

9. REFERENCES

*ABMS. 1994. Non-ferrous metal data [for 1993]. Secaucus, NJ: American Bureau of Metal Statistics, Inc.

*ABMS. 2002. Nickel. Non-ferrous metals yearbook. Chatham NJ: Cadmus Professional Communications, Science Press Division, 157-162.

Accominotti M, Bost M, Haudrechy P, et al. 1998. Contribution to chromium and nickel enrichment during cooking of foods in stainless steel utensils. *Contact Dermatitis* 38(6):305-310.

Acevedo F, Serra MA, Ermolli M, et al. 2001. Nickel-induced proteins in human HaCaT keratinocyte: Annexin II and phosphoglycerate kinase. *Toxicology* 159(1-2):33-41.

ACGIH. 1996. 1996 TLVs and BEIs: Threshold limit values for chemical substances and physical agents and biological exposure indices. Cincinnati, OH: American Conference of Governmental Industrial Hygienists.

*ACGIH. 2003. Nickel. Threshold limit values for chemical substances and physical agents and biological exposure indices. Nickel. Cincinnati, OH: American Conference of Governmental Industrial Hygienists.

Ada AO, Coban T, Kapucuoglu N, et al. 2001. The responses of rat testicular CYP and GST enzymes to cadmium and nickel [Abstract]. *Toxicol Lett* 123(Suppl 1):48.

*Adachi A, Okiayu M, Nishikawa A, et al. 1998. Metal levels in rain water from Kobe City in Japan. *Bull Environ Contam Toxicol* 60:892-897.

*Adamo P, Dudka S, Wilson MJ, et al. 1996. Chemical and mineralogical forms of Cu and Ni in contaminated soils from the Sudbury mining and smelting region, Canada. *Environ Pollut* 91(1):11-19.

*Adams JF, Kissel DE. 1989. Zinc, copper, and nickel availabilities as determined by soil solution and DTPA extraction of a sludge-amended soil. *Commun Soil Sci Plant Anal* 20:139-158.

*Ademec JB, Kihlgren TE. 1967. Nickel and nickel alloys. In: Standen A, ed. *Kirk-Othmer encyclopedia of chemical technology*, vol. 13, 2nd ed. New York, NY: Interscience Publishers, 735-753.

*Adinolfi M. 1985. The development of the human blood-CSF-brain barrier. *Dev Med Child Neurol* 27:532-537.

*Adkins B Jr, Richards JH, Gardner DE. 1979. Enhancement of experimental respiratory infection following nickel inhalation. *Environ Res* 20:33-42.

*Adlercreutz H. 1995. Phytoestrogens: Epidemiology and a possible role in cancer protection. *Environ Health Perspect Suppl* 103(7):103-112.

*Cited in text

9. REFERENCES

- *Agency for Toxic Substances and Disease Registry. 1989. Agency for Toxic Substances and Disease Registry. Decision guideline for identifying substance-specific data needs related to toxicological profiles. Part V. Fed Regist 54:37619-37633.
- *Agency for Toxic Substances and Disease Registry. 2003. Public health assessment for Circle Smelting Corporation Beckmeyer, Clinton County, Illinois. EPA Facility ID: ILD050231976. May 12, 2003. Illinois State Dept. of Public Health/U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry.
- Agner T, Johansen JD, Overgaard L, et al. 2002. Combined effects of irritants and allergens. Contact Dermatitis 47(1):21-26.
- *Akasya-Hillenbrand E, Ozkaya-Bayazit E. 2002. Patch test results in 542 patients with suspected contact dermatitis in Turkey. Contact Dermatitis 46(1):17-23.
- *Alberici TM, Sopper WE, Storm GL, et al. 1989. Trace metals in soil vegetation and voles from mine land treated with sewage sludge. J Environ Qual 18:115-119.
- *Alberti-Fidanza A, Burini G, Perriello G, et al. 2003. Trace element intake and status of Italian subjects living in the Gubbio area. Environ Res 91:71-77.
- *Altman PL, Dittmer DS. 1974. Biological handbooks: Biology data book. Vol. III. 2nd ed. Bethesda, MD: Federation of the American Society of Experimental Biologists, 1987-2008, 2041.
- Alvarez C, Blade C, Cartana J. 1993. α 2-Adrenergic blockade prevents hyperglycemia and hepatic glutathione depletion in nickel-injected rats. Toxicol Appl Pharm 121:112-117.
- *Amacher DE, Paillet SC. 1980. Induction of trifluorothymidine resistant mutants by metal ions in L5178Y/TK+/- cells. Mutat Res 78:279-288.
- *Ambrose AM, Larson PS, Borzelleca JF, et al. 1976. Long term toxicologic assessment of nickel in rats and dogs. J Food Sci Technol 13:181-187.
- *American Biogenics Corporation. 1988. Ninety day gavage study in albino rats using nickel. Final report submitted to U.S. Environmental Protection Agency, Office of Solid Waste. Submitted by Research Triangle Institute and American Biogenics Corporation.
- *Andersen O. 1983. Effects of coal combustion products and metal compounds on sister chromatid exchange (SCE) in a macrophage cell line. Environ Health Perspect 47:239-253.
- *Andersen I, Svenes KB. 1989. Determination of nickel in lung specimens of thirty-nine autopsied nickel workers. Int Arch Occup Environ Health 61:289-295.
- *Andersen I, Svenes K. 2003. X-ray diffraction spectrometric analysis of nickel refinery aerosols, process materials and particulates isolated from worker lung tissues. J Environ Monit 5(2):202-205.
- *Andersen ME, Krishnan K. 1994. Relating *in vitro* to *in vivo* exposures with physiologically based tissue dosimetry and tissue response models. In: Salem H, ed. Animal test alternatives: Refinement, reduction, replacement. New York, NY: Marcel Dekker, Inc., 9-25.

