

# MANAGEMENT OF PATIENTS WITH MAIN SYMPTOMS AND SYNDROMES IN OCCUPATIONAL DISEASES

A 35-year-old man complains of cough and shortness of breath during physical exertion. This health condition has been observed for the past 4 years. The patient has been working at a foundry for the last 14 years, where the concentration of quartz dust in the air was 4 times higher than the maximum permissible concentration. Auscultation detected weakened respiration. Chest Xray revealed emphysema and fine macular shadows in all lung fields.

**What is the most likely diagnosis in this case?**

A 35-year-old man complains of cough and shortness of breath during physical exertion. This health condition has been observed for the past 4 years. The patient has been working at a foundry for the last 14 years, where the concentration of quartz dust in the air was 4 times higher than the maximum permissible concentration. Auscultation detected weakened respiration. Chest Xray revealed emphysema and fine macular shadows in all lung fields. What is the most likely diagnosis in this case?

- A. COPD
- B. Chronic bronchitis
- C. Silicosis
- D. Pulmonary tuberculosis
- E. Asbestosis

A. COPD

B. Chronic bronchitis

C. Silicosis

D. Pulmonary tuberculosis

E. Asbestosis

A 30-year-old man, a cable presser, complains of inertness, memory problems, and pain in his limbs. Objectively, he presents with skin pallor, anemia, reticulocytosis, basophilic stippling of erythrocytes, and high levels of porphyrin in urine. **This man has the signs of the following disease:**

A 30-year-old man, a cable presser, complains of inertness, memory problems, and pain in his limbs. Objectively, he presents with skin pallor, anemia, reticulocytosis, basophilic stippling of erythrocytes, and high levels of porphyrin in urine. This man has the signs of the following disease:

- A. Saturnism
- B. Berylliosis
- C. Mercurialism
- D. Asbestosis
- E. Siderosis

A. Saturnism

B. Berylliosis

C. Mercurialism

D. Asbestosis

E. Siderosis

A 45-year-old man, provisionally diagnosed with a transient ischemic attack, was brought by an ambulance from an aniline-producing factory. Objectively, his skin and mucosa are cyanotic. His speech is dysarthric. The man is disoriented in space. His blood test shows the following: erythrocytes —  $4.6 \cdot 10^{12}/L$ , Hb — 143 g/L, color index — 0.9, leukocytes —  $5.6 \cdot 10^9/L$ , Heinz bodies — 14%, reticulocytes — 18%, methemoglobin — 36%, ESR — 5 mm/hour. The patient was diagnosed with a moderately severe acute aniline intoxication. **What antidote agent will be the most effective in this case?**



A 45-year-old man, provisionally diagnosed with a transient ischemic attack, **was brought by an ambulance from an aniline-producing factory.** Objectively, his **skin and mucosa are cyanotic.** His **speech is dysarthric.** **The man is disoriented in space.** His blood test shows the following: erythrocytes —  $4.6 \cdot 10^{12}/L$ , Hb — 143 g/L, color index — 0.9, leukocytes —  $5.6 \cdot 10^9/L$ , **Heinz bodies — 14%,** reticulocytes — 18%, **methemoglobin — 36%,** ESR — 5 mm/hour. The patient was diagnosed with a **moderately severe acute aniline intoxication.** What antidote agent will be the most effective in this case?

- A. Pentacin (Calcium trisodium pentetate)
- B. Desferal (Deferoxamine)
- C. Sodium thiosulfate
- D. Succimer
- E. Methylene blue

A. Pentacin (Calcium trisodium pentetate)

B. Desferal (Deferoxamine)

C. Sodium thiosulfate

D. Succimer

E. Methylene blue

A chemical plant worker was diagnosed with a malignant neoplasm of the urinary bladder during a regular medical examination. This occupational disease is likely to be caused by exposure to a certain industrial toxin. **Name this toxin.**

A chemical plant worker was diagnosed with a malignant neoplasm of the urinary bladder during a regular medical examination. This occupational disease is likely to be caused by exposure to a certain industrial toxin. Name this toxin.

