as part of the ground search and rescue team.

22. The aerodrome medical post shall be designated to render emergency medical assistance at the aerodrome, evacuate the patients and injured persons to the medical units of the aviation unit or medical organisations (regardless of their form of ownership).

The aerodrome medical post shall be equipped with an airfield ambulance and appropriate medical equipment. The aerodrome medical post ambulance shall not be used other than for its intended purpose.

Footnote. Paragraph 22 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall become effective ten calendar days after the date of its first official publication).

23. If the aviation unit is based at several airdromes, the set of aeromedical safety measures is organized by the head of the medical service of the aviation unit, and is carried out by the medical worker of the aviation unit with an aeromedical safety permit.

24. Before and during flights, the duty doctor (medical worker):

1) carries out preflight, between-flight and post-flight medical examination;

2) checks the sanitary and hygienic condition of the airdrome areas where aviation personnel eat and have a rest.

25. The preflight medical examination of aviation personnel is carried out individually, without unauthorized persons in the preflight medical examination room.

26. Aviation personnel (engineers and technicians) preparing aviation equipment for flights shall be subject to individual interviewing and visual examination (given indications, medical examination is carried out in the volume of preflight medical examination).

27. Aviation personnel are not admitted to (are suspended from) flights, flight control, parachute jumps or flight support:

1) without preflight medical examination (interview);

2) in case of any complaints about health problems, performance decrement;

3) in case of violations of the preflight regime of work, rest and diet;

4) with identified health problems.

28. The decision of the official conducting the preflight medical examination on suspension from flight, flight control, parachute jumping or flight support is final and binding.

29. To make a decision on admission to subsequent flights, it is necessary to compare the results of between-flight and preflight medical examinations. If between-flight medical examination identifies persons to be suspended from further flying, the duty doctor (medical worker) informs the flight manager thereon in a timely manner, makes a relevant note about the suspension in the flight plan table.

30. During the flight period, the duty doctor (medical worker) is provided with technical means to maintain constant communication with the commander of the aviation unit, the flight manager and aviation personnel.

## Chapter 4. Procedure for aeromedical safety of parachute jumps

31. For the parachute jump period, the medical service of the aviation unit assigns a duty doctor (medical worker) with appropriate equipment to provide medical assistance. A medical post is deployed at the landing site.

32. Persons recognized by the medical-flight commission as fit for flight work or parachute jumping are admitted to parachute jumping. In case of emotional superexcitation or

freeze response of aviation personnel performing the parachute jump for the first time, the duty doctor (medical worker) temporarily suspends them from the parachute jump.

33. On the day (night) of parachute jumps, the doctor (medical officer) on duty shall perform a medical examination to the extent of a pre-flight medical examination, but not earlier than 1 hour prior to the first jump, explaining the need to empty the bowels and bladder prior to jumping. Prior to parachute jumps, parachute jumpers shall observe the same work, rest and diet regime as prior to flight.

After each jump, questioning and external examination shall be performed to check for injuries.

Footnote. Paragraph 33 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be enacted ten calendar days after the date of its first official publication).

34. On the day (night) of parachute jumps, aviation personnel involved in performing parachute jumps are not admitted to flights.

35. When organizing aeromedical safety of parachute jumps, the duty doctor (medical worker) checks the compliance with the following conditions:

1) jumping may be no earlier than 1 - 1.5 hours after eating;

2) rest after jumps shall be like that after a flight shift;

3) uniforms and shoes shall fit the climatic and weather conditions.

## Chapter 5. Procedure for aeromedical safety of training ejections

36. When preparing for training ejections, the medical service of the aviation unit explains to the trainees the peculiarities of the effect on the body of adverse factors arising during inflight ejection (shock overloads when the squib is triggered, after the seat's separation from the aircraft, when the parachute canopy is inflated and at the time of landing, quick changes in barometric pressure and air flow pressure when the canopy is removed, and also in case of low temperatures at high altitudes).

37. For the period of training ejections, the medical service of the aviation unit assigns a duty doctor (medical worker) with the required equipment to provide medical assistance.

38. Before training ejections, aviation personnel shall observe the regime of work, rest and diet like that before flights. The duty doctor (medical worker) conducts medical examination of aviation personnel in the volume of preflight medical examination.

On the day of training ejections, aviation personnel are not admitted to flights. Second training ejection on the same day is not allowed.

39. During the period of training ejections, the duty doctor (medical worker):

1) assesses the severity of neuro-emotional stress;

2) checks the ability of aviation personnel to take correct ejection attitude to avoid injuries of the spine and limbs;

3) checks the correctness of training ejections, the appropriateness of flight gear and protective equipment, the ability of trainees to independently jettison protective equipment after training, observance of safety measures.

40. After a training ejection, the duty medical staff examines the musculoskeletal system paying particular attention to the condition of the spine, evaluates the emotional reaction of the trainee, and shall be ready to provide emergency medical care.

## Chapter 6. Procedure for aeromedical safety of simulator training

41. The medical service of the aviation unit is involved in the simulator training of those pilots (cadets):

1) who recently arrived at the aviation unit, who practice exercises that are new to them and young pilots (serving their first year after graduation);

2) who embark on the training of the most complex types of flights;

3) with a break in flight work longer than 4 months;

4) who lag behind in flight training or in retraining for a new type of aircraft and make gross errors during flights.

42. In the course of aeromedical safety of simulator training, the medical service of the aviation unit:

1) studies individual characteristics of the behavior of a pilot (cadet) performing various flight tasks (flight elements) and actions in special cases;

2) determines the level and dynamics of neuro-emotional stress (stress index) and residual attention during training according to psychophysiological indicators (pulse rate, pulmonary ventilation rate, respiratory rate) recorded using special equipment;

3) teaches pilots the methods of self-rating of their state and methods of self-regulation and stress reduction when performing the flight task;

4) participates in the preparation of a joint opinion on the level of professional readiness of the pilot (cadet) for flying.

43. Information obtained during the training of pilots (cadets) is recorded in the register of the values of psychophysiological indicators of pilots (cadets) at the basic flight phases in accordance with the form in Appendix 3 to these Rules.

## Chapter 7. The medical service's activities carried out to inspect the operation and storage of protective equipment and flight gear

44. For the purpose of checking the operation and storage of protective equipment and flight clothing, the medical service of the aviation unit shall:

1) train aviation personnel in the use of protective equipment (altitude, overload and water protection equipment);

2) take part in testing the knowledge and skills of aviation personnel in the use of protective equipment;

3) participate in choosing the height and size of the protective equipment and in fitting it;

4) verify that the flight uniforms of aviation personnel conform to the climatic and weather conditions of the flight area and the nature of the flight task;

5) check that the protective equipment is suitable for the conditions of the flight;

6) checks the sanitary and hygienic condition and storage conditions of protective equipment.

Footnote. Paragraph 44 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall come into force ten calendar days after the date of its first official publication).

45. The medical service of the aviation unit shall choose the growth and size of protective equipment, and adjust it, together with the specialists of the altitude equipment maintenance team of the aviation unit.

46. The results of adjustment (checking the adjustment, re-adjustment) of protective equipment, data on the sizes (sizing) of protective equipment are recorded in the passport of protective equipment and a medical history form.

## Chapter 8. Aeromedical safety during special studies and trainings of aviation personnel

47. Special studies and trainings of aviation personnel include:

1) study of the tolerance of moderate and large degrees of hypoxia, rarefied atmosphere and quick changes in barometric pressure;

2) study of the tolerance of breathing oxygen under overload pressure;

3) study of the tolerance of static muscle loads.

Footnote. Paragraph 47 as reworded by the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 (shall be put into effect ten calendar days after its first official publication).

48. When preparing for special studies and trainings, the medical service of the aviation unit explains to aviation personnel the specific effects of oxygen starvation (hypoxia), quick changes in barometric pressure, oxygen respiration under overload pressure, radial accelerations and measures to protect against the adverse effects of flight factors.

49. Before special studies and trainings, aviation personnel shall observe the regime of work, rest and diet as before flights and undergo medical examination in the volume of preflight medical examination.

50. On the day of special studies and trainings, aviation personnel are not admitted to flights. Special studies and trainings are not carried out if aviation personnel participated in flights or other studies on the day of the study.

51. The results of special studies and trainings are recorded in the register of special studies and trainings of aviation personnel in accordance with the form in Appendix 4 to these Rules.

52. Contraindications to the conduct of special studies and trainings are as follows:

1) complaints about the state of health, performance decrement;

2) non-compliance with the regime of rest and diet (the state after eating is less than 1 hour and more than 5 hours);

3) acute diseases;

4) the recovery period after acute illness;

5) resting heart rate is more than 90 beats per minute;

6) resting blood pressure: systolic - more than 140 and less than 100 millimeters of mercury, diastolic - more than 90 and less than 60 millimeters of mercury.

53. Aviation personnel with reduced tolerance of hypoxia are temporarily suspended from flight work and are referred to medical examination. In this case, it is necessary to clarify reasons for the decrease in the tolerance of hypoxia and prescribe a set of rehabilitation measures. When reduced tolerance of hypoxia is identified again, they are referred to extraordinary inpatient medical examination.

54. The study of the tolerance of breathing oxygen under overload pressure of aviation personnel performing flights at altitudes of more than 12,000 meters is carried out using a training oxygen device (if any in the aviation unit).

55. The study of the tolerance of static muscle loads of aviation personnel performing flights is carried out using the effects of aerobatic overloads on a static ergometer (if any in the aviation unit).

56. The medical service of the aviation unit conducts studies of the tolerance of breathing oxygen under overload pressure, static muscle loads and training of aviation personnel together with specialists of the altitude equipment maintenance team.

57. Excluded by the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 (shall be put into effect ten calendar days after its first official publication)

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## Chapter 9. Involvement of air unit medical service in the study and prevention of air accidents and incidents

Footnote. The title of Chapter 9 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be put into effect ten calendar days after the date of its first official publication).

58. The aviation unit's medical service shall be involved in the study of aviation accidents and incidents to determine, record and analyse the causes reducing the professional reliability of the pilot (aircraft crew), develop and implement measures to prevent them. Information gained in the process of studying aviation accidents and incidents, as well as measures for

their prevention shall be presented on a quarterly basis to the superior chief of medical service in the form specified in Annex 5 hereto.

Footnote. Paragraph 58 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be put into effect ten calendar days after the date of its first official publication).

59. Depending on the causes of accidents and incidents, general and/or individual preventive measures shall be developed.

Footnote. Paragraph 59 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be enacted ten calendar days after the date of its first official publication).

60. General preventive measures shall involve:

1) developing and submitting proposals to the air unit commander to correct deficiencies in organisation, flight operations and pre-flight work, rest and catering regimes;

2) medical support for simulator training for special cases of flight;

3) training of aviation personnel in the psycho-physiological mechanisms and prevention of accidents and incidents;

4) training aviation personnel in the use of protective techniques and exercises that increase resilience to the adverse effects of flight.

Footnote. Paragraph 60 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be enacted ten calendar days after the date of its first official publication).

61. Individual preventive measures shall comprise:

1) examination, treatment, rest or suspension from flying;

2) submission of proposals to the air unit commander on the planning of flight load, regulation of work, rest and meal regimes;

3) monitoring the dynamics of the functional state of aviation personnel experiencing professional difficulties in flight;

4) medical support for simulator and physical training to develop psycho-physiological qualities;

5) interviewing aviation personnel on a one-to-one basis.

Footnote. Paragraph 61 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be brought into force ten calendar days after the date of its first official publication).

## Chapter 10. Activities of the medical service on the rehabilitation of aviation personnel

62. The rehabilitation measures of the aviation unit medical service (restoration of professional efficiency, functional condition, health status) of aviation personnel shall be arranged in phases:

1) the first stage shall be performed in the aviation unit;

2) the second stage - shall be implemented in outpatient and polyclinic conditions;

3) the third stage shall undertaken in special rehabilitation centres, hospital rehabilitation units and sanatorium and health resort organisations.

Footnote. Paragraph 62 - as worded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall come into force ten calendar days after the date of its first official publication).