9. REFERENCES

- *Andersen A, Berge SR, Engeland A, et al. 1996. Exposure to nickel compounds and smoking in relation to incidence of lung and nasal cancer among nickel refinery workers. *Occup Environ Med* 53(10):708-713.
- *Andersen ME, Clewell HJ III, Gargas ML, et al. 1987. Physiologically based pharmacokinetics and the risk assessment process for methylene chloride. *Toxicol Appl Pharmacol* 87:185-205.
- *Anderson KE, Nielsen GD, Flyvholm M-A, et al. 1983. Nickel in tap water. *Contact Dermatitis* 9:140-143.
- *Anderson S. 1995. Nickel: A year of contradiction and transition. *Engineer Min J* 196(3):63-67.
- *Anderson PR, Christensen TH. 1988. Distribution coefficients of Cd, Co, and Zn in soils. *J Soil Sci* 35:15-22.
- Andreassi M, DiGiacchino M, Sabbioni E, et al. 1998. Serum and urine nickel in nickel-sensitized women: effects of oral challenge with the metal. *Contact Dermatitis* 38(1):5-8.
- Andrew A, Barchowsky A. 2000. Nickel-induced plasminogen activator inhibitor-1 expression inhibits the fibrinolytic activity of human airway epithelial cells. *Toxicol Appl Pharmacol* 168(1):50-57.
- *Angerer J, Lehnert G. 1990. Occupational chronic exposure to metals. II: Nickel exposure of stainless steel welders--biological monitoring. *Int Arch Occup Environ Health* 62:7-10.
- *Ankley GT, Phipps GL, Leonard EN, et al. 1991. Acid-volatile sulfide as a factor mediating cadmium and nickel bioavailability in contaminated sediments. *Environ Toxicol Chem* 10:1299-1307.
- *Antonsen DH. 1981. Nickel compounds. In: Grayson M, Eckroth D, eds. *Kirk-Othmer encyclopedia of chemical technology*, vol. 15, 3rd ed. New York, NY: John Wiley and Sons, 801-819.
- *Antonsen DH, Springer DB. 1967. Nickel compounds. In: Standen A, ed. *Kirk-Othmer encyclopedia of chemical technology*, vol. 13, 2nd ed. New York, NY: Interscience Publishers, 753-765.
- *Anttila A, Pukkala E, Aitio A, et al. 1998. Update of cancer incidence among workers at a copper/nickel smelter and nickel refinery. *Int Arch Occup Environ Health* 71(4):245-250.
- APHA. 1992. *Standard methods for the examination of water and wastewater*. 18th ed. Washington, DC: American Public Health Association, American Water Works Association, Water Environment Federation.
- Aremu DA, Olawuyi J, Meshitsuka S, et al. 2002. Heavy metal analysis of groundwater from Warri, Nigeria. *Int J Environ Health Res* 12:261-267.
- *Arena VC, Sussman NB, Redmond CK, et al. 1998. Using alternative comparison populations to assess occupation-related mortality risk. Results for the high nickel alloys workers cohort. *J Occup Environ Med* 40(10):907-916.
- Arild V, Elise PE, Ljudmila T, et al. 2004. The prevalence of selected pregnancy outcome risk factors in the life-style and medical history of the delivering population in north-western Russia. *Int J Circumpolar Health* 63(1):39-60.