- A. Nickel carbonyl
- B. Vinyl chloride
- C. Benzidine
- D. Asbestos
- E. Arsenic

A. Nickel carbonyl

B. Vinyl chloride

C. Benzidine

D. Asbestos

E. Arsenic

A worker at a workshop that produces car batteries came to a doctor with complaints of nausea, loss of appetite, sharp pain in the abdominal cavity, and constipations. Examination reveals elevated blood pressure, bradycardia, an enlarged liver, pain in the right subcostal region, a grayish-blue stripe on the gums, and gray skin. Complete blood count indicates the presence of erythrocytes with basophilic stippling and reduced hemoglobin levels. Aminolevulinic acid and coproporphyrin were detected in the patient's urine. **What is the most likely provisional diagnosis in this case?**

A worker at a workshop that produces car batteries came to a doctor with complaints of nausea, loss of appetite, sharp pain in the abdominal cavity, and constipations. Examination reveals elevated blood pressure, bradycardia, an enlarged liver, pain in the right subcostal region, a grayish-blue stripe on the gums, and gray skin. Complete blood count indicates the presence of erythrocytes with basophilic stippling and reduced hemoglobin levels. Aminolevulinic acid and coproporphyrin were detected in the patient's urine. What is the most likely provisional diagnosis in this case?

- A. Lead poisoning
- B. Food poisoning
- C. Cadmium poisoning
- D. Mercury poisoning
- E. Aluminum poisoning

A. Lead poisoning

B. Food poisoning

C. Cadmium poisoning

D. Mercury poisoning

E. Aluminum poisoning



Forensic autopsy of the body of a 59-year-old man, who died suddenly at home without signs of violent death, shows pink skin and mucosa, liquid bright-red blood, and bright-red plethoric internal organs. Forensic toxicology blood testing detected 1.44 o/oo of ethanol in the blood and carboxyhemoglobin levels of 55 %. **What is the cause of death in this case?**

Forensic autopsy of the body of a 59-year-old man, who died suddenly at home without signs of violent death, shows pink skin and mucosa, liquid bright-red blood, and bright-red plethoric internal organs. Forensic toxicology blood testing detected 1.44 o/oo of ethanol in the blood and carboxyhemoglobin levels of 55 %. What is the cause of death in this case?

- A. Carbon monoxide poisoning
- B. Alcohol poisoning
- C. Potassium cyanide poisoning
- D. Aniline poisoning
- E. Arsenic poisoning

A. Carbon monoxide poisoning

B. Alcohol poisoning

C. Potassium cyanide poisoning

D. Aniline poisoning

E. Arsenic poisoning

A 54-year-old man was hospitalized with complaints of general weakness, fever of 38.6°C, shortness of breath during significant physical exertion, and frequent nosebleeds. He works in production of plastics, where he comes into contact with aromatic compounds. Objectively, his skin is pale and dry.

Complete blood count shows the following: erythrocytes —  $2.1 \cdot 10^{12}/L$ , Hb — 90 g/L, leukocytes —  $2.2 \cdot 10^9/L$ , eosinophils — 1 %, band neutrophils — 1 %, segmented neutrophils — 75 %, lymphocytes — 20 %, myelocytes — 3 %, platelets —  $30 \cdot 10^9/L$ , ESR — 32 mm/hours. **What is the most likely diagnosis in this case?**

A 54-year-old man was hospitalized with complaints of general weakness, fever of 38.6°C, shortness of breath during significant physical exertion, and frequent nosebleeds. He works in production of plastics, where he comes into contact with aromatic compounds. Objectively, his skin is pale and dry. Complete blood count shows the following: erythrocytes —  $2.1 \cdot 10^{12}/L$ , Hb — 90 g/L, leukocytes —  $2.2 \cdot 10^9/L$ , eosinophils — 1 %, band neutrophils — 1 %, segmented neutrophils — 75 %, lymphocytes — 20 %, myelocytes — 3 %, platelets —  $30 \cdot 10^9/L$ , ESR — 32 mm/hours. What is the most likely diagnosis in this case?

