

A man works in casting of nonferrous metals and alloys for 12 years. In the air of working area there was registered high content of heavy metals, carbon monoxide, and nitrogen. During periodic health examination the patient presents with asthenovegetative syndrome, sharp pains in the stomach, constipations, pain in the hepatic area. In urine: aminolevulinic acid and coproporphyrin are detected. In blood: reticulocytosis, low hemoglobin level. Such intoxication is caused by:

**A. Lead and lead salts**

B. Tin

C. Carbon monoxide

D. Nitric oxide

E. Zinc

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During assessment of work conditions at the mercury thermometer manufacture, content of mercury vapors in the air of working area is revealed to exceed maximum concentration limit. Specify the main way of mercury penetration into the body:

**A. Respiratory organs**

B. Intact skin

C. Damaged skin

D. Gastrointestinal tract

E. Mucous tunics

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During health assessment of car drivers and police officers on point duty, the physicians detected carboxyhemoglobin in the blood of the patients, weakened reflex responses, disturbed activity of a number of enzymes. Revealed professional health disorders are most likely to be associated with the effect of:

**A. Carbonmonoxide**

B. Sulfurous anhydride

C. Mental stress

D. Aromatic hydrocarbons

E. Nitric oxide

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A 37-year-old man working as a typesetter in a print shop complains of rapid fatigability, paroxysmal attacks of stomachache, weak drooping hands. Examination of neurological status revealed hypotrophy of the forearm muscles. Carporadial reflexes are sharply weakened. Sensitivity is not disturbed. Gums present with dark blue border. What neurological pathology is it?

**A. Lead polyneuropathy**

B. Guillain-Barre syndrome (postinfectious polyneuritis)

C. Shingles

D. Ulnar neuropathy

E. Brachialplexitis

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During the periodic medical examination an assembly fitter (works on soldering details) didn't report any health problems. Closer examination revealed signs of asthenic vegetative syndrome. Blood included red blood cells with basophilic

aggregations and a somewhat higher number of reticulocytes, urine had a high concentration of delta-aminolevulinic acid. The complex of symptoms indicates the initial stage of chronic intoxication with:

**A. Lead**

B. Manganese

C. Mercury

D. Tin

E. Ethanol

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A 37-year-old worker during a fire ended up in the area of high CO concentration. He was delivered to a hospital in unconscious state. Objectively: the skin of his face and hands is crimson. Respiration rate is 20/min. ECG: alterations specific for hypoxic myocardium. Hourly diuresis is 40 ml. Blood test: erythrocytes —  $4,5 \cdot 10^{12}/l$ , Hb — 136 g/l, color index — 0,89, ESR- 3 mm/hour, carboxyhemoglobin — 5%. What criterion allows determining the severity of the patient's condition?

**A. Carboxyhemoglobin concentration**

B. Respiratory disorders

C. ECG results

D. Extent of trophic disorders

E. Development of chronic renal failure

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During assessment of work conditions at the mercury thermometer manufacture, content of mercury vapors in the air of working area is revealed to exceed maximum concentration limit. Specify the main way of mercury penetration into the body:

**A. Respiratory organs**

- B. Intact skin
  - C. Damaged skin
  - D. Gastrointestinal tract
  - E. Mucous tunics
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A 47-year-old man is employed at the weaving workshop, has 15-year-long record of service at this factory; his work conditions are associated with high-frequency and high-intensity noise. During periodical examination he was diagnosed with occupational deafness. What are the grounds for making such a diagnosis?

- A. Audiometry data and hygienic assessment of working environment**
  - B. Record of service at this factory
  - C. Noise characteristic at this factory
  - D. Central nervous system examination results
  - E. Inner ear examination results
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Survey radiograph of a 52-year-old worker of an agglomeration plant (28-yearlong record of service, the concentration of metal dust is 22-37 mg/m<sup>3</sup>) shows mildly pronounced interstitial fibrosis with diffused contrasting well-defined small nodular shadows. The patient has no complaints. Pulmonary function is not compromised. What is the provisional diagnosis?

- A. Siderosis**
  - B. Silicosis
  - C. Anthraco-silicatosi
  - D. Silicatosi
  - E. Anthracosis
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A 39-year-old man, a battery attendant, suddenly developed weakness, loss of appetite, nonlocalized colicky abdominal pains, and nausea. Objectively his skin is

gray; there is pink-gray stripe on his gums; the stomach is soft and sharply painful. Blood test detected erythrocytes with basophilic stippling and anemia. The patient has a history of peptic ulcer disease of the stomach. There is tendency to constipation. What is the most likely provisional diagnosis?

