Carcinogen List

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List of Known or Anticipated Carcinogens taken from the National Toxicology Program (NTP) and International Agency for Research on Cancer (IARC)

The following is a compilation of chemical substances listed by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP).
This list does not include exposure circumstances (e.g., manufacture of auramine) that are included in NTP and IARC documents.

A
A-alpha-C (2-Amino-9H-pyrido[2,3-b]indole)
Acetaldehyde
Acetamide
2-Acetylaminofluorene
Acrylamide
Acrylonitrile
Adriamycin® (Doxorubicin Hydrochloride)
AF-2 [2-(2-Furyl)-3-(5-nitro-2-furyl)acrylamide]
Aflatoxin M1
Aflatoxins
Alcoholic Beverage Consumption
para-Aminoazobenzene
ortho-Aminoazotoluene
2-Aminoanthraquinone
o-Aminoazotoluene
4-Aminobiphenyl
1-Amino-2,4-dibromoanthraquinone
1-Amino-2-methylanthraquinone
2-Amino-3,4-dimethylimidazo[4,5-f]quinoline (MeIQ)
2-Amino-3,8-dimethylimidazo[4,5-f]quinoxaline (MeIQx)
2-Amino-3-methylimidazo[4,5-f]quinoline (IQ)
2-Amino-1-methyl-6-phenylimidazo[4,5-b]pyridine (PhIP)
2-Amino-5-(5-nitro-2-furyl)-1,3,4-thiadiazole
Amitrole
Amsacrine
Analgesic mixtures containing phenacetin
Androgenic (anabolic) steroids
o-Anisidine Hydrochloride
Antimony trioxide
Aramite®
Auramine
Azaserine
Aziridine
Areca nut
Aristolochic acids (naturally occurring mixtures of)
Arsenic Compounds, Inorganic
Asbestos
Azacitidine (5-Azacytidine®, 5-AzaC)
Azathioprine

B
Benz[a]anthracene (See Polycyclic Aromatic Hydrocarbons)
Benzene
Benzidine (See Benzidine and Dyes Metabolized to Benzidine)

Benzidine-based dyes
Benzo[b]fluoranthene (See Polycyclic Aromatic Hydrocarbons)
Benzo[j]fluoranthene (See Polycyclic Aromatic Hydrocarbons)
Benzo[k]fluoranthene (See Polycyclic Aromatic Hydrocarbons)
Benzofuran
Benzo[a]pyrene (See Polycyclic Aromatic Hydrocarbons)
Benzotrichloride
Benzyl violet 4B
Beryllium and Beryllium Compounds
N,N-Bis(2-chloroethyl)-2-naphthylamine (Chlornaphazine)
Betel quid with tobacco
Betel quid without tobacco
Bitumens
Bleomycins
Bracken fern
2,2-bis-(Bromoethyl)-1,3-propanediol (Technical Grade)
Bromodichloromethane
1,3-Butadiene
1,4-Butanediol Dimethanesulfonate (Myleran®)
Butylated Hydroxyanisole (BHA)
beta-Butyrolactone

C
Cadmium and Cadmium Compounds
Caffeic acid
Captafol
Carbon black
Carbon Tetrachloride
Carrageenan
Catechol
Ceramic Fibers (Respirable Size)
Chlorambucil
Chloramphenicol
Chlordane
Chlordecone (Kepone)
Chlorendic Acid
Chlorinated Paraffins (C12, 60% Chlorine)
alpha-Chlorinated toluenes (benzal chloride, benzotrichloride, benzyl chloride) and benzoyl chloride (combined exposures)
para-Chloroaniline
3-Chloro-4-(dichloromethyl)-5-hydroxy-2(5H)-furanone
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea
1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1-nitrosourea (MeCCNU)
bis(Chloromethyl) Ether and Technical-Grade Chloromethyl Methyl Ether
bis(Chloroethyl) nitrosourea
Chloroform
1-Chloro-2-methylpropene
3-Chloro-2-methylpropene
4-Chloro-ortho-toluidine
4-Chloro-o-phenylenediamine
Chlorophenoxy herbicides
4-Chloro-ortho-phenylenediamine
Chloroprene
Chlorothalonil
p-Chloro-o-toluidine and p-Chloro-o-toluidine Hydrochloride
Chlorozotocin
Chromium Hexavalent Compounds
CI Acid Red 114
CI Basic Red 9 Monohydrochloride
CI Direct Blue 15
Citrus Red No. 2