- A. Chronic lead intoxication
- B. Chronic nitrobenzene intoxication
- C. Chronic tetraethyllead intoxication
- D. Chronic benzene intoxication
- E. Chronic aniline intoxication

- A. Chronic lead intoxication
- B. Chronic nitrobenzene intoxication
- C. Chronic tetraethyllead intoxication
- D. Chronic benzene intoxication
- E. Chronic aniline intoxication

During coke production, the concentration of dust in the air of the working area has been for many years exceeding the maximum permissible concentration by 4–8 times. **What disease is most likely to develop among the workers in this industry as a result?**

During coke production, the concentration of dust in the air of the working area has been for many years exceeding the maximum permissible concentration by 4–8 times. What disease is most likely to develop among the workers in this industry as a result?

- A. Siderosis
- B. Anthracosis
- C. Byssinosis
- D. Silicosis
- E. Asbestosis



A. Siderosis

B. Anthracosis

C. Byssinosis

D. Silicosis

E. Asbestosis

During medical examination, a port crane operator complains of dizziness, nausea, a feeling of pressure in his eardrums, tremor, asphyxia, and cough. He works at a high altitude associated with nervous and emotional strain. Additionally, the workers are exposed to vibration (general and local), noise, infrasound, and a microclimate that heats them in summer and cools them in winter. **What factor is the most likely cause of the worker's complaints?**

During medical examination, a port crane operator complains of dizziness, nausea, a feeling of pressure in his eardrums, tremor, asphyxia, and cough. He works at a high altitude associated with nervous and emotional strain. Additionally, the workers are exposed to vibration (general and local), noise, infrasound, and a microclimate that heats them in summer and cools them in winter. What factor is the most likely cause of the worker's complaints?

- A. Infrasound
- B. Noise
- C. Vibration
- D. Strenuous work
- E. Work at a high altitude

A. Infrasound

B. Noise

C. Vibration

D. Strenuous work

E. Work at a high altitude

A 48-year-old farmer was hospitalized with complaints of headache, nausea, wet cough, problematic breathing, impaired vision, excessive sweating, and salivation. He worked in a team that treated gardens with organophosphorus pesticides. In the blood: erythrocytes –  $4.1 \cdot 10^{12}/L$ , Hb – 136 g/L, color index – 0.9, leukocytes –  $13.0 \cdot 10^9/L$ , ESR – 17 mm/hour. He was diagnosed with acute intoxication caused by organophosphorus pesticides. **What is the most important diagnostic criterion of this pathology?**

A 48-year-old **farmer** was hospitalized with complaints of headache, nausea, wet cough, **problematic breathing, impaired vision, excessive sweating, and salivation**. He worked in a team that treated gardens with **organophosphorus pesticides**. In the blood: erythrocytes –  $4.1 \cdot 10^{12}/L$ , Hb – 136 g/L, color index – 0.9, leukocytes –  $13.0 \cdot 10^9/L$ , ESR – 17 mm/hour. He was diagnosed with acute intoxication caused by organophosphorus pesticides. What is the most important diagnostic criterion of this pathology?

- A. Reticulocytosis
- B. Decreased cholinesterase levels
- C. Leukocytosis
- D. Anemia
- E. Thrombocytopenia

A. Reticulocytosis

B. Decreased cholinesterase levels

C. Leukocytosis

D. Anemia

E. Thrombocytopenia

40% of the workers, who polish the art glass, using an abrasive disk, and have a long time of employment, are diagnosed with ulnar neuritis, 21% - with vegetative polyneuritis, and 12% - with vegetomyofascitis of the upper limbs. These pathologies are associated with the following harmful factor:



40% of the workers, who polish the art glass, using an abrasive disk, and have a long time of employment, are diagnosed with ulnar neuritis, 21% - with vegetative polyneuritis, and 12% - with vegetomyofascitis of the upper limbs. These pathologies are associated with the following harmful factor:

