

WD-0214 #14

HANDBOOK  
*of*  
INDUSTRIAL  
TOXICOLOGY

by

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TO NED AND  
WHOSE GENEROSITY  
MADE ALL THE

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ppm of air

l nervous system  
d cells by reduction in glutathione  
s and nephritis  
kidneys

May be delayed up to two days)

• Garlic odor of breath • Numb-  
ling of hands and feet • Nausea,  
al cramping • Abdominal tender-  
• Weakness • Bronzing of skin  
ing) • Pulmonary edema • Jaun-  
egaly • Hematuria, hemoglobin-  
and oliguria • Anemia and leuko-  
blood calcium • Increased blood  
ck • Delirium and coma

tion of T-waves in all leads  
re with normal conduction

ve 0.2 mg/liter

g body weight (but not to exceed  
dose) every 4 hours the first day;  
econd day; then 3 times daily for  
week

ulation in patients with reduced

blood and packed red blood cells

pportive

urs is usually complete

rline respirator

## ARSINE

Periodic examinations of urine should not exceed 0.5–1.0  
mg arsenic/liter of urine

Preclude from exposure those individuals with diseases of  
blood, liver, kidney, and central nervous system

## ASBESTOS

### Synonyms:

Amianthus • Amphibole • Chrysotile • Earth Flax • Impure  
Magnesium-calcium Silicate • Mountain Cork • Serpen-  
tine • Stone Flax • Many mineralogical names

**Description:** Flax-like fibers; fireproof

### Occupational Exposure:

Clutch facings and brake linings

Roofing and insulating materials

Asbestos cloth products, valve packings, gaskets, pipe cover-  
ing

Auto undercoatings

**Threshold Limit Value:** 5 million particles/cu ft of air

### Toxicity:

**ARSORPTION:** Inhalation

### PATHOLOGY:

Asbestos warts, from fibers that penetrate epidermis

Pulmonary interstitial fibrosis via mechanical action  
of long fibers (20–50 microns) in terminal bron-  
chioles

Grade I: Asbestos bodies in alveoli

Grade II: Asbestos bodies • Thickening of alveolar  
walls • Perivascular fibrosis

Grade III: Coarse honey-combing of lungs • Scar-  
ring in upper portions • Thickening of  
Pleura • Adhesions

Benign asbestos pleurisy may occur without other  
significant pulmonary disease

### SIGNS AND SYMPTOMS:

Anorexia • Cough • Dyspnea • Loss of weight • Pallor •  
Weakness • Cyanosis • Clubbed fingers • Decreased  
vital capacity

## ASBESTOS

38

### DIAGNOSTIC TESTS:

Asbestos bodies in sputum

X-ray changes after 10 years or more of exposure:

Stage I: Increased density at both bases with an occasional superimposed granular pattern

Apices clear

Stage II: Decrease in clarity of cardiac silhouette  
Densities extend to the periphery of middle and lower thirds of both lung fields  
—"ground glass appearance"

Accentuation of hilar markings

Stage III: Shadowing of middle and lower thirds of both lung fields

Cardiac shadow obscured—"shaggy heart"

### TREATMENT:

Symptomatic and supportive

### DISABILITY:

Disease ceases to progress on cessation of exposure

Question of cancer not yet answered

### Preventive Measures:

Adequate ventilation · Wet methods · Mechanical filter respirator

Physical examinations of exposed personnel annually, including vital capacity measurements and chest x-rays

Preclude from exposure:

Persons with pulmonary disease

Persons under 40 when diagnosis of asbestosis is definite

Persons in whom disease is progressing, regardless of age

## ASPHALT

### Synonyms:

Asphaltum · Bitumen · Earth Pitch · Mineral Pitch · Petroleum Pitch

**Description:** Brownish-black solid

### Occupational Exposure:

Insulating · Paving · Roofing · Waterproofing · Paints and varnishes · Wood impregnation

39

**Threshold Limit Value:** None

### Toxicity:

ABSORPTION: None

PATHOLOGY: Local irritant

### SIGNS AND SYMPTOMS:

Acne-like lesions and  
Tar melanosis: yellow skin

Irritation of eyes and

**DIAGNOSTIC TESTS:** None

### TREATMENT:

Remove by scraping, o  
Symptomatic and sup

**DISABILITY:** No permanent

### Preventive Measures:

Loose clothing, closed at n

Protective goggles

Personal cleanliness

### Synonyms:

Pyoktaninum laurum · Py-  
aminophenyl) methylene  
zophenonimide

**Description:** Yellow flakes or p

### Occupational Exposure:

Antiseptics · Dyes

**Threshold Limit Value:** None

### Toxicity:

ABSORPTION: Inhalation

### PATHOLOGY:

Sensitizer · Tumors in

### SIGNS AND SYMPTOMS:

Dermatitis and burns ·  
ing · Yellow vision