63. The time and duration of restoration activities for aviation personnel depend on the daily routine and are approved by the commander of the aviation unit.

64. The planning and implementation of rehabilitation activities shall take into account:

1) medical observation data;

2) age;

3) conclusion of the medical and flight commission;

4) psychological characteristics (level of development of attention, operational thinking, memory, spatial orientation and basic character traits);

5) tolerance characteristics of different types of flight;

6) the degree of physical development and level of physical fitness;

7) risk factors and habits affecting health and performance.

Footnote. Paragraph 64 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall come into force ten calendar days after the date of its first official publication).

65. The main indications for prescribing rehabilitation measures are as follows:

1) performance decrement;

2) fatigue, excessive fatigue;

3) functional impairment developed as a result of flight or general load;

4) after interruptions in flights (over 15 calendar days) when retraining for new equipment and performing flights in new climatic and geographical conditions.

## Chapter 11. Medical support in the search for and rescue of aircraft that suffer or have suffered distress, their passengers and crews

66. Medical support for search and rescue of aircraft, their passengers and crews experiencing distress or who have suffered distress shall comprise:

1) managing the aviation unit's medical service, coordinating their actions during search and rescue operations;

2) provision of medical assistance and timely evacuation of victims to medical organisations (regardless of ownership);

3) interaction with medical organisations (irrespective of ownership) to provide medical care and treatment to victims;

4) ensuring the readiness of the aviation unit's medical forces and facilities for search and rescue operations.

Footnote. Paragraph 66 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be enacted ten calendar days after the date of its first official publication).

67. A medical officer involved in search and rescue work as part of a ground search and rescue team or parachute rescue team must:

1) have specific training in the provision of medical assistance to victims of distress and methods for their evacuation;

2) have practical skills in the provision of emergency medical care;

3) know the location of medical organisations (regardless of ownership) in the search and rescue area, their specialisation, evacuation routes and communication arrangements;

4) be fitted out and equipped with necessary medical equipment and gear as per climatic conditions.

Footnote. Paragraph 67 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be put into effect ten calendar days after its first official publication).

68. A medical officer involved in search and rescue operations shall render emergency medical aid to the injured immediately on the site of a disaster, determine the order of evacuation of victims of distress and the method of their transportation to medical units of aviation units or medical organisations (irrespective of their form of ownership).

Footnote. Paragraph 68 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall come into force ten calendar days after the date of its first official publication).

## Chapter 12. Procedure for aeromedical safety of various types of flights

### Clause 1. Aeromedical safety of altitude and stratosphere flights

69. When ensuring aeromedical safety of altitude and stratosphere flights, the medical service of the aviation unit:

1) explains to the aviation personnel the psychophysiological features of altitude and stratosphere flights;

2) checks the appropriateness of altitude protective equipment and flight gear for the upcoming flight;

3) participates in the selection of altitude protective equipment and in its adjustment, checks its correct operation, sanitary and hygienic condition and storage conditions;

4) conducts special studies and trainings depending on the completeness of protective equipment;

5) trains aviation personnel to breathe oxygen under overload pressure and to use altitude life support equipment;

6) conducts between-flight (post-flight) medical examination when flights are performed at altitudes higher than 12,000 meters;

7) identifies persons with symptoms of fatigue, takes necessary rehabilitation measures.

**Clause 2. Aeromedical safety of aerobatic flights**

70. When ensuring aeromedical safety of aerobatic flights, the medical service of the aviation unit:

1) explains to the aviation personnel the psychophysiological features of aerobatic flying;

2) teaches aviation personnel protective muscle and respiratory antigravity techniques, behavioral and respiratory features under the influence of overloads;

3) trains aviation personnel on a static ergometer (if any in the aviation unit) for the purposes of drill training in protective muscle and respiratory antigravity techniques;

4) participates in the selection of antigravity protective equipment and in its adjustment, checks its correct operation, sanitary and hygienic condition and storage conditions;

5) trains aviation personnel in the features of operation of regular antigravity protective equipment;

6) checks the appropriateness of antigravity protective equipment and flight gear for the upcoming flight;

7) conducts between-flight and post-flight medical examinations when flights are performed with overloads over 7 units;

8) identifies persons with symptoms of fatigue, takes necessary rehabilitation measures.

71. After flights with overloads over 7 units, aviation personnel undergo post-flight medical examination (0.5-2 hours after the flight or the next day).

The post-flight medical examination includes:

1) interview about the state of health during and after the flight;

2) examination of the skin of the body, especially the lower body;

3) measurement of heart rate and sitting blood pressure (after a 5-minute rest);

4) questionnaire (assessment of well-being, activity and mood);

5) breath holding at exhalation (Genchi test);

6) three-stage static ergometer testing (in the presence of a static ergometer);

7) clinical blood panel and clinical urinalysis.

Summarized data of post-flight medical examinations are recorded in the medical history form.

72. With regard to the aviation personnel regularly flying with overloads over 7 units (at least 4 times a month), the medical service of the aviation unit at routine medical examinations carries out additional medical examination, including: 1) clinical blood panel and clinical urinalysis (monthly);

2) full static ergometer testing (if a static ergometer is available);

3) breath holding at exhalation (Genchi test);

4) spirometry;

5) questionnaire (assessment of well-being, activity and mood);

6) conventional 12-lead ECG.

The examination is carried out no earlier than 2 days after flights with overloads over 7 units.

73. Given a decrease in the tolerance of aerobatic overloads, aviation personnel are suspended from flights. In this case, it is necessary to clarify reasons for decrease in the tolerance of aerobatic overloads, prescribe a set of rehabilitation measures and decide on the referral for extraordinary medical checkup and examination.

**Clause 3. Aeromedical safety of low-altitude and NOE flights**

74. When ensuring aeromedical safety of low-altitude and NOE flights, the medical service of the aviation unit:

1) explains to the aviation personnel the psychophysiological features of low-altitude and NOE flights;

2) brings to the attention of aviation personnel the ways and methods of increasing the organism tolerance of alternating overloads and optokinetic stimuli (training on a trampoline, loping, rotating swing, outdoor sports, gymnastic exercises, swimming, short-term visual fixation on the dashboard when illusory sensations appear);

3) draws the attention of aviation personnel to possible errors in visual determination of flight altitude and the need for its control according to instrument readings;

4) conducts between-flight and post-flight medical examinations when NOE flights are performed hugging the terrain;

5) identifies persons with symptoms of fatigue, takes necessary rehabilitation measures.

**Clause 4. Aeromedical safety of long-haul flights**

75. When ensuring aeromedical safety of long-haul flights, the medical service of the aviation unit:

1) explains to the aviation personnel the psychophysiological features and hygienic conditions of activity during a long-haul flight;

2) is involved in testing the aviation personnel’s knowledge of inflight operation of oxygen-breathing equipment and protective equipment;

3) participates in the checking of preparation of inflight rations;

4) checks whether the aircraft has the required amount of first-aid kits;

5) teaches aviation personnel the ways and methods of maintaining operational efficiency during a long-haul flight (breathing pure oxygen, a set of special physical exercises, acupressure of biologically active zones), as well as first aid methods for self-care and mutual aid in emergency situations;

6) assesses the individual tolerance by aviation personnel of long-haul flights, the organism tolerance of physical inactivity, the duration of maintaining inflight optimal performance;

7) identifies persons with symptoms of fatigue, takes necessary rehabilitation measures.

**Clause 5. Aeromedical safety of bad weather flights**

76. When ensuring aeromedical safety of bad weather flights, the medical service of the aviation unit:

1) explains to the aviation personnel the psychophysiological features of bad weather flights and the features of spatial orientation in flight;

2) draws the attention of aviation personnel to possible spatial illusions;

3) teaches the methods of overcoming illusions (energetic head movements, changing posture, muscle tension, temporary attention switching, radio communication with the flight manager);

4) explains the ways and methods of preventing illusions (inadmissibility of flying when sick, strict observance of the regime of work, rest and diet, regular physical training aimed at training the vestibular apparatus, no alcohol drinking and smoking, improving the skills of assessing the spatial position of the aircraft by basic and duplicate instruments);

5) conducts between-flight and post-flight medical examinations when flying in landing minimum conditions;

6) identifies persons with symptoms of fatigue, takes necessary rehabilitation measures.

77. When conducting medical observation of the state of health and admission of aviation personnel to perform bad weather flights, the medical service of the aviation unit:

1) identifies cases of inflight illusions among aviation personnel, finds out the nature and causes of their occurrence (hyper-excitability of the vestibular apparatus, excessive fatigue, violation of the regime, interruption in flight work, individual characteristics of the organism, emotionalism, hyper-excitability, tendency to neurotic conditions, technical defects in cockpit ’s equipment) in order to take measures to eliminate them;

2) teaches aviation personnel a set of special physical exercises that increase the statokinetic tolerance of organism.

78. In the event of persistent and systematic occurrence of illusions not related to the features of the display system and flight conditions, aviation personnel are suspended from flights, referred to extraordinary medical examination and checkup.

**Clause 6. Aeromedical safety of night flights**

79. When ensuring aeromedical safety of night flights, the medical service of the aviation unit:

1) explains to the aviation personnel the psychophysiological features of night flights and the physiological mechanisms of night vision;

2) draws the attention of aviation personnel to possible spatial illusions during night flights;

3) explains the ways and methods of preventing illusions (inadmissibility of flying when sick, strict observance of the regime of work, rest and diet, observance of the light regime in the aircraft cockpit and in the airdrome premises, no alcohol drinking and smoking, regular physical training aimed at training the vestibular apparatus);

4) teaches aviation personnel how to prevent the decline in night vision, also when suddenly exposed to bright light sources (switching to instrument flight, creating maximum illumination and brightness of indicator instrument scales, using light filters, tilting the head or covering the eyes with the hand palm, switching to visual flight only when restoring the initial level of vision);

5) monitors the work of aviation personnel in low light conditions in order to assess the state of night vision;

6) checks the state of night vision of aviation personnel before performing night flights using an adaptometer, night vision scope (if any in the aviation unit).

80. When night flights are performed, at the airdrome the light regime is observed as follows:

1) in the premises for aviation personnel's work and rest immediately before flights and between them, lighting devices with lightproof caps shall direct light only to workplaces;

2) the rooms are lit red, which helps to reduce the time of dark adaptation;

3) for working with the map, reading and performing other visual operations on the tables, local lighting with white light is arranged, providing illumination of about 30 - 40 lux, illumination of walls and floor within 5 - 15 lux;

4) bright light sources at the airdrome are positioned so that their direct rays do not fall into the pilot's visual field;

5) traffic at the airdrome is organized in such a way as to prevent direct light from entering the pilots' eyes in the parking lots, taxiways and runway;

6) to avoid the pilots' blinding, cars moving around the airfield shall have headlights with special protective devices.

81. A decline in night vision (dark adaptation time over 60 seconds, visual acuity below 0.3 with an illumination of the adaptive field of 0.008 lux) is the basis for suspending aviation personnel from night flights with subsequent examination by an ophthalmologist in order to find out and eliminate the causes of this problem.

82. When ensuring aeromedical safety of night flights with night-vision goggles, the medical service of the aviation unit:

1) explains to aviation personnel the features of the functioning of the vision organ in night-vision goggles;

2) teaches aviation personnel special techniques to determine the initial signs of visual fatigue;

3) specifies the presence of flight tasks requiring the use of night-vision goggles;

4) takes into account the pilot's flying time in night-vision goggles;

5) ensures the participation of medical personnel in individual fitting and adjustment of night-vision goggles;

6) conducts between-flight (post-flight) medical examination.

**Clause 7. Aeromedical safety of formation flights**

83. When ensuring aeromedical safety of formation flights, the medical service of the aviation unit:

1) explains to the aviation personnel the psychophysiological features of formation flights ;

2) teaches aviation personnel how to train eye-to-eye determination of distances on the ground and in flight, how to control the parameters of the combat formation (order);

3) in case of repeated errors while maintaining the combat formation (order) parameters, assesses the condition of the visual analyzer of the wingman (pilot following the aircraft flying in front);

4) recommends that wingmen develop the skills of visual assessment of the spatial position of the aircraft flying in front (leader pilot) with visual fixations not exceeding 1 second.