- A. Dust
- B. Microclimate
- C. Vibration
- D. Noise
- E. Electromagnetic field

- A. Dust
- B. Microclimate
- C. Vibration
- D. Noise
- E. Electromagnetic field

A 56-year-old woman has been working as a disinfectant for 19 years. She complains of general weakness, nausea, bitter taste in her mouth, heavy sensation in her right subcostal area, and rapid fatigability. Objectively, her body temperature is 37.1 °C, the sclerae are icteric, and the liver is enlarged. Total bilirubin is 40  $\mu\text{mol/L}$ . **What is the likely diagnosis?**

A 56-year-old woman has been working as a disinfectant for 19 years. She complains of general weakness, nausea, bitter taste in her mouth, heavy sensation in her right subcostal area, and rapid fatigability. Objectively, her body temperature is 37.1 °C, the sclerae are icteric, and the liver is enlarged. Total bilirubin is 40  $\mu\text{mol/L}$ . What is the likely diagnosis?

- A. Biliary dyskinesia
- B. Chronic pancreatitis
- C. Chronic cholecystitis
- D. Acute cholecystitis
- E. Occupational toxic hepatitis

- A. Biliary dyskinesia
- B. Chronic pancreatitis
- C. Chronic cholecystitis
- D. Acute cholecystitis
- E. Occupational toxic hepatitis

A 28-year-old man, a teacher, after an emotional stress developed painful muscle spasms in his right hand that occur during writing; now he has to hold the pen between the second and third fingers. He has no problems with typing or writing on the blackboard; no other motor disturbances or neurological pathologies are detected.

**What is the most likely diagnosis?**

A 28-year-old man, a teacher, after an emotional stress developed painful muscle spasms in his right hand that occur during writing; now he has to hold the pen between the second and third fingers. He has no problems with typing or writing on the blackboard; no other motor disturbances or neurological pathologies are detected. What is the most likely diagnosis?

- A. Parkinsonism
- B. Cortical agraphia
- C. Writer's cramp
- D. Neuropathy of the right ulnar nerve
- E. Neuropathy of the right radial nerve

- A. Parkinsonism
- B. Cortical agraphia
- C. Writer's cramp
- D. Neuropathy of the right ulnar nerve
- E. Neuropathy of the right radial nerve



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 astheno-vegetative syndrome, sharp abdominal pains, constipations, pain in the hepatic area. In urine: aminolaevulinic acid and coproporphyrin are detected. In blood: reticulocytosis, low hemoglobin level. **Such intoxication is caused by:**

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 astheno-vegetative syndrome, sharp abdominal pains, constipations, pain in the hepatic area. In urine: aminolaevulinic acid and coproporphyrin are detected. In blood: reticulocytosis, low hemoglobin level. Such intoxication is caused by:

- A. Tin
- B. Nitric oxide
- C. Zinc
- D. Lead and lead salts
- E. Carbon monoxide

- A. Tin
- B. Nitric oxide
- C. Zinc
- D. Lead and lead salts
- E. Carbon monoxide

Employees work in conditions of high dust concentration. Certain chemical (silicon dioxide content) and physical properties of dust aerosols contribute to the development of occupational dust-induced diseases. **What is the main physical property of dust aerosols?**

Employees work in conditions of **high dust concentration**. Certain chemical (**silicon dioxide content**) and physical properties of dust aerosols contribute to the development of occupational dust-induced diseases. What is the main physical property of dust aerosols?

- A. Dispersion
- B. Electric charge
- C. Ionization
- D. Solubility
- E. Magnetization

- A. Dispersion
- B. Electric charge
- C. Ionization
- D. Solubility
- E. Magnetization

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 a pink-gray stripe on his gums; the abdomen 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. Constipations occur each 3-4 days. **What is the most likely provisional diagnosis?**

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 a pink-gray stripe on his gums; the abdomen 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. Constipations occur each 3-4 days. What is the most likely provisional diagnosis?