- A. Saturnism (lead poisoning)
- B. Acute appendicitis
- C. Perforation of gastric ulcer
- D. Acute cholecystitis
- E. Chronic alcoholism

During the periodic medical examination an assembly fitter (works on soldering details) didn't report any health problems. Closer examination revealed signs of asthenic-vegetative syndrome. Blood included red blood cells with basophilic aggregations and a somewhat higher number of reticulocytes, urine had a high concentration of delta-aminolevulinic acid. The complex of symptoms indicates the initial stage of chronic intoxication with:

- A. Lead
  - B. Manganese
  - C. Mercury
  - D. Tin
  - E. Ethanol
- 

During assessment of work conditions at the factory manufacturing mercury thermometers, the content of mercury vapors in the air of the working area is revealed to exceed the maximum concentration limit. Specify the main pathway of human body exposure to mercury:

- A. Respiratory organs
- B. Intact skin

- C. Damaged skin
  - D. Gastrointestinal tract
  - E. Mucous tunics
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40-50 minutes after the completion of repair works conducted in a closed garage, with car engine running, the repair workers developed severe headache in the temporal area, nausea, tinnitus, vertigo, etc. These symptoms are characteristic of acute poisoning with:

**A. Carbon monoxide**

- B. Aldehydes
  - C. Organochlorides
  - D. Hydrogen sulfide
  - E. Fluoride
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A 28-year-old man complains of skin rash and itching on the both of his hands. The condition persists for 1,5 years. The exacerbation of his condition he ascribes to the occupational contact with formaldehyde resins. Objectively: lesion foci are symmetrically localized on both hands. Against the background of erythema with blurred margins there are papulae, vesicles, erosions, crusts, and scales. What is the most likely pathology?

**A. Occupational eczema**

- B. Idiopathic eczema
- C. Allergic dermatitis

D. Simple contact dermatitis

E. Erythema multiforme

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A 38-year-old woman has been working as a milker for 15 years. She made an appointment with the doctor due to development of red rashes on her hands, predominantly in the interdigital space. The rashes are weeping, itching, and expanding on her skin. Examination of her hands shows her nail plates to be yellow and brittle. These presentations aggravate during work. Make the provisional diagnosis:

**A. Occupational eczema**

B. Scabies

C. Pemphigus

D. Pyoderma

E. Dermatophytosis

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An electro-gas welding operator working at a machine workshop performs welding and cutting of metal, which is accompanied by intense UV-radiation. His welding station is equipped with efficient mechanical ventilation. What occupational disease is most likely to develop in an electro-gas welding operator?

**A. Photoelectricophthalmia**

B. Heatstroke

C. Vegetative-vascular dystonia

D. Chronic overheating

E. Pneumoconiosis

A 50-year-old man, who works as a polisher at a combine-building factory, addressed the factory's sectorial doctor with complaints of general fatigue, sensations of numbness and pain in his fingers. Objectively: the skin of his fingers is pale. Reaction to pain, tactile and thermal stimuli was revealed to be slightly disrupted. No disruptions can be observed within the other organs and systems. What disorder is most likely?

**A. Pneumatic hammer disease**

B. Multipleneuritis

C. Raynaud's disease

D. Syringomyelia

E. Deforming arthrosis

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A worker, who was involved in firefighting inside the building that stored 2 kg of mercury, has been delivered to a hospital with complaints of emotional expansiveness, palpitations, excessive sweating, body tremor, heart pain. Within one day his condition aggravated. Objectively: the skin is pale and moist. The patient is depressed. Permanent red dermographism, erethism, unstable BP are observed. What drug is the serum in this case?

**A. Unithiol**

B. Atropinesulfate

C. Calciumtetacine

D. Amylnitrite

E. Dipyroxime



An emergency situation at a chemical plant caused acute occupational intoxication. A doctor who revealed the case of acute occupational disease (intoxication) must notify the following authority:

**A. Sanitary and epidemiological station**

B. Plant administration

C. Trade union committee of the plant

D. Medical unit of the plant

E. Ministry of Public Health of Ukraine

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The process of open-cut mining requires drilling and blasting operations, rock and ore excavation, transportation of ore to fragmentation and sorting factories and transportation of barren rock to slag-heaps, road building and maintenance, repair works. What factor of production is most important for miner's health?

**A. High content of dust in the air**

B. High content of explosion gas

C. Vibration

D. Noise

E. Adverse microclimate

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For the last 15 years a 48-year-old patient has been working at the factory producing synthetic resins. Lately he has been complaining of significant general

fatigue, headaches, frequent urination (predominantly during the day), red color of urine. What complication of benzene nitrocompounds poisoning can be suspected?

**A. Malignant tumor of the urinary bladder**

B. Chronic cystitis

C. Chronic prostatitis

D. Acute glomerulonephritis

E. Chronic pyelonephritis