**Clause 8. Aeromedical safety of flights over mountainous areas**

84. When ensuring aeromedical safety of flights over mountainous areas, the medical service of the aviation unit:

1) explains to the aviation personnel the psychophysiological features of flying over mountainous areas;

2) takes measures for the personnel's acclimatization in order to prevent mountain sickness;

3) ensures the prevention of snow ophthalmia (wearing safety glasses), sunburns, injuries, colds and excessive fatigue;

4) checks the appropriateness of the flight gear of aviation personnel for climatic and weather conditions of the flight area and the nature of the flight task;

5) conducts classes with aviation personnel on methods of survival and self-care and mutual aid in the event of emergency aircraft evacuation and landing in the mountains.

**Clause 9. Aeromedical safety of over-water flights**

85. When ensuring aeromedical safety of over-water flights, the medical service of the aviation unit:

1) explains to the aviation personnel the psychophysiological features of over-water flying ;

2) draws the attention of aviation personnel to possible spatial illusions during over-water flights;

3) teaches the methods for overcoming illusions (energetic head movements, changing posture, muscle tension, temporary attention switching, radio communication with the flight manager);

4) explains the ways and methods of preventing illusions (inadmissibility of flying when sick, strict observance of the regime of work, rest and diet, regular physical training aimed at training the vestibular apparatus, no alcohol drinking and smoking, improving the skills of assessing the spatial position of the aircraft by basic and duplicate instruments);

5) participates in the selection and adjustment of protective equipment for aviation personnel used for over-water flying;

6) conducts classes with aviation personnel on methods of survival and self-care and mutual aid in the event of emergency aircraft evacuation above water surface.

**Clause 10. Aeromedical safety of flights at low ambient temperatures**

86. When ensuring aeromedical safety of flights at low ambient temperatures, the medical service of the aviation unit:

1) trains aviation personnel to provide self-care and mutual aid in case of cold injuries and freezing, and also to take actions to preserve life and health in the event of emergency landing or aircraft evacuation;

2) ensures the prevention of snow ophthalmia (wearing safety glasses) on sunny days in the presence of snow;

3) checks the temperature conditions in the premises (stationary and field ones);

4) checks the appropriateness of the flight gear of aviation personnel for climatic and weather conditions of the flight area and the nature of the flight task;

5) checks the completeness and condition of protective equipment.

**Clause 11. Aeromedical safety of flights at high ambient temperatures**

87. When ensuring aeromedical safety of flights at high ambient temperatures, the medical service of the aviation unit:

1) participates in organizing a rational daily routine;

2) participates in the planning of flight load, taking into account the individual tolerance of high temperature and performance of aviation personnel;

3) identifies persons with hyperthermia, suspends them from professional activities and arranges treatment and rehabilitation for them;

4) takes prophylactic measures aimed at preventing the hyperthermia of personnel;

5) carries out work to prevent diseases caused by sudden changes in temperature during the day and dusty air at airfields in desert regions;

6) participates in checking the conditions of aviation personnel's stay at the airdrome ( equipment of places for between-flight rest, the presence of showers, air conditioners and fans , the availability of drinking water);

7) participates in the planning of combat and physical training;

8) explains to aviation personnel the need for proper operation of altitude and antigravity protective equipment.

88. Aviation personnel with hyperthermia are suspended from flights with immediate adoption of measures to normalize their thermal state (water procedures, rest in well-ventilated or air-conditioned rooms).

In case of acute vascular disorders (fainting, collapse) caused by hyperthermia, the aviation personnel, after medical care according to urgent indications, shall be hospitalized with subsequent extraordinary examination by the medical-flight commission.

## Chapter 13. Procedure for aeromedical safety of flights of various branches of aviation

### Clause 1. Aeromedical safety of frontline flights

89. When ensuring aeromedical safety of frontline flights, the medical service of the aviation unit:

1) explains to the aviation personnel the psychophysiological features of flying a highly maneuverable aircraft, the effects of adverse inflight factors on the organism and their preventive measures;

2) teaches aviation personnel protective muscle and respiratory antigravity methods;

3) trains aviation personnel on a static ergometer (if any in the aviation unit) for the purposes of drill training in protective muscle and respiratory antigravity methods;

4) participates in the selection of altitude and antigravity protective equipment and its adjustment, checks its correct operation, sanitary and hygienic condition and storage conditions;

5) conducts special studies and trainings depending on the completeness of protective equipment;

6) draws the attention of aviation personnel to possible spatial illusions during flights;

7) checks the aviation personnel's knowledge how to deal with illusory sensations and the features of using protective equipment;

8) takes part in the special training of aviation personnel in survival under conditions of autonomous existence and the provision of self-care and mutual aid when landing (ditching) in an uninhabited area;

9) conducts between-flight and post-flight medical examinations of aviation personnel performing flights on aircraft with overloads over 7 units, and also those who performed flight tasks with aerial refueling, NOE flights hugging the terrain.

### Clause 2. Aeromedical safety of transport aviation flights

90. When ensuring aeromedical safety of transport aviation flights, the medical service of the aviation unit:

1) explains to the aviation personnel the psychophysiological features of flights, the effect of inflight adverse factors (hypokinesia, physical inactivity, monotony, desynchronosis) on the organism and their preventive measures;

2) draws the attention of aviation personnel to possible spatial illusions during flights;

3) teaches aviation personnel the ways and methods of maintaining operational efficiency in flight (breathing pure oxygen, a set of special physical exercises in the cockpit, acupressure of biologically active zones);

4) takes part in the special training of aviation personnel for survival under conditions of autonomous existence and the provision of self-care and mutual aid when landing (ditching) in an uninhabited area;

5) identifies persons with the symptoms of fatigue, excessive fatigue and desynchronosis and arranges rehabilitation measures for them.

### Clause 3. Aeromedical safety of army aviation flights

91. When ensuring aeromedical safety of army aviation flights, the medical service of the aviation unit:

1) explains to the aviation personnel the psychophysiological characteristics and hygienic conditions of inflight activity in helicopter, the effects of adverse inflight factors on the organism and measures for their prevention;

2) draws the attention of aviation personnel to the need for piloting a helicopter with non-instrumental signals, controlling their actions with short visual fixations on instrument readings not longer than 1 second;

3) draws the attention of aviation personnel to possible errors in the visual determination of flight altitude and the need for its control according to instrument readings;

4) checks the aviation personnel’s knowledge how to deal with illusory sensations and sudden changes in illumination during night flight and the features of using night-vision goggles;

5) takes part in the special training of aviation personnel for survival under conditions of autonomous existence and the provision of self-care and mutual aid when landing (ditching) in an uninhabited area;

6) during routine medical examinations, identifies persons with functional impairments associated with the prolonged influence of noise, vibration, and given medical indications, arranges rehabilitation measures for them.

## Chapter 14. Procedure for aeromedical safety of flights during combat duty

92. When ensuring aeromedical safety of flights during combat duty, the medical service of the aviation unit:

1) explains to the aviation personnel the psychophysiological features of flying a highly maneuverable aircraft, the effects of adverse inflight factors on the organism and their preventive measures;

2) explains to the aviation personnel the psychophysiological and physiological-hygienic features of combat duty, paying particular attention to the reduction of night performance and measures to maintain it at a high level;

3) trains aviation personnel to operate protective equipment, life support systems and rescue equipment;

4) checks the completeness and condition of protective equipment and flight gear;

5) explains to aviation personnel the need for proper operation of altitude and antigravity protective equipment;

6) studies individual psychophysiological characteristics and the performance of aviation personnel in the process of combat duty;

7) draws the attention of aviation personnel to the need to observe the pre-flight regime of work, rest and diet in order to maintain high performance;

8) teaches aviation personnel the ways and methods of maintaining operational efficiency (breathing pure oxygen, a set of special physical exercises, acupressure of biologically active zones);

9) checks on-duty sanitary-hygienic and living conditions;

10) checks the organization of night meals in order to prevent breaks longer than 4 - 5 hours between meals;

11) takes part in the special training of aviation personnel for survival under conditions of autonomous existence and the provision of self-care and mutual aid when landing (ditching) in an uninhabited area;

12) during flights, conducts between-flight and post-flight interviews, and, if necessary, a medical examination;

13) identifies persons with the symptoms of fatigue, excessive fatigue and desynchronosis and arranges rehabilitation measures for them.

93. Aviation personnel shall have pre-flight and post-flight rest before and after going on combat duty, no matter whether they flew or not.

94. In order to restore the functional state and performance after 50 combat duties, aviation personnel shall have a rest for 7-10 calendar days with subsequent admission to flights.

## Chapter 15. Procedure for aeromedical safety of flights of aircraft crews performing overflights

95. In providing medical support for flight crews of aircraft operating overflights, the medical service of the aviation unit shall:

1) inspect accommodation, pre-flight rest and meal arrangements for flight crews, especially when flying to other climatic and geographical zones;

2) check that crews are supplied with food, including on-board meals;

3) inspect the completeness and condition of protective equipment and flight clothes;

4) arranges medical care for the sick and the injured ones, as well as their evacuation to medical organisations (irrespective of their form of ownership).

Footnote. Paragraph 95 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be enacted ten calendar days after the date of its first official publication).

96. Crews of flying aircraft shall undergo a pre-flight medical examination with a note on the readiness checklist in the medical unit of the aviation unit no earlier than 2 hours prior to departure. A doctor (medical officer) on duty of the aviation unit's medical unit shall conduct the pre-flight medical examination at off-base aerodromes.

Footnote. Paragraph 96 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall come into force ten calendar days after the date of its first official publication).

## Chapter 16. Procedure for aeromedical safety of training flights

97. In providing medical support for the flight training of cadets enrolled in the flight specialties of military aviation training schools (hereinafter referred to as “cadets”), the military medical service of the military aviation training school shall:

1) monitor the health and performance of cadets and conduct a range of necessary preventive and therapeutic measures;

2) examine the individual psycho-physiological characteristics of cadets' performance during flight training and during simulator training, identify factors that reduce the effectiveness of the formation and consolidation of flight skills;

3) examines the flight plan sheet to ensure that the planned flight load is consistent with the health and physical stamina of the cadets and flight instructors;

4) analyse the tolerance of different types of flight, take part in drawing up a rational work , rest and diet regime;

5) inspect the sanitary condition of the accommodation, catering and teaching facilities of the cadets, paying particular attention to lighting and temperature conditions;

6) provide cadets with training in aviation medicine.

Footnote. Paragraph 97 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be enacted ten calendar days after the date of its first official publication).

98. Medical observation of cadets' health includes:

1) daily observation of health during flight training;

2) routine medical examinations;

3) medical examinations during flights (pre-flight, between-flight and post-flight medical examinations).

99. Cadets shall undergo periodic health checks at the military medical (medical) unit of the military aviation training school once every three months as per the plan approved by the head of the military aviation training school.

Footnote. Paragraph 99 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be put into effect ten calendar days after the date of its first official publication).

99-1. Cadets shall undergo a health check-up six months after their regular medical examination at the military medical (medical) unit of the military aviation training school with the participation of a general practitioner and a neurologist. A surgeon, ophthalmologist, otorhinolaryngologist may be involved, if medically indicated.

Footnote. The Rules have been supplemented by paragraph 99-1 under Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be put into effect ten calendar days after the date of its first official publication).

100. A cadet with persistent deviations in the state of health discovered in the course of medical observation is subject to referral to in-patient medical examination and extraordinary medical checkup to decide on his fitness for flight training.

101. Aviation medicine classes teach:

1) psychophysiological features of flight activity;

2) protective measures against adverse flight factors;

3) requirements for the state of health and the level of physical development during the implementation of flight activities;

4) the need to comply with the pre-flight regime of work, rest and diet to maintain high performance in flight.

102. Between-flight and (or) post-flight medical examinations of cadets during flight training are conducted:

1) before their first independent flight (at least once a week);

2) after an independent flight (at least 5 flights - after each flight);

3) for those who embarked on flights after inpatient or outpatient treatment (during the first week, but at least 2 flight shifts).

