**Carcinogenic Chemicals**

**National Toxicology Program 12th Report on Carcinogens**

<http://ntp.niehs.nih.gov/ntp/roc/twelfth/roc12.pdf>

**Known to be Human Carcinogens**

* Aflatoxins
* Alcoholic beverage consumption
* 4-Aminobiphenyl
* Analgesic mixtures containing phenacetin
* Aristolochic acids
* Arsenic compounds, inorganic
* Asbestos
* Azathioprine
* Benzene
* Benzidine
* Beryllium and beryllium compounds
* 1,3-Butadiene
* 1,4-Butanediol dimethylsulfonate (busulfan, Myleran®)
* Cadmium and cadmium compounds
* Chlorambucil
* 1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1-nitrosourea (MeCCNU)
* bis(chloromethyl) ether and technical-grade chloromethyl methyl ether
* Chromium hexavalent compounds
* Coal tar pitches
* Coal tars
* Coke oven emissions
* Cyclophosphamide
* Cyclosporin A
* Diethylstilbestrol (DES)
* Dyes metabolized to benzidine
* Environmental tobacco smoke
* Erionite
* Estrogens, steroidal
* Ethylene oxide
* Formaldehyde
* Hepatitis B virus
* Hepatitis C virus
* Human papilloma viruses: some genital-mucosal types
* Melphalan
* Methoxsalen with ultraviolet A therapy (PUVA)
* Mineral oils (untreated and mildly treated)
* Mustard gas
* 2-Naphthylamine
* Neutrons
* Nickel compounds
* Oral tobacco products
* Radon
* Silica, crystalline (respirable size)
* Solar radiation
* Soots
* Strong inorganic acid mists containing sulfuric acid
* Sunlamps or sunbeds, exposure to
* Tamoxifen
* 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD); "dioxin"
* Thiotepa
* Thorium dioxide
* Tobacco smoking
* Vinyl chloride
* Ultraviolet radiation, broad spectrum UV radiation
* Wood dust
* X-radiation and gamma radiation

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**Reasonably Anticipated to be Human Carcinogens**