9. REFERENCES

- *Arlauskas A, Baker RS, Bonin AM, et al. 1985. Mutagenicity of metal ions in bacteria. *Environ Res* 36:379-388.
- *Arnich N, Lanhers MC, Cunat L, et al. 2000. Nickel absorption and distribution from rat small intestine in situ. *Biol Trace Elem Res* 74(2):141-151.
- *Arrouijal FZ, Marzin D, Hildebrand HF, et al. 1992. Differences in genotoxic activity of α -Ni3S2 on human lymphocytes from nickel-hypersensitized and nickel-unsensitized donors. *Mutagenesis* 7(3):183-187.
- Artik S, Haarhuis K, Wu X, et al. 2001. Tolerance to nickel: Oral nickel administration induces a high frequency of anergic T cells with persistent suppressor activity. *J Immunol* 167(12):6794-6803.
- *ASTM. 2000. Water (1), Methods D1976 and D5673. In: Allen RF, Baldini NC, Gutman EL, et al., eds. Annual book of ASTM standards. Vol. 11.01. West Conshococken, PA: American Society for Testing and Materials.
- Azar C, Holomberg J, Lindgren K. 1996. Socio-ecological indicators for sustainability. Methodological and ideological options. *Ecol Econ* 18:89-112.
- Banfield CC, Basketter DA, Powell SM. 1998. Cutaneous reactivity of the hands in nickel-sensitive patients with hand eczema. *Contact Dermatitis* 38(6):316-318.
- *Baker DE, Amacher MC. 1982. Nickel, copper, zinc, and cadmium. In: *Methods of soil analysis, Part 2. Chemical and microbiological properties - Agronomy Monograph No. 9, 2nd ed.* Madison: ASA-SSSA, 3323-3336.
- *Baranowska-Dutkiewicz B, Rozanska R, Dutkiewicz T. 1992. Occupational and environmental exposure to nickel in Poland. *Pol J Occup Med Env Health* 5(4):335-343.
- *Barbante C, Boutron C, Moreau A-L, et al. 2002. Seasonal variations in nickel and vanadium in Mont Blanc snow and ice dated from the 1960's and 1990's. *J Environ Monit* 4:960-966.
- Barcan V. 2002. Nature and origin of multicomponent aerial emissions of the copper-nickel smelter complex. *Environ Int* 28:451-456.
- *Barceloux DG. 1999. Nickel. *Clin Toxicol* 37(2):239-258.
- *Barnes DG, Dourson M. 1988. Reference dose (RfD): Description and use in health risk assessment. *Regul Toxicol Pharmacol* 8:471-486.
- *Barrie LA, Hoff RM. 1985. Five years of air chemistry observations in the Canadian Arctic. *Atmos Environ* 19:1995-2010.
- *Barrie LA, Lindberg SE, Chan WH, et al. 1987. On the concentration of trace metals in precipitation. *Atmos Environ* 21:1133-1135.
- *Bavazzano P, Bolognesi R, Cassinelli C, et al. 1994. Skin contamination and low airborne nickel exposure of electroplaters. *Sci Total Environ* 155:83-86.