103. Aviation personnel who were on station (on duty) on the eve or on the day of the flight shift are not allowed to fly.

104. In organizing medical support for flights at the camp aerodrome, the military medical service of the military aviation training institution shall inspect:

1) accommodation conditions for aviation personnel and cadets;

2) the ability of cadets and aviation personnel to comply with the pre-flight work, rest and food regime;

3) sanitary and hygienic conditions of catering and water supply facilities.

Footnote. Paragraph 104 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall become effective ten calendar days after the date of its first official publication).

## Chapter 17. Procedure for aeromedical safety of flights during retraining and mastering combat use on new aviation equipment

105. When ensuring aeromedical safety of flights during retraining and mastering combat use on new aviation equipment, the medical service of the aviation unit:

1) participates in the selection of aviation personnel for retraining, taking into account his state of health, focus on the continuation of flight work, tolerance of flights on mastered equipment;

2) participates in the selection and adjustment of protective equipment for aviation personnel, training in breathing oxygen under overload pressure;

3) explains to the aviation personnel the psychophysiological characteristics and hygienic conditions of inflight activity on the aircraft to operate which the aviation personnel are retrained, ways to protect against adverse effects of flight factors, the need to observe the regime of work, rest and diet;

4) studies individual psychophysiological characteristics of activities of aviation personnel on new aircraft and during simulator training, identifies factors weakening the formation and consolidation of new flight skills;

5) studies the flight schedule for compliance of the planned flight load with the state of health and physical endurance of aviation personnel;

6) draws the attention of aviation personnel to inadmissibility to interrupt flight work for more than 10 calendar days when being retrained to operate new aviation equipment (it adversely affects the formation and consolidation of flight skills), more than 15 calendar days when mastering combat use (it is fraught with regression of flight skills, decreased quality of performance of flight tasks);

7) trains aviation personnel to operate protective equipment, life support systems and rescue equipment;

8) conducts between-flight (post-flight) medical examinations;

9) identifies persons with symptoms of fatigue, takes necessary rehabilitation measures.

## Chapter 18. Procedure for aeromedical safety of tactical flight training

106. Aeromedical safety of tactical flight training (hereinafter referred to as TFT) consists of four periods:

the first period – preparation for aeromedical safety of TFT;

the second period - aeromedical safety of a flight (relocation) to and from a training site;

the third period - aeromedical safety of flights in the TFT area;

the fourth period - medical service activities at the end of TFT.

107. While preparing for the medical support for the flight-tactical exercise, the medical service of the air unit shall:

1) draw up a medical support plan for flight and tactical exercises by period and determine, depending on the tasks to be performed, the necessary forces and means of the aviation unit's health service;

2) check the completeness and condition of equipment, instruct medical personnel departing with a ground or air escort to deploy a medical unit for the duration of the exercise and a medical post at the aerodrome of dispersal;

3) inspect the medical care layouts and instruct the forward team medical personnel assigned to arrange medical support for the flight of the air unit to the dispersal airfield prior to the arrival of the main force;

4) determine a list of aviation personnel who are not permitted to participate in air tactical exercises for medical reasons and report this to the unit commander;

5) obtain information from the superior military health service and health organization on the epidemic situation and hygienic state of the exercise area, the availability of health organizations (irrespective of their form of ownership);

6) familiarise aviation personnel ( by lectures, discussions) with disease prevention measures specific to the area where the air training exercise takes place;

7) in conjunction with the aerial unit's high-altitude equipment maintenance team, inspect the condition of the protective equipment.

Footnote. Paragraph 107 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall be put into effect ten calendar days after the date of its first official publication).

108. When ensuring aeromedical safety of a flight (relocation) to and from the training site, the medical service of the aviation unit shall take into account the requirements regarding the aeromedical safety of aviation personnel during the preparation and conduct of flights.

109. When providing medical support for flights in the flight-tactical exercise area, the medical service of the air unit shall:

1) inspect accommodation, pre-flight rest conditions for aviation personnel, catering and water supply arrangements;

2) liaise with health-care organisations (irrespective of ownership) in the area of the exercise for the prompt resolution of issues related to the provision of qualified and specialised health care to the injured and sick;

3) clarify the epidemic situation and disease patterns in the local population, and the sanitary state of water sources;

4) examine the flight-tactical exercise plan sheet, prepares the unit's aviation medical forces and facilities for flight support;

5) arrange the deployment of a medical station, equip a place for the pre-flight health examination of aviation personnel;

6) verify the compliance with the pre-flight regime, food preparation conditions, sanitary condition of eating places and food storage in field conditions, carry out additional vitaminisation of personnel if necessary.

Footnote. Paragraph 109 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall come into force ten calendar days after the date of its first official publication).

110. At the end of TFT, the medical service of the aviation unit analyzes the aeromedical safety of TFT and specifies measures to correct identified mistakes. For accelerated rehabilitation of aviation personnel, the medical service of the aviation unit makes recommendations to the commander of the aviation unit on the rational organization of work and rest using measures of restorative medicine.

Appendix 1
to the Rules for aeromedical safety
of state aviation of the
Republic of Kazakhstan

**Approximate dates for admission of aviation personnel and parachutists to professional activities after recovery from diseases and injuries**

Footnote. Appendix 1 as reworded by the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 (shall be put into effect ten calendar days after its first official publication).

| Item № | Diseases (injuries) | Place of treatment | Subjective and objective data indicative of recovery | Admission to professional activity |
|---|---|---|---|---|
| 1. | Neuropathies: | | | |
| | 1) occipitocervical, intercostal, of cervicobrachial | | | |

| | | | | |
|---|---|---|---|---|
| | plexus, of lumbosacral plexus of the catarrhal etiology, manifested as pain in typical zones, paresthesia; | Medical post | Pain relief | In 3-5 calendar days after consultation with a neurologist |
| | 2) neuralgias and neuritides after intoxication, trauma or with a prolonged course | Military hospital | Pain relief, restoration of function. No pathology in the spine radiograph. In case of neuralgias associated with general intoxication - good tolerance of moderate degrees of hypoxia in a pressure chamber study | By decision of the medical and flight commission ( hereinafter referred to as MFC) of the hospital, MFC of an aeromedical laboratory ( hereinafter referred to as AML) or a military educational institution |
| 2. | Radiculoneuropathies : | | | |
| | 1) mild forms of cervicobrachial and lumbosacral localization; | Medical post | Pain relief, motion is unconstrained | In 3-5 calendar days after consultation with a neurologist |
| | 2) with a prolonged course<br>and recurrent | Military hospital | Pain relief, motion is unconstrained | By decision of head of the department, MFC of the hospital |
| 3. | Fatigue: | | | |
| | 1) mild;<br>2) moderate and severe | Health center, rest for 7 - 10 calendar days<br>Military hospital | No complaints, desire for flight work<br>No complaints, desire for flight work | Based on the data of medical examination involving a therapist and a neurologist<br>By decision of the MFC of the hospital or MFC of AML ( military educational institution) |
| 4. | Exaggerated emotional response to unfavorable work-related or domestic circumstances: | | | |
| | 1) mildly expressed, short-term, lasting several minutes; | Medical post | Restoration of normal health condition and mood, critical attitude to the past situation | In 2 - 3 calendar days after consultation with a neurologist, psychologist |
| | 2) reaction of medium duration ( several hours), prolonged unusual | | | |

| | | | | |
|---|---|---|---|---|
| | mental states ( neurotic disorders, similar in symptoms to neurasthenia, obsessional neurosis, hysterical neurosis) | Military hospital | Restoration of normal health and mood, critical attitude to the past situation | By decision of the MFC of the hospital |
| 5. | Condition after an inflight aviation incident | Whether inpatient examination is needed shall be decided after medical examination involving a therapist and a neurologist | No complaints, deviations in health status, visible injuries , or emotional or psychological reactions. The pilot was focused on flying , and the occurrence of the aviation incident did not depend on his health status or actions during the flight | Based on the data of medical examination involving a therapist and a neurologist or a report of MFC of the military hospital |
| 6. | Condition after pronounced single, acute alcohol intoxication | Medical post, consultation with a neurologist | No complaints, normalization of the pulse and blood pressure. Normal reaction of the cardiovascular system shown in orthostatic tests and in case of dosed physical activity | In 3-5 calendar days |
| 7. | Influenza and other acute respiratory viral infections | Medical post, Infectious disease department of a military hospital | No objective changes in the nasal pharynx, internal organs and nervous system | In 3-5 calendar days |
| 8. | Acute rhinitis (runny nose) | Medical post | No signs of inflammation of the nasal mucosa with normal function of the nose and auditory tubes, normal blood counts | In 2-3 calendar days |
| 9. | Pharyngitis, laryngitis and laryngotracheitis: | | | |
| | 1) without symptoms of general intoxication; | Medical post | Complete restoration of vocal function, no signs of mucosal inflammation during endoscopy. Normal blood counts | In 3 - 5 calendar days |
| | | | Complete restoration of vocal function, no signs of mucosal | |

| | | | | |
|---|---|---|---|---|
| | 2) with symptoms of general intoxication, a pronounced vocal dysfunction | Military hospital | inflammation during endoscopy. Normal blood counts. No changes in the electrocardiogram ( hereinafter - the ECG ) | In 5 - 7 calendar days after consultation with an otorhinolaryngologist |
| 10. | Acute tonsillitis ( angina) | Infectious disease department of a military hospital | Disappearance of pharyngoscopic signs of inflammation, pain during palpation of regional lymph nodes . Normal body temperature during 7 calendar days. Normal general blood and urine tests. No changes in the ECG ( control ECG entry at the end of the treatment course) | In 5-7 calendar days |
| 11. | Acute sinusitis | Military hospital | No signs of inflammation of the nasal mucosa and paranasal sinuses with normal barofunction of the ear and paranasal sinuses. Normal temperature and blood count. Good tolerance of rapid changes in barometric pressure when examined in an pressure chamber. Examination in the pressure chamber can be no earlier than 3 - 5 calendar days after the puncture | In 3 - 5 calendar days after consultation with an otorhinolaryngologist |
| 12. | Acute bronchitis: | | | |
| | 1) with a favorable course of the disease; | Medical post | Disappearance of subjective manifestations of the disease. Normalization of respiratory function, disappearance of pathological signs of the disease in the lungs and normal blood counts. Normal | In 5 - 7 calendar days |

| | | | | |
|---|---|---|---|---|
| | | | body temperature during 2 - 3 calendar days, no change in chest x-ray | |
| | 2) with a prolonged course of the disease | Military hospital | Disappearance of subjective manifestations of the disease. Normalization of respiratory function, disappearance of pathological signs of the disease in the lungs and normal blood counts. Normal body temperature during 2 - 3 calendar days, no change in chest x-ray | In 7 - 10 calendar days |
| 12-1 | Pneumonia | | | |
| | 1) with a favorable course of the disease; | Military hospital | Disappearance of subjective manifestations of the disease. Normal external respiration function indicators, disappearance of pathological signs of the disease in the lungs and indicators of general and biochemical blood tests. Normal body temperature for 5-7 calendar days, no changes in chest X-ray. | After spirometry and consultation with a therapist |
| | 2) with a complicated case of the disease | Military hospital | Disappearance of subjective manifestations of the disease. Normal external respiration function indicators, disappearance of pathological signs of the disease in the lungs and indicators of general and biochemical blood tests. Normal body temperature for 5-7 | |