Cisplatin
Cisplatin Clonorchis sinensis (infection with)
Coal Tar Pitches (See Coal Tars and Coal Tar Pitches)
Coal Tars (See Coal Tars and Coal Tar Pitches)
Cobalt and cobalt compounds
Cobalt Sulfate
Coffee
Coke Oven Emissions
Creosotes (from coal-tars)
p-Cresidine
Cupferron
Cycasin
Cyclophosphamide
Cyclosporin A

D
Dacarbazine
Danthron (1,8-Dihydroxyanthraquinone)
Daunomycin
N,N'-Diacetylbenzidine
2,4-Diaminoanisole Sulfate
4,4'-Diaminodiphenyl ether
2,4-Diaminotoluene
Diazoaminobenzene
Dibenz[a,h]acridine (See Polycyclic Aromatic Hydrocarbons)
Dibenz[a,j]acridine (See Polycyclic Aromatic Hydrocarbons)
Dibenz[a,h]anthracene (See Polycyclic Aromatic Hydrocarbons)
7H-Dibenzo[c,g]carbazole (See Polycyclic Aromatic Hydrocarbons)
Dibenzo[a,e]pyrene (See Polycyclic Aromatic Hydrocarbons)
Dibenzo[a,h]pyrene (See Polycyclic Aromatic Hydrocarbons)
Dibenzo[a,i]pyrene (See Polycyclic Aromatic Hydrocarbons)
Dibenzo[a,l]pyrene (See Polycyclic Aromatic Hydrocarbons)
1,2-Dibromo-3-chloropropane
1,2-Dibromoethane (Ethylene Dibromide)
2,3-Dibromo-1-propanol
tris(2,3-Dibromopropyl) Phosphate
Dichloroacetic acid
para-Dichlorobenzene
1,4-Dichlorobenzene
3,3´-Dichlorobenzidine and 3,3´-Dichlorobenzidine Dihydrochloride
3,3'-Dichloro-4,4'-diaminodiphenyl ether
Dichlorodiphenyltrichloroethane (DDT)
1,2-Dichloroethane (Ethylene Dichloride)
Dichloromethane (Methylene Chloride)
1,3-Dichloropropene (Technical Grade)
Dichlorvos
Diepoxybutane
1,2-Diethylhydrazine
Diesel Exhaust Particulates
Diethyl Sulfate
Diethylstilbestrol
Diglycidyl Resorcinol Ether
Dihydrosafrole
Diisopropyl sulfate
4-Dimethylaminoazobenzene
trans-2-[(Dimethylamino)methylimino]-5-[2-(5-nitro-2-furyl)-vinyl]-1,3,4-oxadiazole
2,6-Dimethylaniline (2,6-Xylidine)
3,3´-Dimethylbenzidine (See 3,3´-Dimethylbenzidine and Dyes Metabolized to 3,3´-Dimethylbenzidine)
Dimethylcarbamoyl Chloride
3,3´-Dimethoxybenzidine (See 3,3´-Dimethoxybenzidine and Dyes Metabolized to 3,3´-Dimethoxybenzidine)