9. REFERENCES

- *Becker N. 1999. Cancer mortality among arc welders exposed to fumes containing chromium and nickel: Results of a third follow-up: 1989-1995. *J Occup Environ Med* 41(4):294-303.
- *Bencko V, Wagner V, Wagnerova M, et al. 1983. Immuno-biochemical findings in groups of individuals occupationally and nonoccupationally exposed to emissions containing nickel and cobalt. *J Hyg Epidemiol Microbiol Immunol* 27:387-394.
- *Bencko V, Wagner V, Wagnerova M, et al. 1986. Human exposure to nickel and cobalt: Biological monitoring and immunobiological response. *Environ Res* 40:399-410.
- *Bennett BG. 1984. Environmental nickel pathways in man. In: Sunderman FW Jr, ed. Nickel in the human environment. Proceedings of a joint symposium. IARC scientific publication no. 53. Lyon, France: International Agency for Research on Cancer, 487-495.
- *Benson JM, Barr EB, Bechtold WE, et al. 1994. Fate of inhaled nickel oxide and nickel subsulfide in F344/N rats. *Inhal Toxicol* 6:167-183.
- *Benson JM, Burt DG, Carpenter RL, et al. 1988. Comparative inhalation toxicity of nickel sulfate to F344/N rats and B6C3F1 mice exposed for twelve days. *Fundam Appl Toxicol* 10:164-178.
- *Benson JM, Burt DG, Cheng YS, et al. 1989. Biochemical responses of rat and mouse lung to inhaled nickel compounds. *Toxicology* 57:255-266.
- *Benson JM, Carpenter RL, Hahn FF, et al. 1987. Comparative inhalation toxicity of nickel subsulfide to F344/N rats and B6C3F1 mice exposed for twelve days. *Fundam Appl Toxicol* 9:251-265.
- *Benson JM, Chang I-Y, Cheng YS. 1995a. Particle clearance and histopathology in lungs of F344/N rats and B6C3F1 mice inhaling nickel oxide or nickel sulfate. *Fundam Appl Toxicol* 28:232-244.
- *Benson JM, Cheng Y-S, Eidson AF, et al. 1995b. Pulmonary toxicity of nickel subsulfide in F344/N rats exposed for 1-22 days. *Toxicology* 103:9-22.
- Benson J, March TH, Divine KK, et al. 2003. Mechanisms of nickel induced lung cancer - Nickel subsulfide vs nickel sulfate. *Toxicol Sci* 72(S-1):299.
- *Berge SR, Skyberg K. 2003. Radiographic evidence of pulmonary fibrosis and possible etiologic factors at a nickel refinery in Norway. *J Environ Monit* 5(4):681-688.
- *Berger GS. 1994. Epidemiology of endometriosis. In: Berger GS, ed. Endometriosis: Advanced management and surgical techniques. New York, NY: Springer-Verlag.
- *Berghem L, Hansson M, Lundborg M, et al. 1987. Fibronectin concentrations in lung lavage fluid after inhalation exposure to low levels of metals. *Environ Res* 43:79-85.
- *Berman E, Rehnberg B. 1983. Fetotoxic effects of nickel in drinking water in mice. National Technical Information Service. EPA600183007. PB83225383.
- *Bernacki EJ, Parsons GE, Sunderman FW Jr. 1978. Investigation of exposure to nickel and lung cancer mortality. *Ann Clin Lab Sci* 8:190-194.