| | | | | |
|---|---|---|---|---|
| | | | calendar days, no changes in chest X-ray. | By decision of the MFC of the hospital |
| 13. | Acute otitis externa, boils in the external auditory canal | Military hospital | Pain relief and signs of inflammation of the skin of the auditory canal during otoscopy. Normal blood counts | In 3 - 5 calendar days after consultation with an otorhinolaryngologist |
| 14. | Acute catarrhal otitis media, salpingootitis | Military hospital | No signs of inflammation with normal barofunction of the ear, good tolerance of rapid changes in barometric pressure when examined in an pressure chamber, normal blood counts. Examination in the pressure chamber can be no earlier than 5 - 7 calendar days after recovery | In 5 - 7 calendar days after consultation with an otorhinolaryngologist with vestibulometry |
| 15. | Nosebleed: | | | |
| | 1) spontaneous; | Medical post | No nosebleed during 3 calendar days. Scab detachment | In 3 - 5 calendar days after consultation with an otorhinolaryngologist |
| | 2) repeated, frequent nosebleeds | Military hospital | No nosebleed during 3 calendar days. Scab detachment. Normal blood counts | By decision of head of the department, MFC of the hospital |
| 16. | Exacerbation of chronic diseases of the digestive system | Medical post. Military hospital | Normalization of the general condition, disappearance of subjective and objective signs of exacerbation of the disease with the onset of remission | In 3 - 5 calendar days |
| 17. | Helminthic invasion | Medical post | Disappearance of subjective and objective manifestations of the digestive system | In 3 - 5 calendar days |
| 18. | Acute intestinal infections and food poisoning | Military hospital | Normalization of the general condition, disappearance of subjective and objective signs of the disease | In 3 - 5 calendar days |

| | | | | |
|---|---|---|---|---|
| 19. | Reaction after preventive vaccinations, other allergic reactions | Medical post. Military hospital | Normalization of the general condition, disappearance of subjective and objective signs of the disease | In 3 - 5 calendar days |
| 20. | Hyperthermia: | | | |
| | 1) mild forms; | Medical post | Normalization of the general condition, indicators of blood pressure, pulse, body temperature and neuropathological status | In 1 - 2 calendar days |
| | 2) with acute neurovascular disorders | Military hospital | Normalization of the general condition, indicators of blood pressure, pulse, body temperature and neuropathological status | By decision of MFC of the hospital |
| 21. | Bruises: | | | |
| | 1) with limited swelling of the tissues, with light sores, without severe pain (except for bruises of the head and spine); | Medical post | Disappearance of pain, tissue swelling, restoration of the functions of the bruised organ | In 2 - 5 calendar days after consultation with a traumatologist or a surgeon |
| | 2) all bruises of the head, spine, chest, bruises with detachment of skin and subcutaneous tissue, with extensive hematomas, injuries of the periosteum with its detachment | Military hospital | Disappearance of pain, tissue swelling, restoration of the functions of the bruised organ | By decision of MFC of the hospital |
| 22. | Damage to the ligamentous apparatus of joints: | | | |
| | 1) with strained ligamentous apparatus with slight swelling of soft tissues, soreness and slight dysfunction; | Medical post | Disappearance of pain, swelling of tissues, complete restoration of joint function. The patient shall be exempt from parachute jumping and ground ejections for three months after recovery | In 3 - 5 calendar days after consultation with a traumatologist or a surgeon |
| | | | | |

| | | | | |
|---|---|---|---|---|
| | 2) with significant damage to the ligamentous apparatus with suspected hemorrhage in a joint, joint dislocation | Military hospital | Disappearance of pain, swelling of tissues, complete restoration or minor temporary impairment of joint function. | By decision of MFC of the hospital |
| 23. | Open soft-tissue injury: | | | |
| | 1) small cut, bruised, chopped and avulsive wounds; | Medical post | Presence of strong, painless scars not limiting the function and not impeding the use of special equipment | In 5 - 7 calendar days after consultation with a surgeon |
| | 2) extensive and deep soft-tissue injuries and gunshot wounds | Military hospital | Presence of painless, strong scars not limiting or temporarily limiting the function | By decision of MFC of the hospital |
| 24. | Fractures of limbs' small bones | Medical post | Complete consolidation of bone fragments with callus formation, in the absence of soft tissue infiltrates not limiting the function and not impeding the use of special equipment | In 5 - 7 calendar days after consultation with a traumatologist or a surgeon |
| 25. | Condition after reduction of joint dislocation | Medical post | Disappearance of pain, swelling of tissues, complete restoration of joint function | In 5 - 7 calendar days after consultation with a traumatologist or a surgeon |
| 26. | Boils: | | | |
| | 1) solitary (except for facial boils), without increased body temperature and disturbed general condition; | Medical post | Complete healing of the boil, pain reliefful infiltrate and regional lymphadenitis. Normal blood counts | In 2 - 3 calendar days |
| | 2) multiple or often recurrent; solitary facial boils | Military hospital | Disappearance of local and general manifestations of the disease, normal blood counts | In 3 - 5 calendar days, by decision of head of the department of the hospital |
| 27. | Abscesses, hydradenitis, phlegmon, carbuncles | Military hospital | Strong scar without inflammatory infiltrate at the lesion not impeding the use of special equipment, | In 3 - 5 calendar days |

| | | | | |
|---|---|---|---|---|
| | | | normal blood counts, normal blood sugar level | |
| 28. | Panaritium: | | | |
| | 1) mild forms of skin, subcutaneous and subungual panaritium ; | Medical post | Healing with complete finger recovery | In 2 - 3 calendar days |
| | 2) severe forms: tendon, bony, articular, pandactylitis | Military hospital | Healing with complete finger recovery | By decision of head of the department, MFC of the hospital |
| 29. | Burns: | | | |
| | 1) limited I - II degrees; | Medical post | Complete healing of the burn, strong scars not impairing the function and not impeding the use of special equipment | In 5 - 7 calendar days after consultation with a surgeon |
| | 2) extensive I - II - III degrees | Military hospital | Complete healing of the burn, strong scars not impairing or temporarily impairing the function and not impeding the use of special equipment | By decision of head of the department, MFC of the hospital |
| 30. | Frostbites: | | | |
| | 1) limited frostbites I - II degrees; | Medical post | Disappearance of swelling, redness and soreness at the lesion | In 5 - 7 calendar days after consultation with a surgeon |
| | 2) extensive frostbites II - III degrees | Medical post | Complete healing of frostbite, strong scars not impairing the function or temporarily impairing function and not impeding the use of special equipment | By decision of head of the department, MFC of the hospital |
| 31. | Exacerbation of hemorrhoids: | | | |
| | 1) with a course that is not prolonged and uncomplicated; | Medical post | Disappearance of pain, inflammation and bleeding | In 2 - 3 calendar days after consultation with a surgeon |
| | 2) with prolonged and complicated course | Military hospital | Disappearance of pain, inflammation and bleeding. Normal blood counts | By decision of head of the department of the hospital |
| | | Military hospital | Disappearance of pain, inflammation | |

| | | | | |
|---|---|---|---|---|
| | 3) after surgical treatment | | and bleeding. Normal blood counts | In 30 calendar days after consultation with a surgeon |
| 32. | Acute cystitis, acute urethritis, acute prostatitis | Medical post. Military hospital | Normal body temperature during 5 calendar days, normal general urine and blood tests, no discharge from the urethra after provocation, no dysuric manifestations | In 2 - 3 calendar days after consultation with a urologist or surgeon |
| 33. | Inflammatory scrotal diseases | Military hospital | Disappearance of pain and swelling, normal body temperature, normal general blood and urine tests | In 2 - 3 calendar days after consultation with a urologist or surgeon |
| 34. | Condition after surgery related to appendicitis, hernias, varicocele and hydrocele | Medical post | Scars are painless, strong, no infiltrates not limiting the function and not impeding the use of special equipment | In 30 calendar days after consultation with a surgeon |
| 35. | Blepharitis: | | | |
| | 1) mild forms of the disease; | Medical post | No itching, disappearance of redness of the eyelids, greasy scales at the roots of the eyelashes | In 1 - 2 calendar days |
| | 2) severe, difficult to treat | Military hospital | No itching, disappearance of redness of the eyelids, greasy scales at the roots of the eyelashes | In 5 - 7 calendar days after consultation with an ophthalmologist |
| 36. | Sty. Purulent inflammation of the meibomian gland ( internal sty)) | Medical post. In case of relapse – military hospital | No painful infiltrate, the wound is closed. Presence of small painless infiltrate is not a contraindication to flight admission | In 2 - 3 calendar days after consultation with an ophthalmologist |
| 37. | Conjunctivitis: | | | |
| | 1) acute, mild, uncomplicated; | Medical post | No photophobia, a feeling of pressure and heat in the eyes, painful sensations, the disappearance of redness and swelling of the conjunctiva of the eyelids and | In 2 - 3 calendar days |

| | | | | |
|---|---|---|---|---|
| | | | discharge from the eyes | |
| | 2) severe, with profuse purulent discharge, and also complicated by superficial keratitis | Military hospital | No photophobia, a feeling of pressure and heat in the eyes, painful sensations, the disappearance of redness and swelling of the conjunctiva of the eyelids and discharge from the eyes | In 5 - 7 calendar days after consultation with an ophthalmologist |
| 38. | Foreign object in the eye cornea | Military hospital | No signs of inflammation of the conjunctiva and eye cornea | In 1 - 2 calendar days |
| 39. | Inflammatory diseases of eyeballs | Military hospital | No signs of inflammation of the membranes of the eyeball | By decision of MFC of the hospital |
| 40. | Tooth extraction: | | | |
| | 1) uncomplicated; | Medical post | No edema, pain, bleeding, the mouth can open free, chewing is painless | In 1 - 2 calendar days |
| | 2) complicated by bleeding, alveolitis | Medical post | No edema, pain, bleeding, the mouth can open free, chewing is painless. Normal blood and urine counts | In 2 - 3 calendar days |
| 41. | Acute pulpitis | Medical post | Pain relief | In 1 - 2 calendar days |
| 42. | Acute periodontitis | Medical post | Pain relief when biting and percussing a tooth. Complete obliteration of the canal with filling material | In 1 - 2 calendar days |
| 43. | Periodontal disease in the acute stage, abscess formation | Medical post. Military hospital | Complete disappearance of inflammation from periodontium, normal blood and urine counts | In 2 - 3 calendar days after consultation with a dentist |
| 44. | Acute odontogenic osteomyelitis. Odontogenic phlegmon | Military hospital | Pain relief, edema, hyperemia, normal body temperature, normal blood and urine counts | In 3 - 5 calendar days after consultation with a dentist |
| | | | No elements of mucosal damage, | |

| | | | | |
|---|---|---|---|---|
| 45. | Acute diseases of the oral mucosa | Medical post. Military hospital | normal body temperature, normal blood and urine counts | In 3 - 5 calendar days after consultation with a dentist |
| 46. | Acute sialadenitis | Military hospital | Pain relief, edema, normalization of the gland function, normal ECG, normal blood and urine counts | In 3 - 5 calendar days after consultation with a dentist |
| 47. | Difficult “wisdom” teething complicated by pericoronitis | Medical post. Military hospital | Pain relief, edema, free opening of the mouth (4 cm), normal blood and urine counts | In 2 - 3 calendar days after consultation with a dentist |

Appendix 1-1
to the Rules for aeromedical safety
of state aviation of the
Republic of Kazakhstan

Form

## PLAN for Dynamic Monitoring of State Aviation Personnel

Footnote. The Rules were supplemented with Appendix 1-1 in accordance with the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 (shall be put into effect ten calendar days after its first official publication).

| Sequential № | Military rank, surname, name, patronymic (if any), year of birth | When and by which medical and flight commission was examined | Diagnosis, conclusion of the medical and flight commission | Recommended treatment and preventive measures | Implementation of activities 20_____ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |

Table continued

| Implementation of activities 20_____ | | | | | | Ordinary examination | Date | | Date | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Test in pressure chamber | Breathing and speech training under excessive pressure | Leave for the previous year | Leave in the current year | Leave in a health care center |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |

Head of medical service_____

Note:

A conventional symbol is used for filling in: a cell divided by a diagonal line drawn from the upper right corner to the lower left corner. When planning, the date of the planned event is entered in the upper part of the cell and shaded with the corresponding color (specified in the conventional symbols). In the lower part of the cell, the date of actual completion is entered and shaded with the same color..

When filling in the cell, it is colored:

Medical and flight commission (in a hospital) – red;

Medical and flight commission (outpatient) – blue;

Medical examination in 6 months – green;

Medical examination in 3 months – brown.