1,1-Dimethylhydrazine
1,1-Dimethylhydrazine
1,2-Dimethylhydrazine
Dimethyl Sulfate
Dimethylvinyl Chloride
3,7-Dinitrofluoranthene
3,9-Dinitrofluoranthene
1,6-Dinitropyrene (See Nitroarenes (selected))
1,8-Dinitropyrene (See Nitroarenes (selected))
2,4-Dinitrotoluene
2,6-Dinitrotoluene
1,4-Dioxane
Disperse Blue 1
Dyes Metabolized to Benzidine (See Benzidine and Dyes Metabolized to Benzidine)
Dyes Metabolized to 3,3´-Dimethoxybenzidine (See 3,3´-Dimethoxybenzidine and Dyes Metabolized to 3,3´-Dimethoxybenzidine)
Dyes Metabolized to 3,3´-Dimethylbenzidine (See 3,3´-Dimethylbenzidine and Dyes Metabolized to 3,3´-Dimethylbenzidine)

E
Epichlorohydrin
Engine exhaust, gasoline
Environmental Tobacco Smoke (See Tobacco Related Exposures)
1,2-Epoxybutane
Epstein-Barr virus
Erionite
Estrogens, Steroidal
Ethyl acrylate
Ethylbenzene
Ethylene dibromide
Ethylene Oxide
N-Ethyl-N-nitrosourea
Etoposide in combination with cisplatin and bleomycin
Ethylene Thiourea
di(2-Ethylhexyl) Phthalate
Ethyl Methanesulfonate

F
Foreign bodies, implanted in tissues (Vol. 74; 1999)
Polymeric, prepared as thin smooth films (with the exception of poly(glycolic acid))
Metallic, prepared as thin smooth films
Metallic cobalt, metallic nickel and an alloy powder containing 66-67% nickel, 13-16% chromium and 7% iron
Formaldehyde (Gas)
2-(2-Formylhydrazino)-4-(5-nitro-2-furyl)thiazole
Fuel oils, residual (heavy)
Fumonisin B1
Furan

G
Gallium arsenide
Gasoline
Glass Wool (Respirable Size)
Glu-P-1 (2-Amino-6-methyldipyrido[1,2-a:3',2'-d]imidazole)
Glu-P-2 (2-Aminodipyrido[1,2-a:3',2'-d]imidazole)
Glycidaldehyde
Glycidol
Griseofulvin

H

HC Blue No. 1
Helicobacter pylori (infection with)
Heptachlor
Hepatitis B Virus
Hepatitis C Virus
Herbal remedies containing plant species of the genus Aristolochia
Hexachlorobenzene
Hexachlorocyclohexane Isomers (See Lindane and Other Hexachlorocyclohexane Isomers)
Hexachloroethane
Hexamethylphosphoramide
Hot mate
Hydrazine and Hydrazine Sulfate
Hydrazobenzene
Human immunodeficiency virus type 1 (infection with)
Human immunodeficiency virus type 2 (infection with)
Human Papillomas Viruses: Some Genital-Mucosal Types
Human papillomaviruses: some types other than 16, 18, 31 and 33
1-Hydroxyanthraquinone

I
Indeno[1,2,3-cd]pyrene (See Polycyclic Aromatic Hydrocarbons)
Indium phosphide IQ (2-Amino-3-methylimidazo[4,5-f]quinoline)
Iron Dextran Complex
Isoprene

K
Kaposi's sarcoma herpesvirus/human herpesvirus 8 (Vol. 70; 1997)
Kepone® (Chlordecone)

L
Lasiocarpine
Lead and Lead Compounds
Lindane and Other Hexachlorocyclohexane Isomers

