



# Rescuer readiness before, during and after an accident



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Emergency rescue is the main type of professional activity of the rescuers.



In the process of these works, rescuers are exposed to damaging and stressful factors.





The content of the work, the decision speed, the complexity of the technical means used and other specific factors arising in an emergency situation, are define high requirements for the level of knowledge, skills, and psychological characteristics of the rescuers.



The daily schedule of the professional rescue service usually includes various types of occupations, maintenance of technical equipment and rescue tools, theoretical and practical lessons in classroom, sports training and open-air grounds training.





At the alarm signal, which is the start of rescuers' professional duties, personnel wear special clothing and equipment, open the gates of garages, load rescue tools, drivers start the car engines and everybody takes its own place in cars according to their duties in team.



The alarm is always sudden. It catches rescuers during training sessions, rest, eating, etc.

These abruptnesses, lack of time, uncertainty of the upcoming situation (due to the lack of sufficient information about the emergency situation) cause the rescuers to emotional stress, which is rapidly growing.





Upon arrival at the emergency site, it takes place the inquiry of the disaster center and preparing for functional responsibilities.

Further, the personnel perform their functions in accordance with their place in a team and execute the orders of the immediate leaders. At this stage, rescuers are exposed to a large number of stress factors.



The need for quick decision-making in a constantly changing dangerous situation and great responsibility for its correctness.

This is due to the task as soon as it possible to save people and material values, as well as rescuer's consciousness the price of a mistake, that can lead to unjustified human losses.





The stress effects can be perceived differently by each rescuer, but in their entirety, as a rule, it causes temporary stress.

The professional activities of rescuers, being collective in its essence, imply the provision of mutual assistance, replaceability, and the ability to rescue in time.



After the accident elimination it comes a stage covering the period from the end of the liquidation to the readiness to overcome the new emergency.

It includes getting in order the equipment, rescue tools, personal protective equipment, as well as analysis of rescuers' actions in the past emergency situation. Then it comes again the stage of training.

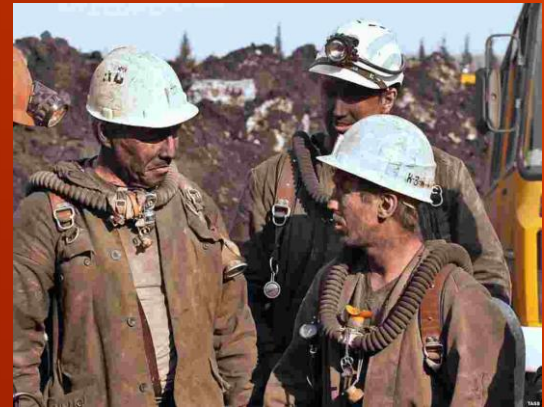




The rescuer must be on constant alert; he does not have the ability to plan his activities, he cannot know whether an emergency will happen in a certain time, as well as its character and scale.



Different people endure long time wakefulness in different ways, and sleep deprivation can lead some of them to long-term disorders of the entire sleep-wake cycle, that has negatively affect to the psycho-emotional state.







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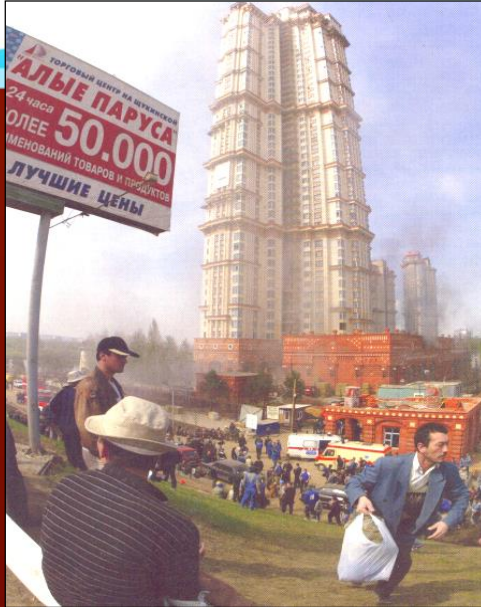


## The key requirements for personal qualities:

- quick adaptation to emergency ambiance;
- resistance to the influence of stressful factors of an emergency;
- ability to make a quick decisions in the context of lack of information or time for its comprehension;
- ability to perform the rescue operations for a long time and even using the personal protective equipment;
- resistance to extreme physical and psychological tension;
- efficient and trouble-free operation of technical equipment and rescue tools;
- effective interaction and mutual replaceability during the rescue operations.



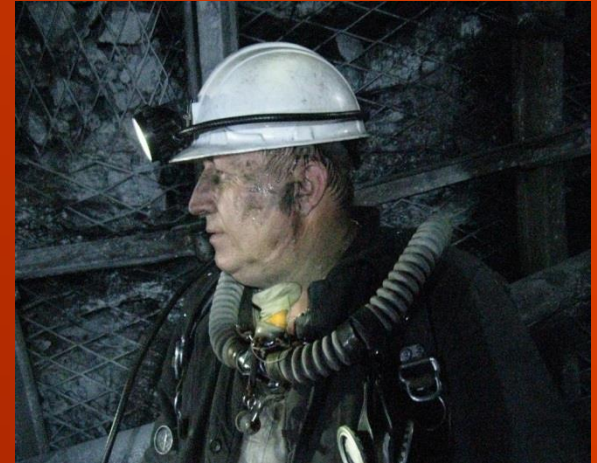
World wide experience in the elimination of major emergencies has shown that it have been many cases in which the individual personal qualities of rescuers did not meet the specified requirements.