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



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

A 43-year-old man, a coal-face worker with 15-year-long record of work, complains of cough, thoracic pain, and dyspnea. The cough is mild, usually dry, occurs mostly in the morning. The pain is localized in the interscapular region and aggravates during a deep intake of breath. Dyspnea occurs during physical exertion. Vesicular respiration in the lungs is weakened. Heart sounds are rhythmic, heart rate is 86/min., blood pressure is 135/80 mm Hg. The abdomen is soft and painless. X-ray shows micronodular pulmonary fibrosis. **Make diagnosis:**

A 43-year-old man, a **coal-face worker** with 15-year-long record of work, complains of cough, thoracic pain, and dyspnea. **The cough is mild, usually dry, occurs mostly in the morning.** The pain is localized in the interscapular region and aggravates during a deep intake of breath. Dyspnea occurs during physical exertion. Vesicular respiration in the lungs is weakened. Heart sounds are rhythmic, heart rate is 86/min., blood pressure is 135/80 mm Hg. The abdomen is soft and painless. **X-ray shows micronodular pulmonary fibrosis.** Make diagnosis:

- A. Siderosis
- B. Byssinosis
- C. Carboconiosis
- D. Berylliosis
- E. Metal pneumoconiosis

- A. Siderosis
- B. Byssinosis
- C. Carboconiosis
- D. Berylliosis
- E. Metal pneumoconiosis

A woman has been working as a polisher for a year and a half. Her workstation is equipped with a grinding machine (grinding wheels). She complains of white discoloration of her fingers and toes that appears when she is nervous. Objectively there are no changes in the coloration of the distal segments of her limbs. Grip strength measured with a dynamometer is 25 kg, algesimetry findings are 0.1; 0.3; 0.5. Cold stimulus is extremely positive on the upper and lower limbs. Internal organs are without pathologies. **Make the diagnosis:**

A woman has been working as a polisher for a year and a half. Her workstation is equipped with a grinding machine (grinding wheels). She complains of white discoloration of her fingers and toes that appears when she is nervous. Objectively there are no changes in the coloration of the distal segments of her limbs. Grip strength measured with a dynamometer is 25 kg, algesimetry findings are 0.1; 0.3; 0.5. Cold stimulus is extremely positive on the upper and lower limbs. Internal organs are without pathologies. Make the diagnosis:

- A. Vibration disease
- B. Syringomyelia
- C. Polyneuritis
- D. Raynaud syndrome
- E. Raynaud disease

- A. Vibration disease
- B. Syringomyelia
- C. Polyneuritis
- D. Raynaud syndrome
- E. Raynaud disease

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 the 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 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 the 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. Erythema multiforme
- B. Occupational eczema
- C. Allergic dermatitis
- D. Idiopathic eczema
- E. Simple contact dermatitis

- A. Erythema multiforme
- B. Occupational eczema
- C. Allergic dermatitis
- D. Idiopathic eczema
- E. Simple contact dermatitis

Survey radiograph of a 52-year-old worker of an agglomeration plant (28 years of experience, the concentration of metal dust is 22-37 mg/m<sup>3</sup>) shows mildly pronounced interstitial fibrosis with diffused contrast well-defined small nodular shadows. The patient has no complaints. Pulmonary function is not compromised. **What is the provisional diagnosis?**

Survey radiograph of a 52-year-old worker of an agglomeration plant (28 years of experience, the concentration of metal dust is 22-37 mg/m<sup>3</sup>) shows mildly pronounced interstitial fibrosis with diffused contrast well-defined small nodular shadows. The patient has no complaints. Pulmonary function is not compromised. What is the provisional diagnosis?

- A. Silicosis
- B. Silicatosi
- C. Anthraco-silicatosi
- D. Siderosis
- E. Anthracosis

- A. Silicosis
- B. Silicatosis
- C. Anthraco-silicatosis
- D. Siderosis
- E. Anthracosis

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?**

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. Adverse microclimate
- B. High content of explosion gas
- C. Noise
- D. Vibration
- E. High content of dust in the air

- A. Adverse microclimate
- B. High content of explosion gas
- C. Noise
- D. Vibration
- E. High content of dust in the air