9. REFERENCES

- *Bernacki EJ, Zugowicz E, Sunderman FW Jr. 1980. Fluctuations of nickel concentrations in urine of electroplating workers. *Ann Clin Lab Sci* 10:33-39.
- *Bhattacharyya MH. 1983. Bioavailability of orally administered cadmium and lead to the mother, fetus, and neonate during pregnancy and lactation: An overview. *Sci Total Environ* 28:327-342.
- *Biedermann KA, Landolph JR. 1987. Induction of anchorage independence in human diploid foreskin fibroblasts by carcinogenic metal salts. *Cancer Res* 47:3815-3823.
- *Biego GH, Joyeux M, Hartemann P, et al. 1998. Determination of mineral contents in different kinds of milk and estimation of dietary intake in infants. *Food Addit Contam* 15(7):775-781.
- *Biggart NW, Costa M. 1986. Assessment of the uptake and mutagenicity of nickel chloride in *Salmonella* tester strains. *Mutat Res* 175:209-215.
- *Biggart NW, Murphy E Jr. 1988. Analysis of metal-induced mutations altering the expression or structure of a retroviral gene in a mammalian cell line. *Mutat Res* 198:115-130.
- *Biggart NW, Gallick GE, Murphy EC Jr. 1987. Nickel-induced heritable alterations in retroviral transforming gene expression. *J Virol* 61:2378-2388.
- *Bingham E, Barkley W, Zerwas M, et al. 1972. Responses of alveolar macrophages to metals. I. Inhalation of lead and nickel. *Arch Environ Health* 25:406-414.
- *Birge WJ, Black JA. 1980. Aquatic toxicology of nickel. In: Nriagu JO, ed. *Nickel in the environment*. New York, NY: John Wiley and Sons, Inc., 354-355.
- *Borg K, Tjalve H. 1989. Uptake of $^{63}\text{Ni}^{2+}$ in the central and peripheral nervous system of mice after oral administration: Effects of treatment with halogenated 8-hydroxyquinolines. *Toxicology* 54:59-68.
- *Borska L, Fiala Z, Smejkalova J. 2003. Health risk of occupational exposure in welding processes. I. Genotoxic risk. *Acta Medica (Hradec Kralove)* 46(1):25-29.
- Boscolo P, Andressi M, Sabbioni E, et al. 1999. Systemic effects of ingested nickel on the immune system of nickel sensitised women. *Life Sci* 64(17):1485-1491.
- *Bowlby JN, Gunn JM, Liimatainen VA. 1988. Metals in stocked lake trout *Salvelinus-namaycush* in lakes near Sudbury Canada. *Water Air Soil Pollut* 39:217-230.
- *Bowman RS, Essington ME, O'Connor GA. 1981. Soil sorption of nickel: Influence of solution composition. *Soil Sci Soc Am J* 45:860-865.
- *Boyer KW, Horowitz W. 1986. Special considerations in trace element analysis of foods and biological materials. In: O'Neill IK, Schuller P, Fishbein L, eds. *Some metals: As, Be, Cd, Cr, Ni, Pb, Se, Zn*. IARC Scientific Publication No. 71. Lyon, France: International Agency for Research on Cancer, 191-220.
- *Bradley RW, Morris JR. 1986. Heavy metals in fish from a series of metal-contaminated lakes near Sudbury, Ontario. *Water Air Soil Pollut* 27:341-354.

9. REFERENCES

- Bragadin G, Taraschi A, Marchini C, et al. 1999. Allergic contact dermatitis from nickel following electromyography. *Contact Dermatitis* 41(6):353-354.
- Brasch J, Geier J. 1997. Patch test results in schoolchildren: Results from the Information Network of Departments of Dermatology (IVDK) and the German Contact Dermatitis Research Group (DKG). *Contact Dermatitis* 37:286-293.
- *Brito G, Diaz C, Galindo L, et al. 1990. Levels of metals in canned meat products: Intermetallic correlations. *Bull Environ Contam Toxicol* 44:309-316.
- Broday L, Cai J, Costa M. 1999. Nickel enhances telomeric silencing in *Saccharomyces cerevisiae*. *Mutat Res* 440(2):121-130.
- *Bronstein AC, Currance PL. 1988. Emergency care for hazardous material exposure. Washington, DC: The CV Mosby Company, 147-148.
- *Brooks RR. 1980. Hyperaccumulation of nickel by terrestrial plants. In: Nriagu JO, ed. Nickel in the environment. New York, NY: John Wiley and Sons, 410-413.
- *Brown SS, Nomoto S, Stoeppler M, et al. 1981. IUPAC reference method for analysis of nickel in serum and urine by electrothermal atomic absorption spectrometry. *Clin Biochem* 14:295-299.
- *Bruce BW, McMahon PB. 1996. Shallow ground-water quality beneath a major urban center: Denver, Colorado, USA. *J Hydrol* 186:129-151.
- Bryld LE, Hindsberger C, Kyvik KO, et al. 2003. Risk factors influencing the development of hand eczema in a population-based twin sample. *Br J Dermatol* 149(6):1214-1220.
- *Brzezinska-Paudyn A, VanLoon JC, Balicki MR. 1986. Multielement analysis and mercury speciation in atmospheric samples from the Toronto area. *Water Air Soil Pollut* 27:45-56.
- Budinger L, Neuser N, Totzke U, et al. 2001. Preferential usage of TCR-Vbeta17 by peripheral and cutaneous T cells in nickel-induced contact dermatitis. *J Immunol* 167(10):6038-6044.
- *Burrows D, Creswell S, Merrett JD. 1981. Nickel, hands, and hip prosthesis. *Br J Dermatol* 105:437-444.
- *Butte W, Heinzow B. 2002. Pollutants in house dust as indicators of indoor contamination. *Rev Environ Contam Toxicol* 175:1-46.
- *Cahill TA. 1989. Monitoring of atmospheric particles and ozone in Sequoia National Park: 1985-1987. Sacramento, CA: California State Air Resources Board. PB90157512.
- Candura SM, Locatelli C, Butera R, et al. 2001. Widespread nickel dermatitis from inhalation. *Contact Dermatitis* 45(3):174-175.
- *Capar SG, Cunningham WC. 2000. Element and radionuclide concentrations in food: FDA Total Diet Study 1991-1996. *JOAC Int* 83(1):157-177.
- *Carvalho SMM, Ziemer PL. 1982. Distribution and clearance of $^{63}\text{NiCl}_2$ in the rat: Intratracheal study. *Arch Environ Contam Toxicol* 11:245-248.