Appendix 1-2
to the Rules for aeromedical safety
of state aviation of the
Republic of Kazakhstan

Form

A5 format

(cover - front side)

**MEDICAL RECORD**
**of aviation personnel of state aviation of the Republic of Kazakhstan**

Footnote. The Rules were supplemented with Appendix 1-2 in accordance with the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 (shall be put into effect ten calendar days after its first official publication).

(for members of the flight crew, individuals responsible for flight supervision and control, air traffic management operators, unmanned aerial vehicle (UAV) operators, and parachutists)

_____

**Surname**

_____

**Name, Patronymic (if any)**

"____"_____20 ____

(date of completion)

(cover – back page)

**CONTENTS**

## Section 1. General information _____

_____

**(name of military unit)**

Class_____

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Place for photography | | | | | | Military rank | Category |
| | | | | | | | Cadets |
| | | | | | | | Pilots |
| | | | | | | | Navigators |
| | | | | | | | Flight attendants ( specialists) |
| | | | | | | | Parachutists |
| | | | | | | | Flight managers |
| | | | | | | | Air traffic controllers |
| | | | | | | | Unmanned aerial vehicle operators |

Surname _____
__

Name _____
___

Patronymic (if any) _____

Date of birth _____ Place of birth _____

Individual identification number _____

Sex (male, female _____

Education (general, military, special) _____

_____
__

Department (directorate, division) of defense affairs responsible for conscription _____
___

Service in the Armed Forces of the Republic of Kazakhstan from ____, in the air defense forces from____.

Marital status (single, married), family composition (how many children, dates of their birth, dependents)

_____
__

Address and telephone (home and business) _____
_

_____
__

Blood type _____ Rhesus factor _____

Date and name of institution, where the blood type, rhesus factor was determined _____

_____
__

Surname, initials, signature of the doctor (paramedic, nurse) who made the recording

_____
__

"____"_____20____



**Section 2. Anamnesis**

1. Genetic background _____
___

2. Past illnesses (what kind and at what age) _____

_____
__

_____
__

3. Head injuries (date), nature of injury, duration of loss of consciousness, presence of vomiting,
amnesia, where and how long was treated, when did he resume flight work after the injury
___

_____

_____
__

_____
__

4. Injuries: a) wounds (location, nature, date, duration of treatment, how long before he resumed flight work); b) contusions (severity, duration of loss of consciousness, treatment )

_____

_____
__

_____
__

5. Were there any breaks in flight work, sick leave, their duration, when and for what reason

_____
__

_____
__

_____
__

6. Bad habits (smoking, drinking alcohol, drugs) _____

_____
__

7. Drug tolerance (allergies) _____

_____
__

8. Additional comments (past flight incidents, when, circumstances, causes, consequences , damage received, etc.)

_____
_____

Page 4,5,6,7

## Section 3. Conditions of service and living

| Date<br>Conditions of service and living | "___"_____20___ | "___"_____20___ | "___"_____20___ |
|---|---|---|---|
| Characteristics of the work regime: average number of hours worked per day, frequency and duration of work (duties) at night, average number of combat duties and assignments per month | | | |
| Sleep: how many hours a day sleep, quality of sleep | | | |
| Regular leave (where and when spent). Result of rest | | | |
| Meals (at home, in the canteen): regularity, frequency, diet | | | |
| Characteristics of living conditions | | | |

Page 8,9

## Section 4. Preventive vaccination

| Date | Name of the drug, manufacturer, series, control number, expiration date | Dose, method and site of administration of the drug | Reaction | Signature of the doctor |
|---|---|---|---|---|
| | | | | |

## Section 5. Condition of teeth and mouth cavity

| 1.) Data of examination and diagnosis by the dentist (enter yes, no, except for the "diseases" column) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Date осмотра | Mucous membrane | | | Gums | | | Dental plaque | Diseases | Signature (seal) |
| | norm | Stomatitis | Gingivitis | norm | Periodontitis | Periodontitis | | | |
| | | | | | | | | | |

| 2). Conditional symbols for dental formulas: healthy tooth – H; missing tooth – M; unerupted tooth – UE; root – RT; caries – C; pulpitis – P; gangrene – GR; subject to removal – E; metal crown – MC; bridge prosthesis – BP; removable prosthesis – RP; filling – FL. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F | | 18 | | 17 | | 16 | | 15 | | 14 | | 13 | | 12 | | 11 | | 21 | | 22 | | 23 | | 24 | | 25 | | 26 | | 27 | | 28 |
| | | 48 | | 47 | | 46 | | 45 | | 44 | | 43 | | 42 | | 41 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 |
| E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| XA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Note. In the first column, record the results of the examination for each tooth; in the second column, record the results of the treatment. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



## Section 6. Data of laboratory tests

| Date | | ___20_ | ___20_ | ___20_ | ___20_ | ___20_ | ___20_ |
|---|---|---|---|---|---|---|---|
| Blood: | | | | | | | |
| Hemoglobin | | | | | | | |
| Erythrocyte sedimentation rate | | | | | | | |
| Erythrocyte count | | | | | | | |
| Leukocyte count: | | | | | | | |
| | band | | | | | | |
| | segmented | | | | | | |
| | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Leukocyte formula(%) | lymphocytes | | | | | | |
| | monocytes | | | | | | |
| | eosinophils | | | | | | |
| Urine: | | | | | | | |
| specific gravity | | | | | | | |
| reaction | | | | | | | |
| blood | | | | | | | |
| protein | | | | | | | |
| sugar | | | | | | | |
| Microscopy | | | | | | | |
| Stool test for worm eggs | | | | | | | |
| Additional tests | | | | | | | |

Page 14,15

## Section 7. Data of biochemical tests

| Indicator name | ___20__ | ___20__ | ___20__ | ___20__ | ___20__ | ___20__ |
|---|---|---|---|---|---|---|
| | | | | | | |

Page 16,17,18,19

## Section 8. Data from chest X-ray examinations

| | | |
|---|---|---|
| "____"_____20___ | "____"_____20___ | "____"_____20___ |
| "____"_____20___ | "____"_____20___ | "____"_____20___ |

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## Section 9. Data from radiological, endoscopic, and ultrasound examinations of internal organs

| | | |
|---|---|---|
| "____" _____20___ | "____" _____20___ | "____" _____20___ |
| "____" _____20___ | "____" _____20___ | "____" _____20___ |

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## Section 10. Data of electrocardiography

| | | |
|---|---|---|
| "____" _____20___ | "____" _____20___ | "____" _____20___ |
| "____" _____20___ | "____" _____20___ | "____" _____20___ |

Page 26,27

## Section 11. Physical development data

| Date | ___20__ | ___20__ | ___20__ | ___20__ | ___20__ | ___20__ |
|---|---|---|---|---|---|---|
| Height | | | | | | |
| Body mass | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Mody mass index | | | | | | | |
| Foot length | | | | | | | |
| Head circumference | | | | | | | |
| Neck circumference | | | | | | | |
| Chest circumference | At rest | | | | | | |
| | When breathing in | | | | | | |
| | When breathing out | | | | | | |
| Abdominal circumference | | | | | | | |
| Hand dynamometry | right | | | | | | |
| | left | | | | | | |
| Standing strength | | | | | | | |
| Spirometry | | | | | | | |
| Developmental defects | | | | | | | |
| Body type | | | | | | | |

Page 28,30,32,34,36,38 (левая сторона)

## Section 12. Data of surgical examination

| | | |
|---|---|---|
| Date | "____"_____20___ | "____" _____20___ |
| Complaints and anamnesis | | |
| Musculoskeletal system and joints | | |
| Skin condition | | |
| Abdominals (abdominal rings, existence of a hernia) | | |
| Abdominal organs | | |
| Urogenital system | | |

Page 29,31,33,35,37,39 (right side)

| | | |
|---|---|---|
| Date | "____" _____20___ | "____" _____20___ |
| Anus and rectum | | |
| Peripheric vessels | | |
| Additional method of study | | |
| Diagnosis | | |
| Expert opinion and treatment and prevention recommendations | | |
| Signature (seal) | | |

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## Section 13. Examination of the functional capacity of the cardiovascular system

| | "___" _____ 20___ | | | "___" _____ 20___ | | | "___" _____ 20___ | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| | | Sitting at rest | after 15 squats ( in 30 seconds) | In 3 minutes | Sitting at rest | after 15 squats ( in 30 seconds) | In 3 minutes | Sitting at rest | after 15 squats ( in 30 seconds) | In 3 minutes |
|---|---|---|---|---|---|---|---|---|---|---|
| Pulse (frequency per 1 minute, rhythm and degree of filling) | | | | | | | | | | |
| Blood pressure | Maximum | | | | | | | | | |
| | Minimum | | | | | | | | | |
| Functional tests | | | | | | | | | | |

Page 44,46,48,50,52,54 (left side)

## Section 14. Data from the examination of internal organs

| Date | "____" _____20___ | "____"_____20___ |
|---|---|---|
| Complaints and anamnesis | | |
| Nutritional status | | |
| Body color | | |
| Lymphatic system | | |
| Thyroid gland | | |
| Cardiovascular system | | |

Page 45,47,49,51,53,55 (right side)

| Date | "____" _____20___ | "____" _____20___ |
|---|---|---|
| Respiratory organs | | |
| Digestive organs | | |
| Liver, spleen | | |
| Kidneys | | |
| Additional studies | | |
| Diagnosis | | |
| Expert opinion and treatment and preventive recommendations | | |
| Signature (seal) | | |

Page 56,58,60,62 (left side)

## Section 15. Data of psychoneurological examination

| Date | "____" _____20___ | "____" _____20___ | "____" _____20___ |
|---|---|---|---|
| Complaints and anamnesis (indicate previous illnesses, brain injuries, fainting spells) | | | |
| Pupils | | | |
| | | | |

| | | | |
|---|---|---|---|
| Cranial nerves | | | |
| Reflex sphere | | | |
| Motor sphere | | | |
| Sensory sphere | | | |

Page 57,59,61,63 (right side)

| | | | |
|---|---|---|---|
| Date | "____" _____20___ | "____" _____20___ | "____" _____20___ |
| Vegetative nervous system (dermographism, pilomotors, Aschner's oculocardiac reflex, acrocyanosis) | | | |
| Mental status | | | |
| Additional studies | | | |
| Diagnosis | | | |
| Expert opinion and treatment and preventive recommendations | | | |
| Signature (seal) | | | |

Page 64,66,68,70 (left side)

## Section 16. Data from the organ of vision

| | | | | |
|---|---|---|---|---|
| Date | | "____" _____20__ | "____" _____20__ | "____" _____20__ |
| Complaints and anamnesis | | | | |
| Visual acuity | without correction | Right eye _____<br>Left eye _____ | Right eye _____<br>Left eye _____ | Right eye _____<br>Left eye _____ |
| | with correction | Right eye _____<br>Left eye _____ | Right eye _____<br>Left eye _____ | Right eye _____<br>Left eye _____ |
| Refraction (skiascopic) | | Right eye _____<br>Left eye _____ | Right eye _____<br>Left eye _____ | Right eye _____<br>Left eye _____ |
| Media | | Right eye _____<br>Left eye _____ | Right eye _____<br>Left eye _____ | Right eye _____<br>Left eye _____ |
| Ocular fundus | | Right eye _____<br>Left eye _____ | Right eye _____<br>Left eye _____ | Right eye _____<br>Left eye _____ |
| Color perception by _____ | | | | |
| Night vision | | | | |

| | | | | |
|---|---|---|---|---|
| Range of vision | Right eye | | | |
| | Left eye | | | |
| Nearest point of convergence | | | | |

Page 65,67,69,71 (right side)

| Date | "____"_____20___ г. | "____"_____20___ г. | "____"_____20___ г. |
|---|---|---|---|
| Nearest point of clear vision | | | |
| Pupils | Right eye _____<br>Left eye _____ | Right eye _____<br>Left eye _____ | Right eye _____<br>Left eye _____ |
| Pupil reaction | Right eye _____<br>Left eye _____ | Right eye _____<br>Left eye _____ | Right eye _____<br>Left eye _____ |
| Eyelids | | | |
| Conjunctiva | | | |
| Lacrimal ducts | | | |
| Additional examination data | | | |
| Diagnosis | | | |
| Expert opinion and treatment and preventive recommendations | | | |
| Signature (seal) | | | |