A worker, who was involved in fire fighting 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 worker, who was involved in fire fighting 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. Calcium tetacine
- B. Unithiol
- C. Amyl nitrite
- D. Atropine sulfate
- E. Dipiroxim

- A. Calcium tetacine
- B. Unithiol
- C. Amyl nitrite
- D. Atropine sulfate
- E. Dipiroxim

An employee of a petrol station with 15 years of service record having contact with ethylated gasoline presents with memory impairment, bradycardia, sensation of having a hair in the mouth, skin paresthesia. In this case, one can assume intoxication with the following substance:

An employee of a petrol station with 15 years of service record having contact with ethylated gasoline presents with memory impairment, bradycardia, sensation of having a hair in the mouth, skin paresthesia. In this case, one can assume intoxication with the following substance:

- A. Organophosphates
- B. Tetraethyl lead
- C. Nitrobenzene
- D. Benzene
- E. Lead chloride

A. Organophosphates

B. Tetraethyl lead

C. Nitrobenzene

D. Benzene

E. Lead chloride

A 51-year-old female is a weaving factory worker with 15 years of service record. During a regular preventive examination she complained of frequent headaches, poor sleep, tingling in the heart, irritability, rapid fatigability, hearing impairment. For years, the noise level has exceeded the maximum allowable concentration by 10-15 dB. A year ago, the patient underwent a course of treatment for essential hypertension.

**Specify the most likely diagnosis:**

A 51-year-old female is a **weaving factory worker** with 15 years of service record. During a regular preventive examination she complained of frequent headaches, poor sleep, tingling in the heart, irritability, rapid fatigability, hearing impairment. **For years, the noise level has exceeded the maximum allowable concentration by 10-15 dB.** A year ago, the patient underwent a course of treatment for essential hypertension. Specify the most likely diagnosis:

- A. Neurasthenia
- B. Arteriosclerotic encephalopathy
- C. Essential hypertension
- D. Noise disease
- E. Asthenic-vegetative syndrome



- A. Neurasthenia
- B. Arteriosclerotic encephalopathy
- C. Essential hypertension
- D. Noise disease
- E. Asthenic-vegetative syndrome

Survey radiograph of a 52-year-old worker of an agglomeration plant (28 years of experience, the concentration of metal dust is 22-37 mg/m<sup>3</sup>) shows mildly pronounced interstitial fibrosis with diffused contrast well-defined small nodular shadows. The patient has no complaints. Pulmonary function is not compromised. **What is the provisional diagnosis?**

Survey radiograph of a 52-year-old worker of an agglomeration plant (28 years of experience, the concentration of metal dust is 22-37 mg/m<sup>3</sup>) shows mildly pronounced interstitial fibrosis with diffused contrast well-defined small nodular shadows. The patient has no complaints. Pulmonary function is not compromised. What is the provisional diagnosis?

- A. Siderosis
- B. Anthraco-silicatosis
- C. Silicatosis
- D. Anthracosis
- E. Silicosis

A. Siderosis

B. Anthraco-silicatosis

C. Silicatosis

D. Anthracosis

E. Silicosis

During coal extraction in a mine the concentration of coal dust in the working area is 450 mg/m<sup>3</sup> (MPC is 10 mg/m<sup>3</sup>).

What occupational respiratory disease may develop in miners?

During coal extraction in a mine the concentration of coal dust in the working area is 450 mg/m<sup>3</sup> (MPC is 10 mg/m<sup>3</sup>). What occupational respiratory disease may develop in miners?

- A. Byssinosis
- B. Siderosis
- C. Talcosis
- D. Allergic nasopharyngitis
- E. Anthracosis

- A. Byssinosis
- B. Siderosis
- C. Talcosis
- D. Allergic nasopharyngitis
- E. Anthracosis

A patient is 50 years old, works as a builder with 20 years of service record. He was admitted to the hospital for chest pain, dry cough, minor dyspnea. Objectively: acrocyanosis, asbestos warts on the hands. In lungs - rough respiration, diffuse dry rales. The x-ray picture shows intensification of pulmonary pattern, signs of pulmonary emphysema. **What is the most likely diagnosis?**



A patient is 50 years old, works as a builder with 20 years of service record. He was admitted to the hospital for chest pain, dry cough, minor dyspnea. Objectively: acrocyanosis, asbestos warts on the hands. In lungs - rough respiration, diffuse dry rales. The x-ray picture shows intensification of pulmonary pattern, signs of pulmonary emphysema. What is the most likely diagnosis?