M
Magenta (containing CI Basic Red 9)
Magnetic fields (extremely low-frequency)
MeA-?-C (2-Amino-3-methyl-9H-pyrido[2,3-b]indole)
Medroxyprogesterone acetate
MeIQ (2-Amino-3,4-dimethylimidazo[4,5-f]quinoline)
MeIQx (2-Amino-3,8-dimethylimidazo[4,5-f]quinoxaline)
Melphalan
Merphalan
5-Methoxypsoralen
8-Methoxypsoralen (Methoxsalen) plus ultraviolet A radiation
Methoxsalen with Ultraviolet A Therapy (PUVA)
2-Methylaziridine (Propylenimine)
Methylazoxymethanol acetate
5-Methylchrysene (See Polycyclic Aromatic Hydrocarbons)
4,4′-Methylenebis(2-chloroaniline)
4-4′-Methylenebis(N,N-dimethyl)benzenamine
4,4'-Methylene bis(2-methylaniline)
4,4′-Methylenedianiline and Its Dihydrochloride Salt
Methyleugenol
Methyl Methanesulfonate
Methylmercury compounds
2-Methyl-1-nitroanthraquinone
N-Methyl-N′-nitro-N-nitrosoguanidine
N-Methyl-N-nitrosourea
N-Methyl-N-nitrosourethane

Nitrogen mustard
N-Nitrosodiethylamine
Methylthiouracil
Metronidazole
Michler´s Ketone [4,4´-(Dimethylamino)benzophenone]
Mineral Oils (Untreated and Mildly Treated)
Mirex
Mitomycin C
Mitoxantrone
Monocrotaline
MOPP and other combined chemotherapy including alkylating agents
5-(Morpholinomethyl)-3-[(5-nitrofurfurylidene)amino]-2-oxazolidinone
Mustard Gas

N
Nafenopin
Naphthalene
2-Naphthylamine
Neutrons (See Ionizing Radiation)
Nickel Compounds (See Nickel Compounds and Metallic Nickel)
Niridazole
Nitrilotriacetic Acid
5-Nitroacenaphthene
2-Nitroanisole
o-Nitroanisole
Nitrobenzene
6-Nitrochrysene (See Nitroarenes (selected))
Nitrofen (2,4-Dichlorophenyl-p-nitrophenyl ether)
2-Nitrofluorene
1-[(5-Nitrofurfurylidene)amino]-2-imidazolidinone
N-[4-(5-Nitro-2-furyl)-2-thiazolyl]acetamide
Nitrogen Mustard Hydrochloride
Nitrogen mustard N-oxide
Nitromethane
2-Nitropropane
1-Nitropyrene (See Nitroarenes (selected))
4-Nitropyrene (See Nitroarenes (selected))
N-Nitrosodi-n-butylamine
N-Nitrosodiethanolamine
N-Nitrosodiethylamine
N-Nitrosodimethylamine
N-Nitrosodi-n-propylamine
N-Nitroso-N-ethylurea
4-(N-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone
3-(N-Nitrosomethylamino)propionitrile
N-Nitrosomethylethylamine
N-Nitroso-N-methylurea
N-Nitrosomethylvinylamine
N-Nitrosomorpholine
N-Nitrosonornicotine
N-Nitrosopiperidine
N-Nitrosopyrrolidine
N-Nitrososarcosine
Non-arsenical insecticides (occupational exposures in spraying and application of)
Norethisterone

O
Ochratoxin A
Oestrogen therapy, postmenopausal
Oestrogens, nonsteroidal (NB: This evaluation applies to the group of compounds as a whole and not necessarily to all individual compounds within the group)

Oestrogens, steroidal (NB: This evaluation applies to the group of compounds as a whole and not necessarily to all individual compounds within the group)
Oil Orange SS
Opisthorchis viverrini (infection with)
Oral contraceptives, combined (NB: There is also conclusive evidence that these agents have a protective effect against cancers of the ovary and endometrium)
Oral contraceptives, sequential
Oxazepam
4,4′-Oxydianiline
Oxymetholone