Page 72,74,76,78 (left side)

## Section 17. Data from examinations of the ear, throat, and nose

| Date | "____"_____20___ г. | | "____"_____20___ г. | | "____"_____20___ г. | |
|---|---|---|---|---|---|---|
| Complaints and anamnesis (including vestibular, traumatological , baroanamnesis) | | | | | | |
| Endoscopy of the ear, throat, nose | | | | | | |
| Pharyngoscopy | | | | | | |
| Examination of the functions of the ear, throat, nose | Side | | Side | | Side | |
| | right | left | right | left | right | left |
| Nasal breathing | | | | | | |
| Smell | 1, 2, 3 | 1, 2, 3 | 1, 2, 3 | 1, 2, 3 | 1, 2, 3 | 1, 2, 3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Barofunction | 1, 2, 3 | 1, 2, 3 | 1, 2, 3 | 1, 2, 3 | 1, 2, 3 | 1, 2, 3 |

Page 73,75,77,79 (right side)

| Date | "____" _____20___ | "____" _____20___ | "____" _____20___ |
|---|---|---|---|
| Whispered speech | | | |
| Vestibulometry (for vestibular reactions of I–III degree, describe subjective and objective data) | Protective actions<br>3, 2, 1, 0 — 0, 1, 2, 3<br>Vegetative reactions<br>3, 2, 1, 0 — 0, 1, 2, 3 | Protective actions<br>3, 2, 1, 0 — 0, 1, 2, 3<br>Vegetative reactions<br>3, 2, 1, 0 — 0, 1, 2, 3 | Protective actions<br>3, 2, 1, 0 — 0, 1, 2, 3<br>Vegetative reactions<br>3, 2, 1, 0 — 0, 1, 2, 3 |
| Additional examinations | | | |
| Diagnosis | | | |
| Expert opinion and treatment and preventive recommendations | | | |
| Signature (seal) | | | |

Page 80,81,82,83,84,85

## Section 18. Conclusion of medical and flight commission

| "____" _____20____ | "____" _____20____ |
|---|---|
| During examination by the medical and flight commission | During examination by the medical and flight commission |
| According to paragraph/subparagraph _____ _____<br>_____ of column _____ of the order _____ ___<br>dated "__" _____ 20___№ _____, was recognized: | According to paragraph/subparagraph _____ _____<br>_____ of column _____ of the order _____ ___<br>dated "__" _____ 20___№ _____, was recognized: |
| Diagnosis: _____<br>_____<br>_____<br>_____ | Diagnosis: _____<br>_____<br>_____<br>_____ |
| Treatment and preventive measures _____<br>_____<br>_____ | Treatment and preventive measures _____<br>_____<br>_____ |
| Chairman of the commission: | Chairman of the commission: |
| Secretary of the commission: | Secretary of the commission: |
| Seal | Seal |

Page 86,87,88,89,90,91,92,93

## Section 19. Compliance with the instructions of the medical and flight commission and results

| Date | Instructions of the medical and flight commission | Performed activities and their results |
|---|---|---|
| | | |

Page 94,95,96,97,98,99,100,101

## Section 20. Data from anthropometric measurements and studies of the functional capacity of the cardiovascular system during medical examinations

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | | | | | | | | | | | | | |
| Weight | | | | | | | | | | | | | |
| Body mass index | | | | | | | | | | | | | |
| Spirometry | | | | | | | | | | | | | |
| Hand dynamometry | right | | | | | | | | | | | | |
| | left | | | | | | | | | | | | |
| Pulse | In rest | | | | | | | | | | | | |
| | after 15 squats | | | | | | | | | | | | |
| | In 3 minutes | | | | | | | | | | | | |
| Blood pressure | In rest | | | | | | | | | | | | |
| | after 15 squats | | | | | | | | | | | | |
| | In 3 minutes | | | | | | | | | | | | |
| Functional tests | | | | | | | | | | | | | |

Page 102,104,106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138 ( left side)

## Section 21. Data from medical examinations, studies of the body's response to flight work, and medical monitoring of physical fitness

| | |
|---|---|
| Data from the study of the body's reaction to flight work (tolerance to various types of flights, parachute jumps, ejections). Flight hours | |
| Medical monitoring of physical fitness | |
| Medical examination data | |

Page 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139 (right side)

Page 140,142,144 (left side)

## Section 22. Results of medical examinations for admission to training parachute jumps and ground ejection

| | | | | | |
|---|---|---|---|---|---|
| | | | | | |

| Date and time of examination | Type of medical examination | Nature of tasks performed | Complaints | Condition of the upper respiratory tract | Body temperature |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |

Page 141,143,145 (right side)

| Pulse | Blood pressure | Identified deviations in health status or violations of the regime | Conclusion on admission to training parachute jumps ( ground ejection) | Surname and signature of the person who allowed training parachute jumps (ground ejection) |
|---|---|---|---|---|
| 7 | 8 | 9 | 10 | 11 |

Page 146,147,148,149,150,151,152,153

## Section 23 High-altitude tests in a pressure chamber or on an airplane, special training and their results

| Date | The reason for the tests, training | Nature of the test, training | Result of the test, training. Signature of the doctor |
|---|---|---|---|
| | | | |

Page 154,155

## Section 24. Special equipment size (height) data

| Date of fitting | Name of equipment | | | | | |
|---|---|---|---|---|---|---|
| | Number | Size | Service life | Number | Size | Service life |
| Date of fitting | Name of equipment | | | | | |
| | Number | Size | Service life | Number | Size | Service life |

Page 156,157,158,159,160

## Section 25. For additional records

(back cover – inside)

## Explanations for completing the form

1. A medical record book is the main document reflecting the state of health of each member of aviation personnel throughout their flying career.

2. For cadets at aviation personnel training institutions, the medical record book is completed three months after their enrollment.

3. After all sections have been completed, the old medical record book is not submitted to the archive, but is filed with the newly created one.

4. Medical record book is stored in the medical office of the unit (institution) in locked cabinets. The insert is stored together with the medical record.

5. When aviation personnel are referred to medical institutions for treatment or consultation, to a sanatorium or rest home, the insert is handed over against receipt. When referred for inpatient examination or medical examination, the medical record book together with the insert is handed over only in sealed form against receipt or sent by official mail.

6. When aviation personnel are transferred from a military unit (institution) or educational institution, the medical record book shall be sent together with their personal file. Upon dismissal from the Armed Forces, the medical record book shall be sent together with the personal file to the place of military registration.

7. Medical record book is maintained by the aviation unit (institution) physician and specialists of the medical flight commission. All entries should be made in ink, concisely, clearly, and legibly. When corrections are made, the old entry is crossed out and a new wording is written above it, which is marked: “Corrected to be believed” and is certified by the doctor's signature and seal.

8. During a regular or extraordinary medical examination by the medical-flight commission, the results of the examination are entered into the relevant sections of the medical record book book according to specialty.

9. Data on hospitalization and treatment are entered into an insert to the medical record book (epicrisis, treatment provided, and recommendations to the unit physician).

10. In section 7, “Biochemical test data,” enter the names of the indicators in the “ Indicator name” column.

11. In sections 8 and 9, “Radiological and endoscopic test data,” when performing radiography, fluoroscopy, and fluorography, the radiation dose in millisieverts (mSv) should be indicated).

Appendix 1-3
to the Rules for aeromedical safety
of state aviation of the
Republic of Kazakhstan

Form
A6 format
(cover – front side)

**INSERT**
**to medical record book of the aviation personnel of state aviation of the Republic of Kazakhstan**

Footnote. The Rules were supplemented with Appendix 1-3 in accordance with the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 (shall be put into effect ten calendar days after its first official publication).

(for members of the flight crew, individuals responsible for flight supervision and control, air traffic management operators, unmanned aerial vehicle (UAV) operators, and parachutists)

_____

**Surname**

_____

**Name, Patronymic (if any)**

"____"_____20 ____

(date of completion)

(cover – reverse side)

## CONTENTS





## Section 1. General information _____ _____ (name of military unit)

Class _____

| | | |
|---|---|---|
| Surname_____ _____ | Military rank | Category |
| Name_____ _____ | | Cadets |
| Patronymic (if any) _____ ____ | | Pilots |
| Date of birth_____ _____ | | Navigators |
| Place of birth_____ _____ | | Flight attendants (specialists) |
| Individual Identification Number _____ _____ | | Parachutists |
| Sex (male, female) _____ _____ | | Flight managers |

| | | |
|---|---|---|
| Education (general, military, special) _____ _____ | | Air traffic controllers |
| Department (directorate, division) of defense affairs responsible for conscription _____ | | Unmanned aerial vehicle operators |

Service in the Armed Forces of the Republic of Kazakhstan from ____, in the air defense forces from____.

Marital status (single, married), family composition (how many children, dates of their birth, dependents)

_____
__

Address and telephone (home and business) _____
_

_____
__

Blood type _____ Rhesus factor _____



**Section 2. Anamnesis**

1. Genetic background (family background) _____
_____

2. Past illnesses (what kind and at what age) _____

_____
_____

3. Drug acceptability _____
_____

4. Injuries: a) wounds, b) contusions _____
_____

_____
_____

5. Surgeries _____
_____

_____
_____

6. Sick leave, its duration, when and for what reason _____
_____

_____
_____

7. Treatment in sanatoriums _____
_____
_____
_____
8. Bad habits (smoking, drinking alcohol, drugs) _____
_____
_____
9. Drug tolerance (allergies) _____
_____
_____



## Section 3. Preventive vaccination

| Date | Name of the drug, manufacturer, batch, control number, expiration date | Dosage, method and site of administration of the preparation | Reaction | Signature of the doctor |
|---|---|---|---|---|
| | | | | |



## Section 4. Data from radiological, endoscopic and ultrasound examinations

| | | |
|---|---|---|
| "____" _____20___ | "____" _____20___ | "____" _____20___ |
| "____" _____20___ | "____" _____20___ | "____" _____20___ |



## Section 5. Sanatorium-resort therapy

| Date | Decision of the sanatorium selection committee, dates of admission to and discharge from the sanatorium, therapeutic and diagnostic procedures, preventive recommendations and instructions. |
|---|---|
| 1 | 2 |



## Section 6. Data of medical examinations, registration of requests for medical assistance, referrals for inpatient treatment (examination)

| Date and order of referral | Complaints, medical history, objective data, laboratory test results, diagnosis, prescription, referral for inpatient treatment, referral to the military medical commission, exemption from classes and work, outcome of the disease, number of days of treatment, signature of the doctor |
|---|---|
| | |

| 1 | 2 |
|---|---|

Page 34 –35

## Section 7. Accounting of days away from work

| Date of relief | | Diagnosis of the primary disease | Number of days away from work due to | | | |
|---|---|---|---|---|---|---|
| Commencement | End | | Outpatient treatment | Inpatient treatment | leave and sick leave | Total of days |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Page 36 –37

## Section 8. Observation page

| Date | Contents |
|---|---|
| 1 | 2 |

(page 38 and back cover– inside)

## Explanation to completion of the insert

1. The insert to the medical record of aviation personnel (hereinafter referred to as the Insert) is a document for recording and reporting. It is intended for recording requests from aviation personnel for medical assistance, recording work losses, treatment provided, medical examinations for recovery, consultations, referrals to sanatoriums, health centers, special survival training centers, as well as records not related to the examination of a serviceman and the adoption of an expert decision.

2. The insert together with the medical book is presented to the ordinary examination of the medical flight commission.

3. The insert notes changes in health status identified during the inter-commission period that served as the reason for referral for an unscheduled inpatient examination.

4. The insert is maintained by the doctor. All entries should be made in ink, concisely, clearly, and legibly. When corrections are made, the old entry is crossed out and a new wording is written above it, which is marked: “Corrected to be believed” and sealed with the doctor's signature and stamp.