9. REFERENCES

- *Casey CE, Neville MC. 1987. Studies in human lactation 3: Molybdenum and nickel in human milk during the first month of lactation. *Am J Clin Nutr* 45(5):921-926.
- Cavallo D, Ursinini CL, Setini A, et al. 2003. Evaluation of oxidative damage and inhibition of DNA repair in an *in vitro* study of nickel exposure. *Toxicol in Vitro* 17(5-6):603-307.
- Cavani A, Mei D, Guerra E, et al. 1998. Patients with allergic contact dermatitis to nickel and nonallergic individuals display different nickel-specific T cell responses. Evidence for the presence of effector CD8+ and regulatory CD4+ T cells. *J Invest Dermatol* 111(4):621-628.
- Cavani A, Nasorri F, Ottaviani C, et al. 2003. Human CD25+ regulatory T cells maintain immune tolerance to nickel in healthy, nonallergic individuals. *J Immunol* 171(11):5760-5768.
- Cavani A, Nasorri F, Prezzi C, et al. 2000. Human CD4+ T lymphocytes with remarkable regulatory functions on dendritic cells and nickel-specific TH1 immune responses. *J Invest Dermatol* 114(2):295-302.
- *Cavelier C, Foussereau J, Gille P, et al. 1988. Nickel allergy: Tolerance to metallic surface-plated samples in nickel-sensitive humans and guinea pigs. *Contact Dermatitis* 19:358-361.
- Cederbrant K, Gunnarsson LG, Marcusson JA. 2000. Mercury intolerance and lymphocyte transformation test with nickel sulfate, palladium chloride, mercuric chloride, and gold sodium thiosulfate. *Environ Res* 84(2):140-144.
- CELDS. 1994. Computer environmental legislative data system database. University of Illinois, Urbana Illinois.
- Cempel M, Janicka K. 2002. Distribution of nickel, zinc, and copper in rat organs after oral administration of nickel(II) chloride. *Biol Trace Elem Res* 90:215-226.
- *CEPA. 1994. Canadian Environmental Protection Act. Priority substances list assessment report: Nickel and its compounds. Government of Canada, Environment Canada, Health Canada, 1-82.
- Cervený KA Jr., Brodell RT. 2002. Blue jean button dermatitis. Nickel allergy presenting as a periumbilical rash. *Postgrad Med* 112(5):79-80.
- Chakrabarti SK, Bai C. 1999. Role of oxidative stress in nickel chloride-induced cell injury in rat renal cortical slices. *Biochem Pharmacol* 58(9):1501-1510.
- Chakrabarti SK, Bai C, Subramanian KS. 1999. DNA-protein crosslinks induced by nickel compounds in isolated rat renal cortical cells and its antagonism by specific amino acids and magnesium ion. *Toxicol Appl Pharmacol* 154(3):245-255.
- Chakrabarti SK, Bai C, Subramanian KS. 2001. DNS-protein crosslinks induced by nickel compounds in isolated rat lymphocytes: Role of reactive oxygen species and specific amino acids. *Toxicol Appl Pharmacol* 170(3):153-165.
- *Chamberlain PG. 1985. Nickel. Preprint from the Bureau of Mines mineral yearbook. Pittsburgh, PA: Bureau of Mines, U.S. Department of the Interior, 108-109.