- A. Pneumonia
- B. Asbestosis
- C. Tuberculosis
- D. Chronic obstructive bronchitis
- E. Lung cancer

- A. Pneumonia
- B. Asbestosis
- C. Tuberculosis
- D. Chronic obstructive bronchitis
- E. Lung cancer

After treating a field with pesticides a machine operator presents with great weakness, headache, nausea, vomiting, diarrhea, visual impairment, watery eyes. Objectively: the patient is excited, hypersalivation, hyperhidrosis, muscle fibrillation of tongue and eyelids are observed. Pupils are narrowed, there is tachycardia, lung auscultation reveals moist small and medium bubbling rales. In blood: changed level of cholinesterase activity. **What is the most likely diagnosis?**

After treating a field with pesticides a machine operator presents with great weakness, headache, nausea, vomiting, diarrhea, visual impairment, watery eyes. Objectively: the patient is excited, hypersalivation, hyperhidrosis, muscle fibrillation of tongue and eyelids are observed. Pupils are narrowed, there is tachycardia, lung auscultation reveals moist small and medium bubbling rales. In blood: changed level of cholinesterase activity. What is the most likely diagnosis?

- A. Intoxication with arsenic-containing pesticides
- B. Intoxication with organochlorine pesticides
- C. Intoxication with organophosphorus pesticides
- D. Intoxication with carbamic acid derivatives
- E. Intoxication with organomercurial pesticides

- A. Intoxication with arsenic-containing pesticides
- B. Intoxication with organochlorine pesticides
- C. Intoxication with organophosphorus pesticides
- D. Intoxication with carbamic acid derivatives
- E. Intoxication with organomercurial pesticides

A 52-year-old patient works as a secretary and has 30 year record of service. She complains of spasms in her right hand during working and inability to type and write. Up to 80% of her work involves hand load. The patient has been presenting with these symptoms for 2 years. Objectively: the right hand is tense, there is an increase in muscle tone, attempts to write cause spasms. Examination revealed no pathological changes of CNS. **What is the most likely diagnosis?**

A 52-year-old patient works as a secretary and has 30 year record of service. She complains of spasms in her right hand during working and inability to type and write. Up to 80% of her work involves hand load. The patient has been presenting with these symptoms for 2 years. Objectively: the right hand is tense, there is an increase in muscle tone, attempts to write cause spasms. Examination revealed no pathological changes of CNS. What is the most likely diagnosis?

- A. Chronic manganese intoxication
- B. Hysteric neurosis
- C. Spastic form of coordination neurosis
- D. Neuralgic form of coordination neurosis
- E. Paretic form of coordination neurosis

- A. Chronic manganese intoxication
- B. Hysteric neurosis
- C. Spastic form of coordination neurosis
- D. Neuralgic form of coordination neurosis
- E. Paretic form of coordination neurosis



Workers of a laboratory producing measuring devices (manometers, thermometers etc) complain about a metallic taste in mouth, stomatitis, dyspepsia, sleep disturbance, unsteady walk, abrupt decrease in cardiac activity. **These presentations must have been caused by the intoxication with the following substance:**

Workers of a laboratory producing measuring devices (manometers, thermometers etc) complain about a metallic taste in mouth, stomatitis, dyspepsia, sleep disturbance, unsteady walk, abrupt decrease in cardiac activity. These presentations must have been caused by the intoxication with the following substance:

- A. Lead
- B. Toluol
- C. Tetraethyl lead
- D. Manganese
- E. Mercury

- A. Lead
- B. Toluol
- C. Tetraethyl lead
- D. Manganese
- E. Mercury

A driver had been fixing a car in a closed garage and afterwards complained about headache, dizziness, nausea, muscle asthenia, sleepiness. Objectively: pulse and respiratory rate elevation, excitement, hypertension, delirium of persecution.

