

ICS 13.100
CCS C 60



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

GBZ 57-2019

**Diagnosis of occupational asthma
(English Translation)**

Issued on: January 30, 2019

Implemented on: July 1, 2019

Issued by: National Health Commission of the PRC

Table of Contents

Foreword...	3
1 Scope...	5
2 Normative references...	5
3 Terms and definitions...	5
4 Diagnostic principles...	6
5 Diagnosis...	6
6 Treatment principles...	7
7 Instructions for the correct use of this Standard...	8

Foreword

Clause 5 of this Standard is mandatory. The rest are recommended.

According to the Code of Occupational Disease Prevention of PRC, this Standard is developed.

This Standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard replaces GBZ 57-2008 "Diagnostic criteria of occupational asthma".

As compared with GBZ 57-2008, the main changes are as follows:

- ADD terms and definitions;
- Expand the definition of occupational asthma and ADD reactive airway dysfunction syndrome;
- REVISE the diagnostic principles;
- REVISE the diagnosis of occupational asthma and delete the grading;
- REVISE part of Appendix A;
- The index of Fractional exhaled nitric oxide is added to the positive reaction standards of job-site bronchial provocation test;
- Delete appendixes "non-specific bronchial provocation test", "exercise challenge test", and "sensitizer-specific IgE antibody detection-enzyme-

labelled fluorescence immunoassay (FEIA)".

Drafting organizations of this Standard: Shanghai Pulmonary Hospital, Tongji University (Shanghai Occupational Disease Prevention and Treatment Hospital), Guangdong Province Hospital for Occupational Disease Prevention and Treatment, The Second Hospital of Heilongjiang Province, West China Fourth Hospital, Sichuan University.

Main drafters of this Standard: Zhang Jingbo, Sun Daoyuan, Chen Jiabin, Zhao Liqiang, Song Li, Yang Huimin, Hu Yinghua.

The previous editions of this Standard were released as follows:

- GB 16377-1996;
- GBZ 57-2002;

Diagnosis of occupational asthma

1 Scope

This Standard specifies the principles of diagnosis and treatment of occupational asthma.

This Standard applies to the diagnosis and treatment of occupational asthma.

2 Normative references

The following documents are indispensable for the application of this document.

For the dated references, only the editions with the dates indicated are applicable to this document. For the undated references, the latest edition (including all the amendments) are applicable to this document.

GB/T 16180 Standard for identify work ability - Gradation of disability caused by work-related injuries and occupational diseases

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Occupational asthma

Chronic inflammatory disease of the airway involving a variety of cells including eosinophils, mast cells, T lymphocytes, neutrophils, smooth muscle cells, airway epithelial cells, and other cellular components, which is caused by contact with certain chemical substances in occupational activities. It is accompanied by variable airflow limitation and airway hyperresponsiveness. Occupational asthma in this Standard includes occupational sensitizer-induced asthma and occupational reactive airway dysfunction syndrome.

3.2 Occupational sensitizer-induced asthma

Chronic inflammatory disease of the airway characterized by intermittent attack of wheezing, shortness of breath, chest tightness, or cough, etc. caused by inhalation of sensitizers in occupational activities, with a period of incubation.

3.3 Occupational reactive airway dysfunction syndrome

Chronic airway neurogenic inflammatory disease with cough, wheezing, and

5.1.7 If 5.1.1+5.1.2+5.1.3 or 5.1.2+5.1.3+5.1.4 or 5.1.1+5.1.2+5.1.5 or 5.1.1+5.1.2+5.1.6 are met, occupational sensitizer-induced asthma can be diagnosed.

5.2 Occupational reactive airway dysfunction syndrome

The following conditions shall be met at the same time:

- a) There is an exact occupational inhalation history of large doses of irritant chemicals in a short period of time;
- b) After contact, mucosal irritation symptoms such as shedding tears, pharyngalgia, cough, etc. appear immediately;
- c) Within 24 h after inhalation, bronchial asthma symptoms appear. The duration of the symptoms is longer than 3 months;
- d) Pulmonary function test shows reversible obstructive ventilation function disturbance or non-specific airway hyperresponsiveness;

e) There is no history of diseases of respiratory system such as chronic bronchitis and chronic obstructive pulmonary disease.

6.1.1 After the diagnosis of occupational asthma is established, the patient shall be removed from the original occupational activity environment as soon as possible, to avoid and prevent the relapse of asthma.

6.1.2 Patients with acute asthma attacks shall be relieved for symptoms as soon as possible, relieved for airflow limitation and hypoxemia. The main pharmacotherapy methods are repeated inhalation of fast-acting beta2 receptor agonists, oral or intravenous glucocorticoids, inhalation of anticholinergic drugs, and intravenous aminophylline, etc. Patients with severe asthma attacks and acute respiratory failure, if necessary, shall be treated with mechanical ventilation.

6.1.3 For long-term therapy of asthma, according to the severity of the disease, an appropriate therapeutic regimen shall be selected. The goal is to achieve and maintain symptom control, maintain normal activity level, and maintain normal pulmonary function as much as possible.

6.2 Other treatment

Appendix A

(Informative)

Instructions for the correct use of this Standard

A.1 Occupational sensitizer or irritant chemical is one of the pathogenic factors of bronchial asthma. Compared with common asthma, occupational sensitizer-induced asthma has no difference in pathological changes, clinical manifestations, pulmonary function changes, therapy, etc. The pathogenesis is mainly sensitizer-induced mechanism, but other mechanisms are often mixed. Respiratory inhalation is the main contact route for occupational sensitizer-induced asthma and the starting position for stimulating the immune response.