Rescuers were unable to perform emergency rescue operations in conditions of extreme physical exertion.

Their behavior depended on the effects of traumatic factors. As a result, working capacity was decreased.





The Committee for Emergency Situations of the Ministry of Internal Affairs of the Republic of Kazakhstan conducted a series of studies to determine the professionally important qualities of rescuers.

It was studied the mechanisms of the negative influence of working conditions to the professional activity of rescuers and was identified human qualities that could avoid or minimize this influence.







**The structure of professional important qualities of rescuers, which are divided into five groups:**

- psychological;
- medical (physiological);
- ergonomic;
- socio-psychological;
- engineering and psychological.





## PSYCHOLOGICAL QUALITIES

The psychological group includes such qualities as **attention**, **memory**, **intellection**, **will** and **self-attitude**.



Attention

Memory

Intellection

Will

Self-attitude

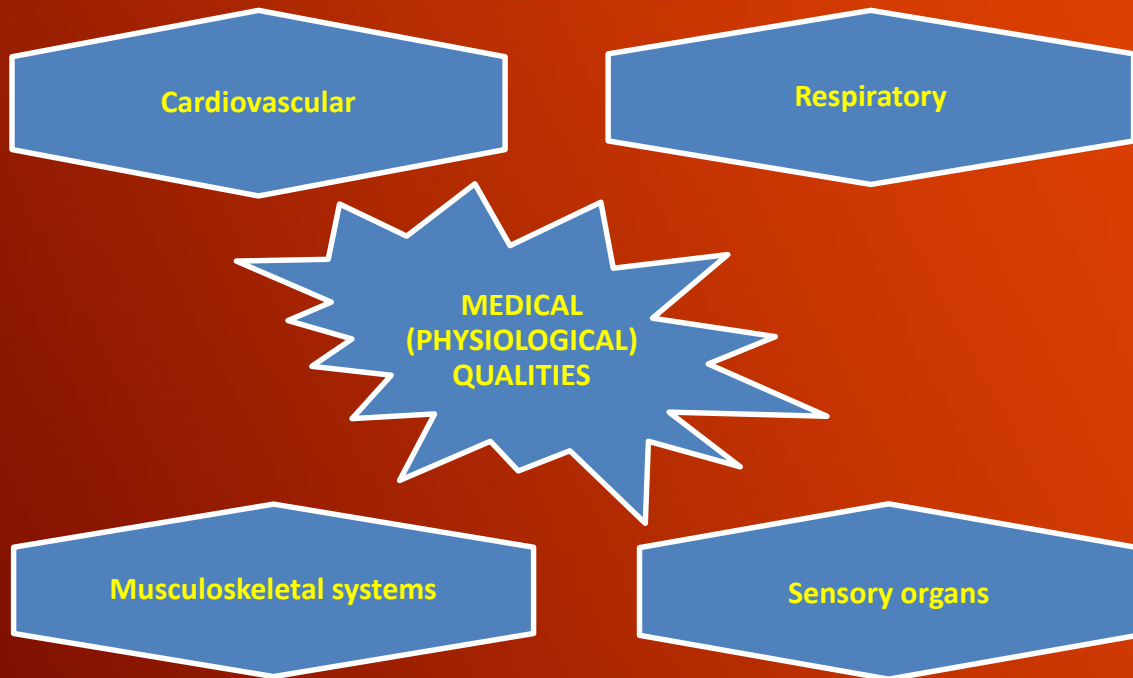




## MEDICAL (PHYSIOLOGICAL) QUALITIES

The medical (physiological) group of professionally important qualities in general characterizes the degree of compliance the capabilities of rescuer's body with the content and conditions of emergency rescue operations.

In addition, the assessment of these group qualities makes it possible to identify the pathologies of the rescuers that prevent them from performing their professional duties in an emergency situation.





## ERGONOMIC QUALITIES

The professionally important qualities of the rescuers depend on effectiveness, high level and reliability of equipment work.

These include:

- central nervous system condition;
- monotone resistance;
- impulsiveness (reflexivity).



### ERGONOMIC QUALITIES

Central nervous system  
condition

Monotone resistance

Impulsiveness  
(reflexivity)





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## **SOCIALLY PSYCHOLOGICAL QUALITIES**

The main qualities of this group for the rescuers are so-called cognitive style, sociability and empathy.

**SOCIALLY  
PSYCHOLOGICAL  
QUALITIES**

Cognitive style

Sociability

Empathy



## ENGINEERING AND PSYCHOLOGICAL QUALITIES

The status of the musculoskeletal system and the level of self-control are referred to this group of professionally important qualities for rescuers.

The first of them is determined by such characteristics as coordination of movements, speed and accuracy of motor reactions, tremor (trembling of the body limb).

### ENGINEERING AND PSYCHOLOGICAL QUALITIES

**Musculoskeletal system**  
(coordination of movements, speed and accuracy of motor reactions, tremor (trembling of the body limb)).

The tremor is unacceptable



The primary assessment of the professional important qualities of rescuers should be carried out during the initial selection at the recruitment stage for emergency services and formations.



**THANKS FOR YOUR  
ATTENTION!**



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