P
Palygorskite (attapulgite)
Panfuran S
Phenacetin (See Phenacetin and Analgesic Mixtures Containing Phenacetin)
Phenazopyridine Hydrochloride
Phenobarbital
Phenolphthalein
Phenoxybenzamine Hydrochloride
Phenyl glycidyl ether
Phenytoin
PhIP (2-Amino-1-methyl-6-phenylimidazo[4,5-b]pyridine)
Phosphorus-32, as phosphate
Pickled vegetables (traditional in Asia)
Plutonium-239 and its decay products (may contain plutonium-240 and other isotopes), as aerosols
Polybrominated Biphenyls (PBBs)
Polychlorinated Biphenyls (PCBs)
Polychlorophenols and their sodium salts (mixed exposures)
Polycyclic Aromatic Hydrocarbons (PAHs)
Ponceau MX
Ponceau 3R
Potassium bromate
Procarbazine Hydrochloride
Progesterone
Progestins
1,3-Propane Sultone
beta-Propiolactone
Propylene Oxide
Propylthiouracil

R
Radioiodines, short-lived isotopes, including iodine-131, from atomic reactor accidents and nuclear weapons detonation (exposure during childhood)
Radionuclides, a-particle-emitting, internally deposited (NB: Specific radionuclides for which there is sufficient evidence for carcinogenicity to humans are also listed individually as Group 1 agents)
Radionuclides, b-particle-emitting, internally deposited (NB: Specific radionuclides for which there is sufficient evidence for carcinogenicity to humans are also listed individually as Group 1 agents)
Radium-224 and its decay products
Radium-226 and its decay products
Radium-228 and its decay products
Radon-222 [10043-92-2] and its decay products
Radon (See Ionizing Radiation)
Refractory ceramic fibres
Riddelliine
Reserpine

S
Safrole
Salted fish (Chinese-style)
Schistosoma haematobium (infection with)

Schistosoma japonicum (infection with)
Selenium Sulfide
Shale-oils
Silica, Crystalline (Respirable Size)
Smokeless Tobacco (See Tobacco Related Exposures)
Sodium ortho-phenylphenate
Solar Radiation (See Ultraviolet Radiation Related Exposures)
Soots
Special-purpose fibres such as E-glass and '475' glass fibres
Sterigmatocystin
Streptozotocin
Styrene
Strong Inorganic Acid Mists Containing Sulfuric Acid
Styrene-7,8-oxide
Sulfallate
Sunlamps or Sunbeds, Exposure to (See Ultraviolet Radiation Related Exposures)

T
Talc containing asbestiform fibres
Tamoxifen
Toxaphene (Polychlorinated camphenes)
Teniposide
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD); “Dioxin”
Tetrachloroethylene (Perchloroethylene)
Tetrafluoroethylene
Tetranitromethane
Thioacetamide
4,4´-Thiodianaline
Thiotepa
Thiouracil
Thiourea
Thorium Dioxide (See Ionizing Radiation)
Toluene Diisocyanate
o-Toluidine and o-Toluidine Hydrochloride
Toxaphene
Toxins derived from Fusarium moniliforme
Treosulfan
Trichloroethylene
Trichlormethine (Trimustine hydrochloride)
2,4,6-Trichlorophenol
1,2,3-Trichloropropan
Tris(2,3-dibromopropyl) phosphate
Trp-P-1 (3-Amino-1,4-dimethyl-5H-pyrido[4,3-b]indole)[62450-06-0]
Trp-P-2 (3-Amino-1-methyl-5H-pyrido[4,3-b]indole)[62450-07-1]
Trypan blue
Tobacco Smoking (See Tobacco Related Exposures)

U
Uracil mustard
Ultraviolet A Radiation (See Ultraviolet Radiation Related Exposure)
Ultraviolet B Radiation (See Ultraviolet Radiation Related Exposure)
Ultraviolet C Radiation (See Ultraviolet Radiation Related Exposure)
Urethane

V
Vanadium pentoxide
Vinyl acetate
Vinyl Bromide
Vinyl Chloride
4-Vinyl-1-cyclohexene Diepoxide

4-Vinylcyclohexene
Vinyl Fluoride

W
Welding fumes
Wood Dust

X
X-Radiation and Gamma Radiation (See Ionizing Radiation)

Z
Zalcitabine
Zidovudine (AZT)