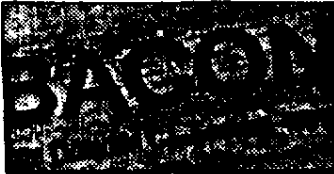
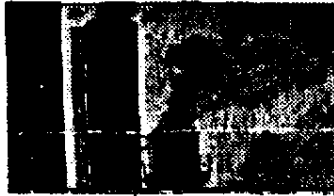


	Substance's Use	When Danger Was Discovered	Extent of Risk	Regulatory Action	Current Status
Nitrites 	Used since the time of prehistoric man (then in the form of saltpeter) as a cure, or antibacterial preservative, for meat and fish. Chemical reaction also gives bacon, hot dogs and cold cuts, for example, their traditional red color. Also used to texture rubber and plastic products such as infant pacifiers. <i>Used as a preservative in food</i>	Tests in 1970's confirmed that nitrites used in the curing of meat products synthesized nitrosamines, many of which are carcinogenic. Nitrosamines originating in automobile exhausts were linked to cancer in the 1970's.	The entire population is exposed to potential risks as a result of naturally occurring and artificially produced nitrosamines in air, water and food.	In 1976 the Agriculture Department ordered a reduction of nitrites added to cured meat to 40 parts per million, a level that would limit nitrosamines in cooked bacon to 10 parts per billion.	In January the Consumer Product Safety Commission began an enforcement policy that limits nitrites in infant pacifiers and nipples to 60 parts per billion.
PCB's	For polychlorinated biphenyls, a family of synthetic compounds produced since 1929. Before 1972, used in electric transformer coolants, in hydraulic fluids, lubricants, plasticizers, coatings, sealants and pesticide extenders.	In the early 1970's scientists identified PCB's as a persistent contaminant of fish. A report in 1976 said PCB's were entering the human food chain in fish, cheese, eggs and animal feed.	The entire population. E.P.A. officials estimate that 12.5 million people within 12 miles of incinerator sites could be exposed to low-level PCB emissions in the air.	The E.P.A. banned PCB's in pesticides in 1970. A water discharge standard was set in 1977. In 1979 the E.P.A. banned all manufacture, processing and distribution of PCB's. F.D.A. limits on PCB's in foods were set in 1973 and tightened in 1979.	Because of the persistence of PCB's in the environment, traces remain in water, soil, air and human tissue.
Saccharin	For 100 years an artificial, non-nutritive sweetener. Until 1959, restricted for use as a prescription drug. Since 1960 largely in soft drinks but also as a tabletop sweetener, in juices, jellies, candy, chewing gum, cosmetics, toothpaste and in drugs as coatings on pills. Virtually monopolized the market when cyclamates were banned as a carcinogen in 1969.	Feeding tests on laboratory animals since 1948 have produced bladder cancer and leukemia in rats.	About one-sixth of the population, largely teen-agers, is exposed through ingestion. NIOSH estimates 28,000 manufacturing workers are exposed.	As a result of Congressional intervention, still approved by the F.D.A. as a food and beverage additive. Listed as a suspected animal carcinogen by National Toxicology Project and International Agency for Research on Cancer. Its presence in industrial waste is subject to E.P.A. hazardous waste disposal regulations.	Labels must say: "Use of this product may be hazardous to your health. This product contains saccharin which has been determined to cause cancer in laboratory animals." F.D.A. "awaits analysis" of information gathered in seven years of successively renewed Congressional orders to study the carcinogenicity of saccharin.
Soots, coke and tars 	Coke, or carbonized coal, is produced in massive "ovens" for use in the extraction of metals from their ores, particularly iron. Coke byproducts include tars and oils. <i>Coke soot endangered workers</i>	Coal soot was found in 1778 to be causative agent in cancer among chimney sweeps. Study in 1971 found deaths among coke oven workers from respiratory cancer to be twice that of steel workers as a group, and N.T.P. says evidence of carcinogenicity is "overwhelming."	OSHA estimates 10,000 coke workers and 121,000 others, such as roofers and wood preservative workers, who are exposed to coal-based tars and pitches. Machinists may use some cutting oils that are carcinogenic in animals. Because environmental contamination overall is widespread, N.T.P. assumes "the entire population is exposed at some level."	OSHA regulations limit exposure of coke oven workers by requiring engineering controls (positive-pressure machinery cabs), respirators and protective clothing. Regulations restrict use in wood preservative products, require reporting of spills and waste disposal, and in 1980 barred the use of coal tar formulations in antifungal ointments for application to skin.	EPA has not determined whether environmental emission controls are "warranted and feasible" at coke ovens.
Tobacco 	Smoking, chewing, sniffing. Cigarette smoke contains more than 3,000 chemical components, including such carcinogens elsewhere on this list as arsenic, formaldehyde, nitrites and vinyl chloride, plus benzo(a)pyrene and such "organ-specific" chemicals as N-nitrosomnicotine (esophagus) and NNK (lung, liver). <i>Smoke contains 3,000 chemicals</i>	There is debate over whether the carcinogenicity of tobacco was first noticed 223 years ago or 189 years ago. But modern scientific studies were not published until the 1920's and 1930's. The first major retrospective proof of a direct association of cigarette smoking with lung cancer came in 1950.	The latest Government estimate is that, 20 years after the Surgeon General's report indicting cigarette smoking as the cause of one-third of all cancer deaths, one-third of the population still smokes. The figure is down from 42 percent in 1964. The Office on Smoking and Health says that 129,000 American smokers die each year of cancer, and another 170,000 of heart disease caused by cigarettes.	Congress in 1965 required cigarette packages to carry the warning: "Caution: Cigarette smoking may be hazardous to your health." The Law was amended in 1970 to ban cigarette advertising on radio and television and to change the cigarette package label to: "Warning: The Surgeon General has determined that cigarette smoking is dangerous to your health."	Proposed bills in Congress would strengthen cigarette package warnings to include notice that smoking "is addictive" and to warn specifically of "death from" cancer, emphysema, heart disease and of an increased chance miscarriage in pregnant women.
TRIS	Flame retardant in textiles, fabrics, clothing, furniture, toys and wigs. Widely used in children's sleepwear after 1972 after a Congressional requirement in 1967 that garments of synthetic textiles be fire-retardant.	The bromine-phosphate basis of Tris aroused concern among scientists in 1973. A study published in 1977 by the National Cancer Institute documented cancer in test animals.	Millions of children were exposed by skin absorption or orally by garments placed in the mouth.	The Commission in April 1977 banned the sale of Tris-treated garments and the further production of the chemical.	No further production or use.
Vinyl chloride	A gaseous raw material of plastics, floor tiles; formerly in a wide range of plastic food packaging films and beverage containers, formerly a propellant in aerosol containers.	In 1974 the B.F. Goodrich Chemical Company informed NIOSH that four workers in Louisville died of rare liver cancer possibly related to vinyl chloride exposure.	The Consumer Product Safety Commission estimated that as many as 5 million persons were exposed to vinyl chloride in aerosols until banned in 1974.	In 1974 OSHA imposed a standard of 1 part per million in workplace air over an eight-hour day.	The 1974 regulation remains in effect, but the F.D.A. is considering withdrawing a 1975 order regulating vinyl chloride in food packaging, which manufacturers say is now safer.

After Years of Cancer Alarms Progress Amid the Mistaken