5. In section 4, “Radiological and endoscopic examination data,” when performing radiography, fluoroscopy, and fluorography, the radiation dose in millisieverts (mSv) is indicated.

6. In section 5, when referring aviation personnel to sanatorium-resort therapy, a referral is issued in the insert with the decision of the sanatorium selection committee and indicating the name of the sanatorium (rest home), the duration of stay, and the diagnosis. At the end of

the sanatorium-resort treatment, a discharge summary is recorded in the insert, indicating the dates of admission and discharge, therapeutic and diagnostic procedures, treatment methods and their results, as well as preventive recommendations and instructions.

7. In section 6, when conducting outpatient treatment, all visits, results of medical examinations, consultations, laboratory, instrumental, and special studies are recorded in the insert. Upon recovery, the record shall indicate the presence (absence) of complaints, the duration of treatment, objective status, the dynamics of the course of the disease, the treatment provided, the results of laboratory and clinical studies, the criteria for recovery, and admission to military service. When inpatient treatment is provided, the initial visit is recorded in the insert, indicating complaints, objective status, diagnosis, and referral for inpatient treatment. After discharge, the record indicates the presence (absence) of complaints , objective status, results of tests at discharge, criteria for recovery, and a note is made about admission to military service, indicating the date of arrival for a medical examination for the purpose of admission to flight and flight control.

8. When the insert is completely filled, it is replaced with a new one, and the old one is stored in a separate package along with the results of previous studies over the past three years.

Appendix 1-4
to the Rules for aeromedical safety
of state aviation of the
Republic of Kazakhstan

**Methodology for medical testing of oxygen**

Footnote. The Rules were supplemented with Appendix 1-4 in accordance with the Order of the Minister of Defense of the Republic of Kazakhstan dated 18.04.2024 № 389 (shall be put into effect ten calendar days after its first official publication).

A mobile oxygen filling station is used to fill (charge) aircraft oxygen systems with gaseous medical oxygen. Each mobile oxygen filling station has a capacity in the form of a battery of high-pressure cylinders. The compressors are powered by the vehicle's engine. The principle of operation of all mobile oxygen filling stations is the same and consists of transferring compressed gaseous oxygen from high-pressure cylinders to lower-pressure cylinders, followed by increasing its pressure to a specified level using a compressor.

Before flights, the aviation unit's medical service checks the documentation (passports) for oxygen, the hygienic condition of oxygen refueling equipment, and conducts an organoleptic assessment of its quality.

This check includes verification of documents (passports) confirming the quality of gases, the cleanliness of hoses and fittings of refueling equipment, the availability of special clothing (white coats), alcohol for processing fittings and refueling hoses.

The passport (certificate) that determines the quality of oxygen contains the following information:

1) the name of the manufacturer and its trademark;

2) batch number;

3) date of manufacture, mass of liquid oxygen;

4) results of physical and chemical analysis.

Medical oxygen intended for breathing during high-altitude flight contains at least 99.5% pure oxygen by volume; it is odorless and does not contain acetylene, oils, carbon monoxide, gaseous acids and bases, moisture, or mechanical impurities.

Gaseous oxygen obtained by electrolysis of water is not used for medical purposes.

Medical gaseous oxygen meets the following requirements in terms of harmful impurities:

| Name of indicators | Norm |
|---|---|
| Appearance | colorless, odorless gas |
| Carbon monoxide (CO) content | absent |
| Carbon dioxide (CO2) content | absent |
| Nitrogen and oxidizing gas content | absent |
| Water vapor content | no more than 0.07 grams per cubic meter at a temperature of 20 degrees Celsius and a pressure of 760 millimeters of mercury |

The organoleptic assessment of oxygen quality is carried out as follows. The driver of the mobile oxygen filling station is asked to turn on the oxygen supply at low pressure and direct the oxygen hose away from people and flammable surfaces toward a clean mirror held in such a way that the oxygen reflected from the mirror hits the face. At the same time, the smell ( oxygen is odorless) and humidity of the oxygen (the surface of the mirror does not fog up) are determined.

Then the oxygen stream is directed onto black fabric (to check for the absence of light impurities) and white fabric (to check for the absence of dark impurities).

After the check, the medical worker makes a note in the passport about the permission to use oxygen to refuel aircraft systems.

Appendix 2
to the Rules for aeromedical safety
of state aviation of the
Republic of Kazakhstan
Form

**Register of medical examination results**

**Military unit _____**

| Date. Time of examination | Military rank, surname and initials | Complaints | Condition of the | Temperature | Pulse | Blood pressure | Identified health problems and violation of | Conclusion on admission |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | upper respiratory tract | | | | the preflight regime | to professional activities |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Note:

1. To register the data of the preflight, between-flight, post-flight medical examination of aviation personnel, the title of the book is amended as follows: “The register of the results of the pre-flight (between-flight, post-flight) medical examination of aviation personnel”. During the between-flight and post-flight medical examination, it is necessary to indicate the time elapsed from the moment of landing of the aircraft.

2. To register the data of the preflight medical examination of the crews of aircraft performing overflights, the title of the book is amended as follows: “The register of the results of the preflight medical examination of crews of aircraft performing overflights”.

3. To register the data of the medical examination of persons maintaining flights, the title of the book is amended as follows: “The register of the results of medical examination of persons maintaining flights”. Columns 4 - 7 are filled if examination is carried out in the volume of the preflight medical examination.

4. To register medical examination data before going on combat duty, the title of the book is amended as follows: “The register of the results of medical examination of persons going on combat duty”. The reference point for the number of shifts is a regular leave (or its better part). Daily duty is not divided into day and night duties.

5. To register the data of medical examination of persons performing parachute jumps, the title of the book is amended as follows: “The register of the results of pre-jump ( between-jump, post-jump) medical examination”.

6. To register medical examination data during training ejections, the title of the book is amended as follows: “The register of results of medical examination of aviation personnel during training ejections”. Column 2 is amended as follows: “Military rank, surname, initials. The number of ejections. The amount of overload.” The number of ejections is counted on an accrual basis.

7. To register the data of medical examination of aviation personnel in the process of special studies and training, the title of the book is amended as follows: “The register of the results of medical examination of aviation personnel during special studies and training”.

Appendix 3
to the Rules for aeromedical safety
of state aviation of the
Republic of Kazakhstan
Form

**Register of values of psychophysiological indicators of pilots (cadets) at the basic flight phases**

Military rank _____ Surname, initials _____, birth year _____. Qualification_____ Total flying time: on planes _____ _, on simulators_____

Date _____, total training time _____

| Item № | Indicator | Background | Baseline | Flight phases | | | | | | | | After the flight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Takeoff | Climb | Level flying | Target interception | Bank turn | Descent | Passage of AS beacon | Passage of YO beacon | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1. | Pulse rate | | | | | | | | | | | |
| 2. | Volume of pulmonary ventilation | | | | | | | | | | | |
| 3. | Breathing rate | | | | | | | | | | | |
| 4. | Residual attention | | | | | | | | | | | |
| 5. | Tension index | | | | | | | | | | | |
| 6. | Psychophysiological conclusion | | | | | | | | | | | |
| 7. | Instructor rating | | | | | | | | | | | |
| 8. | Overall rating | | | | | | | | | | | |
| 9. | Recommendations | | | | | | | | | | | |

Instructor _____

Physician _____

Appendix 4
to the Rules for aeromedical safety
of state aviation of the
Republic of Kazakhstan

Form

## Register of special studies and trainings of aviation personnel

Military unit _____

| Item № | Military rank. Surname, initials. Specialty | Goal of special studies and trainings | Description of study, training | Protective equipment used ( type, serial number, size) | Opinion |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |

Annex 5 to the Rules for
Medical Support of Flights of State
Aviation of the Republic of Kazakhstan
Document form
Table 1

## Aviation accidents and incidents investigated by aviation unit health service for ___ quarter (year)

Footnote. Annex 5 - as reworded by Order № 510 of the Minister of Defence of the Republic of Kazakhstan dated 05.08.2021 (shall enter into force ten calendar days after the date of its first official publication).

| № in seq. | Causes | Number of cases |
|---|---|---|
| 1 | 2 | 3 |
| 1. | Execution of flights, total: | |
| | in painful condition; | |
| | after a violation of the pre-flight rest and recreation regime; | |
| | after a pre-flight dietary disruption; | |
| | without protective equipment suitable for the conditions of flight; | |
| | without medical permit; | |
| | after drinking alcohol (the day before or the day of the flight); | |
| | with an expired medical-flight commission report; | |
| | with excess flying hours per flight shift | |
| 2. | Flight management, total: | |
| | in a sick state; | |
| | after a violation of the pre-flight rest and recreation regime; | |
| | after a pre-flight dietary disruption; | |
| | without medical permit; | |
| | after drinking alcohol (the day before or the day of the flight); | |
| | | |

| | | |
|---|---|---|
| | with an expired medical-flight commission report | |
| 3. | The effects of flight factors on the pilot's (crew's) body: | |
| | hypoxia | |
| | overload (piloting); | |
| | motion sickness; | |
| | barometric pressure fluctuations; | |
| | explosive decompression | |
| 4. | Effects on the pilot's (crew's) body of unfavourable hygienic conditions in the cockpit of an aircraft: | |
| | ingress of foreign matter into the cabin air; | |
| | ingress of foreign matter into the oxygen; | |
| | unfavourable cabin temperature conditions | |
| 5. | Incorrect use and malfunctions in safety equipment and gear | |
| 6. | Deficiencies in medical support for flights | |
| 7. | Illusions that have made flying difficult | |
| 8. | Loss of spatial awareness by the pilot (crew) | |
| 9. | Other cases | |
| 10. | Total | |

Note:

1. Data shall be presented as a fraction: the numerator shall be the total number, the denominator shall be the number of cases due to reduced capacity for work.

2. "Other cases" shall include aviation accidents and incidents that do not relate to other items in this table. These occurrences shall be briefly explained in the text.

Document form

Table 2

**Activities of the aviation unit medical service to prevent air accidents and incidents per ___ quarter (year)**

| № in seq. | Measures | Number of cases |
|---|---|---|
| 1 | 2 | 3 |
| 1. | Suspended from flying at the pre-flight health check, total: | |
| | in a state of illness; | |
| | | |

| | | |
|---|---|---|
| | who have violated the pre-flight rest and recreation regime; | |
| | who have violated pre-flight eating habits; | |
| | after consuming alcohol; | |
| | with signs of fatigue, overwork; | |
| | due to a break between leaves of absence of more than 12 months | |
| 2. | Suspended from directing flights at pre-flight health checks, total: | |
| | in a state of illness; | |
| | who have violated the pre-flight rest and recreation regime; | |
| | who have violated pre-flight eating habits; | |
| | after consuming alcohol; | |
| | with signs of fatigue, overwork; | |
| | due to a break between leaves of absence of more than 12 months | |
| 3. | Removed from flight support of engineering personnel on medical interrogation (examination), total: | |
| 4. | The total number of deficiencies in flight preparation and support that adversely affected the physical or emotional/psychological condition of aviation personnel was eliminated: | |
| | deficiencies in catering arrangements ; | |
| | inadequate airfield recreational facilities; | |
| | excessive flight load; | |
| | insufficient breaks between flights; | |
| | mental trauma; | |
| | conflictual work situations; | |
| | conflicting family and domestic situations; | |
| | shortcomings in transportation of aviation personnel | |
| 5. | Faults in the safety equipment are detected: | |
| | during pre-flight training; | |
| | during pre-flight training | |
| 6. | Prevented the use of substandard medical oxygen | |
| 7. | Other measures | |
| | | |

| | | |
|---|---|---|
| 8. | Total | |

Note:

1. Data in paragraph 1 shall be given as a fraction: the numerator shall be the total number of aircrew suspended, the denominator shall be the number of aircrew members overflown.

2. The report shall contain diagnoses of all diseases diagnosed during pre-flight inspections that have caused the suspension of aviation personnel from flying (flight management).

3. The “Other Activities” shall refer to the activities of the aviation unit medical service in preventing air accidents and incidents, those not related to other items in this table. These activities shall be briefly explained in the text.