**What is the most likely diagnosis?**

A driver had been fixing a car in a closed garage and afterwards complained about headache, dizziness, nausea, muscle asthenia, sleepiness. Objectively: pulse and respiratory rate elevation, excitement, hypertension, delirium of persecution. What is the most likely diagnosis?

- A. Intoxication with ethyl gasoline
- B. Hypertensive crisis
- C. Asthenovegetative syndrome
- D. Intoxication with carbon oxide
- E. Posttraumatic encephalopathy

- A. Intoxication with ethyl gasoline
- B. Hypertensive crisis
- C. Asthenovegetative syndrome
- D. Intoxication with carbon oxide**
- E. Posttraumatic encephalopathy

A 42 year old metalworker has been working at the turning machine for production of heavy large-size parts for 5 years. His work requires using of hand and pedal levers that involves considerable physical force. What means for osteoarthritis prevention should be recommended?

A 42 year old metalworker has been working at the turning machine for production of heavy large-size parts for 5 years. His work requires using of hand and pedal levers that involves considerable physical force. What means for osteoarthritis prevention should be recommended?

- A. To administer protein-and-carbohydrate diet
- B. To limit physical work
- C. To improve health at the Black sea coast
- D. To administer protein-and-vitamin diet
- E. To go in for weightlifting



- A. To administer protein-and-carbohydrate diet
- B. To limit physical work
- C. To improve health at the Black sea coast
- D. To administer protein-and-vitamin diet
- E. To go in for weightlifting

A fitter of a metallurgic factory with occupational exposure to high concentrations of mercury fumes for 16 years presents instability of pulse and blood pressure, general hyperhidrosis, asymmetric innervations of facial muscles and tongue, positive subcortical reflexes, hand tremor on physical examination. A dentist revealed paradontosis and chronic stomatitis. **What is the most probable diagnosis?**

A fitter of a metallurgic factory with occupational exposure to high concentrations of mercury fumes for 16 years presents instability of pulse and blood pressure, general hyperhidrosis, asymmetric innervations of facial muscles and tongue, positive subcortical reflexes, hand tremor on physical examination. A dentist revealed paradontosis and chronic stomatitis. What is the most probable diagnosis?

- A. Neuroinfection
- B. Mercury encephalopathy
- C. Acute mercury intoxication
- D. Parkinson syndrome
- E. Chronic mercury intoxication

- A. Neuroinfection
- B. Mercury encephalopathy
- C. Acute mercury intoxication
- D. Parkinson syndrome
- E. Chronic mercury intoxication

A 48 y.o. farmer was admitted to the hospital with complaints of headache, nausea, vomiting, cough with sputum, breath shortage, weak sight, sweating, salivation. He was cultivated the garden with phospho organic pesticides. Blood count: RBC-  $4,1 \cdot 10^{12}/L$ , Hb- 136 g/L, C.I.- 0,9, leukocytes -  $13,0 \cdot 10^9/L$ , ESR- 17 mm/h. His diagnosis is acute intoxication with phospho organic pesticides. **What is the most important diagnostic criterion for this pathology?**

A 48 y.o. farmer was admitted to the hospital with complaints of headache, nausea, vomiting, cough with sputum, breath shortage, weak sight, sweating, salivation. He was cultivated the garden with phospho organic pesticides. Blood count: RBC-  $4,1 \cdot 10^{12}/L$ , Hb- 136 g/L, C.I.- 0,9, leukocytes -  $13,0 \cdot 10^9/L$ , ESR- 17 mm/h. His diagnosis is acute intoxication with phospho organic pesticides. What is the most important diagnostic criterion for this pathology?

- A. Low level of choline esterase
- B. Thrombocytopenia
- C. Anemia
- D. Leukocytosis
- E. Reticulocytosis

- A. Low level of choline esterase
- B. Thrombocytopenia
- C. Anemia
- D. Leukocytosis
- E. Reticulocytosis