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**NATIONAL OCCUPATIONAL HEALTH STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GBZ 41-2019

Diagnosis of occupational heat illness

职业性中暑的诊断

(English Translation)

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Foreword

Chapters 4 and 5 of this standard are mandatory and the rest are recommended.

This standard is formulated in accordance with the Law of the People's Republic this standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GBZ 41-2002 "Diagnostic Standards for Occupational Heatstroke".

Compared with GBZ 41-2002, the main changes are as follows.

- Revised the diagnostic principles;
- deleted the diagnostic rating;
- Revised the description of heatstroke, enthusiasm, heat exhaustion, and heat stroke;
- Adjusted the content of the processing principles;
- Revised the contents of Appendix A.

This standard was drafted. Xinjiang Uygur Autonomous Region Occupational Disease Hospital, Tongji University Affiliated Shanghai Pulmonary Hospital, Jiangsu Provincial People's Hospital, Chongqing Occupational Disease Prevention and Control Institute, Hubei Provincial Center for Disease Control and Prevention, Wuhan Occupational Disease Prevention and Treatment Institute.

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The previous versions of the standards replaced by this standard are.

--GB 11508-1989;

--GBZ 41-2002.

Diagnosis of occupational heat stroke

1 Scope

This standard specifies the principles of diagnosis and treatment of occupational heat stroke.

This standard applies to the diagnosis and treatment of occupational heat stroke.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the dated version applies to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 16180 Labor ability appraisal employee injury and occupational disease disability level

3 Diagnostic principles

According to the occupational history of high temperature operation, clinical manifestations of elevated body temperature, tendon, syncope, hypotension, oliguria, and disturbance of consciousness appear.

Performance, combined with the results of auxiliary examinations, refer to workplace occupational hygiene survey data, comprehensive analysis, and exclude similar diseases caused by other causes Only when you are sick can you diagnose.

4 Heat shock aura

After working for a certain period of time in a high temperature working environment, dizziness, headache, fatigue, thirst, sweating, palpitations, inattention, Symptoms such as uncoordinated movements, normal or slightly elevated body temperature but less than 38.0 °C, may be accompanied by flushing, skin burning, etc., short break the symptoms will disappear.

5.1 Hot ??

Engage in physical or physical activity in a high-temperature working environment, with a short, intermittent onset of tendon after a large amount of sweating, accompanied by contraction Pain, more common in the muscles of the limbs, masticatory muscles and abdominal muscles, especially the gastrocnemius muscle, symmetry; body temperature is generally normal.

5.2 Heat exhaustion

Engaged in physical labor or physical activity in a high-temperature working environment, a group of clinical syndromes characterized by insufficient blood volume, such as hyperhidrosis, the skin is damp, pale, nausea, dizziness, increased heart rate, hypotension, oliguria, and often elevated body temperature but not exceeding 40 °C.

There are dizziness, syncope, and some patients only have elevated body temperature in the early stage. Laboratory tests showed increased hematocrit, hypernatremia, and azotemia.

5.3 Heatstroke (including sunstroke)

In the high-temperature working environment, physical exertion or physical activity occurs, and clinical manifestations such as obvious increase in body temperature and disturbance of consciousness appear.

Now the skin is dry and hot, no sweat, body temperature up to 40 °C and above, convulsions, coma, etc.; may be associated with systemic epileptic seizures, rhabdomyolysis, Multiple organ dysfunction syndrome.

6.1 Principles of treatment

6.1.1

Heatstroke Aura. Immediately leave the high temperature environment, rest in the cool and ventilated place, lying down. Salt-containing refreshing drinks and symptomatic treatment, and dense Cut and observe.

6.1.2

enthusiasm. correct water and electrolyte disorders and symptomatic treatment.

6.1.3

Heat exhaustion. physical cooling and/or drug cooling, and pay attention to monitoring body temperature, correct water and electrolyte disorders, expand blood volume, prevent Stop shock.

6.1.4

Heatstroke. rapid cooling, continuous monitoring of body temperature, protection of important organ functions, respiratory cycle support, improvement of microcirculation, correction of coagulation Blood dysfunction, for patients with liver and kidney failure, rhabdomyolysis, early blood purification treatment.

6.2 Other treatment

If labor capacity is required, it shall be handled in accordance with GB/T 16180.

7 Instructions for the correct use of this standard

See Appendix A.

Appendix A

(informative appendix) Instructions for the correct use of this standard A.1 Common heatstroke operations include high temperature, strong radiation operations, such as smelting, furnaces, etc.; high temperature, high humidity operations, such as printing and dyeing, silk, Deep mine operations; summer open-air operations, such as summer construction,, farm labor, sanitation and other outdoor operations; summer high-intensity operations, such as Sports competitions and military training.

A.2 Diagnose occupational heat stroke, should understand the meteorological conditions of the patient's workplace, such as temperature, humidity and/or thermal radiation intensity. Summer dew the daily work site is mainly based on measuring temperature. High-temperature work places refer to all productive heat sources in the workplace, and the heat dissipation is greater than $23 \text{ W}/(\text{m}^3 \cdot \text{h})$ or

$84 \text{ KJ}/(\text{m}^3 \cdot \text{h})$ workshop; or when the outdoor summer outdoor ventilation design calculates the temperature of the temperature in the outdoor area, the workplace the temperature is higher than the outdoor 2°C or above 2°C (including the outdoor operation in the summer ventilation outdoor temperature $\geq 30^\circ\text{C}$ area, excluding the mine Work below). Relative humidity above 80% is high humidity. Thermal radiation mainly refers to infrared rays and a part of visible light. Solar radiation and production Heat sources such as various hot furnaces, open flames, and melted metals in the environment can emit a large amount of radiant heat.

A.3 High temperature operation refers to abnormal meteorological conditions with high temperature, strong thermal radiation or high gas and humidity combined with WBGT index Work that exceeds the specified limits.

A.4 Heat shock aura refers to the symptoms only or the temperature rises below 38.0°C after working for a certain period of time in a high temperature working environment.

No signs of central nervous system, cardiovascular system and water and electrolyte