* Acetaldehyde
* 2-Acetylaminofluorene
* Acrylamide
* Acrylonitrile
* Adriamycin® (doxorubicin hydrochloride)
* 2-Aminoanthraquinone
* o-Aminoazotoluene
* 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)
* Amitrole
* o-Anisidine hydrochloride
* Azacitidine (5-Azacytidine®, 5-AzaC)
* Benz[a]anthracene
* Benzo[b]fluoranthene
* Benzo[j]fluoranthene
* Benzo[k]fluoranthene
* Benzo[a]pyrene
* Benzotrichloride
* Bromodichloromethane
* 2, 2-bis-(bromoethyl)-1,3-propanediol (technical grade)
* Butylated hydroxyanisole (BHA)
* Captafol
* Carbon tetrachloride
* Ceramic fibers (respirable size)
* Chloramphenicol
* Chlorendic acid
* Chlorinated paraffins (C12, 60% chlorine)
* 1-(2-chloroethyl)-3-cyclohexyl-1-nitrosourea
* Bis(chloroethyl) nitrosourea
* Chloroform
* 3-Chloro-2-methylpropene
* 4-Chloro-o-phenylenediamine
* Chloroprene
* p-Chloro-o-toluidine and p-chloro-o-toluidine hydrochloride
* Chlorozotocin
* C.I. basic red 9 monohydrochloride
* Cisplatin
* Cobalt sulfate
* Cobalt-tungsten carbide: powders and hard metals
* p-Cresidine
* Cupferron
* Dacarbazine
* Danthron (1,8-dihydroxyanthraquinone)
* 2,4-Diaminoanisole sulfate
* 2,4-Diaminotoluene
* Diazoaminobenzene
* Dibenz[a,h]acridine
* Dibenz[a,j]acridine
* Dibenz[a,h]anthracene
* 7H-Dibenzo[c,g]carbazole
* Dibenzo[a,e]pyrene
* Dibenzo[a,h]pyrene
* Dibenzo[a,i]pyrene
* Dibenzo[a,l]pyrene
* 1,2-Dibromo-3-chloropropane
* 1,2-Dibromoethane (ethylene dibromide)
* 2,3-Dibromo-1-propanol
* Tris (2,3-dibromopropyl) phosphate
* 1,4-Dichlorobenzene
* 3,3'-Dichlorobenzidine and 3,3'-dichlorobenzidine dihydrochloride
* Dichlorodiphenyltrichloroethane (DDT)
* 1,2-Dichloroethane (ethylene dichloride)
* Dichloromethane (methylene chloride)
* 1,3-Dichloropropene (technical grade)
* Diepoxybutane
* Diesel exhaust particulates
* Diethyl sulfate
* Diglycidyl resorcinol ether
* 3,3'-Dimethoxybenzidine
* 4-Dimethylaminoazobenzene
* 3,3'-Dimethylbenzidine
* Dimethylcarbamoyl chloride
* 1,1-Dimethylhydrazine
* Dimethyl sulfate
* Dimethylvinyl chloride
* 1,6-Dinitropyrene
* 1,8-Dinitropyrene
* 1,4-Dioxane
* Disperse blue 1
* Dyes metabolized to 3,3'-dimethoxybenzidine
* Dyes metabolized to 3,3'-dimethylbenzidine
* Epichlorohydrin
* Ethylene thiourea
* Di(2-ethylhexyl) phthalate
* Ethyl methanesulfonate
* Furan
* Glass wool fibers (inhalable)
* Glycidol
* Hexachlorobenzene
* Hexachlorocyclohexane isomers
* Hexachloroethane
* Hexamethylphosphoramide
* Hydrazine and hydrazine sulfate
* Hydrazobenzene
* Indeno[1,2,3-cd]pyrene
* Iron dextran complex
* Isoprene
* Kepone® (chlordecone)
* Lead and lead compounds
* Lindane and other hexachlorocyclohexane isomers
* 2-Methylaziridine (propylenimine)
* 5-Methylchrysene
* 4,4'-Methylenebis(2-chloroaniline)
* 4-4'-Methylenebis(N,N-dimethyl)benzenamine
* 4,4'-Methylenedianiline and its dihydrochloride salt
* Methyleugenol
* Methyl methanesulfonate
* N-methyl-N'-nitro-N-nitrosoguanidine
* Metronidazole
* Michler's ketone [4,4'-(dimethylamino) benzophenone]
* Mirex
* Naphthalene
* Nickel (metallic)
* Nitrilotriacetic acid
* o-Nitroanisole
* Nitrobenzene
* 6-Nitrochrysene
* Nitrofen (2,4-dichlorophenyl-p-nitrophenyl ether)
* Nitrogen mustard hydrochloride
* Nitromethane
* 2-Nitropropane
* 1-Nitropyrene
* 4-Nitropyrene
* 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
* N-nitroso-N-methylurea
* N-nitrosomethylvinylamine
* N-nitrosomorpholine
* N-nitrosonornicotine
* N-nitrosopiperidine
* N-nitrosopyrrolidine
* N-nitrososarcosine
* o-Nitrotoluene
* Norethisterone
* Ochratoxin A
* 4,4'-Oxydianiline
* Oxymetholone
* Phenacetin
* Phenazopyridine hydrochloride
* Phenolphthalein
* Phenoxybenzamine hydrochloride
* Phenytoin
* Polybrominated biphenyls (PBBs)
* Polychlorinated biphenyls (PCBs)
* Polycyclic aromatic hydrocarbons (PAHs)
* Procarbazine hydrochloride
* Progesterone
* 1,3-Propane sultone
* beta-Propiolactone
* Propylene oxide
* Propylthiouracil
* Reserpine
* Riddelliine
* Safrole
* Selenium sulfide
* Streptozotocin
* Styrene
* Styrene-7,8-oxide
* Sulfallate
* Tetrachloroethylene (perchloroethylene)
* Tetrafluoroethylene
* Tetranitromethane
* Thioacetamide
* 4,4'-Thiodianaline
* Thiourea
* Toluene diisocyanate
* o-Toluidine and o-toluidine hydrochloride
* Toxaphene
* Trichloroethylene
* 2,4,6-Trichlorophenol
* 1,2,3-Trichloropropane
* Ultraviolet A radiation
* Ultraviolet B radiation
* Ultraviolet C radiation
* Urethane
* Vinyl bromide
* 4-Vinyl-1-cyclohexene diepoxide
* Vinyl fluoride