9. REFERENCES

- *Chan WH, Tang AJS, Chung DHS, et al. 1986. Concentration and deposition of trace metals in Ontario-1982. *Water Air Soil Pollut* 29:373-389.
- *Chashschin VP, Artunina GP, Norseth T. 1994. Congenital defects, abortion and other health effects in nickel refinery workers. *Sci Total Environ*, 148:287-291.
- Chen CY, Huang YL. 1998. Association between oxidative stress and cytokine production in nickel-treated rats. *Arch Biochem Biophys* 356(2):127-132.
- Chen C-Y, Lin T-H. 2001. Effects of nickel chloride on human platelets: Enhancement of lipid peroxidation, inhibition of aggregation and interaction with ascorbic acid. *J Toxicol Environ Health A* 62:431-438.
- Chen CY, Huang YL, Lin TH. 1998. Lipid peroxidation in liver of mice administered with nickel chloride: With special reference to trace elements and antioxidants. *Biol Trace Elem Res* 61(2):193-205.
- Chen CY, Wang YF, Huang WR, et al. 2003a. Nickel induces oxidative stress and genotoxicity in human lymphocytes. *Toxicol Appl Pharmacol* 189:153-159.
- Chen CY, Wang YF, Lin YH, et al. 2003b. Nickel-induced oxidative stress and effect of antioxidants in human lymphocytes. *Arch Toxicol* 77(3):123-130.
- Cheng RYS, Zhao A, Alvord WG, et al. 2003. Gene expression dose-response changes in microarrays after exposure of human peripheral lung epithelial cells to nickel(II). *Toxicol Appl Pharmacol* 191(1):22-39.
- *Chernoff N, Kavlock RJ. 1982. An *in vivo* teratology screen utilizing pregnant mice. *J Toxicol Environ Health* 10:541-550.
- *Chin YE, Snow ET, Christie NT. 1994. The stimulatory effect of nickel chloride on DNA replication in human HeLa cells and *Escherichia coli*. *Carcinogenesis* 15(5):1013-1016.
- Chiu A, Katz AJ, Beaubier J, et al. 2004. Genetic and cellular mechanisms in chromium and nickel carcinogenesis considering epidemiologic findings. *Mol Cell Biochem* 255(1-2):181-194.
- *Chovil A, Sutherland RB, Halliday M. 1981. Respiratory cancer in a cohort of nickel sinter plant workers. *Br J Ind Med* 38:327-333.
- *Christensen JM. 1995. Human exposure to toxic metals: Factors influencing interpretation of biomonitoring results. *Sci Total Environ* 166:89-135.
- *Christensen OB, Lagesson V. 1981. Nickel concentrations of blood and urine after oral administration. *Ann Clin Lab Sci* 11:119-125.
- *Christensen OB, Moller H. 1975. External and internal exposure to the antigen in the hand eczema of nickel allergy. *Contact Dermatitis* 1:136-141.
- *Christie NT, Tummolo DM, Klein CB, et al. 1992. Role of Ni(II) in mutation. In: Nieboer E, Nriagu JO, eds. *Nickel and human health, current perspectives: Advances in environmental science and technology*, Vol. 25. New York: John Wiley & Sons, 305-317.

9. REFERENCES

- *Ciccarelli RB, Wetterhahn KE. 1982. Nickel distribution and DNA lesions induced in rat tissues by the carcinogen nickel carbonate. *Cancer Res* 42:3544-3549.
- *Claiborn CS, Larson T, Sheppard L. 2002. Testing the metals hypothesis in Spokane, Washington. *Environ Health Perspect* 101(Suppl 4):547-552
- *Clary JJ. 1975. Nickel chloride-induced metabolic changes in the rat and guinea pig. *Toxicol Appl Pharmacol* 31:55-65.
- Clemens F, Landolph JR. 2003. Genotoxicity of samples of nickel refinery dust. *Toxicol Sci* 73(1):114-123.
- *Clewell HJ III, Andersen ME. 1985. Risk assessment extrapolations and physiological modeling. *Toxicol Ind Health* 1(4):111-131.
- *Colborn T, Clement C. 1992. Chemically induced alterations in sexual and functional development. The wildlife/human connection. In: *Advances in modern environmental toxicology*. Volume XXI. Princeton, NJ: Princeton Scientific Publishing Co.
- *Cole KL, Engstrom DR, Futyma RP, et al. 1990. Past atmospheric deposition of metals in northern Indiana measured in a peat core from Cowles Bog. *Environ Sci Technol* 24:543-549.
- *Cole RH, Frederick RE, Healy RP, et al. 1984. Preliminary findings of the priority pollutant monitoring project of the nationwide urban runoff program. *J Water Pollut Control Fed* 56:898-908.
- *Coleman ME, Elder RS, Basu P, et al. 1992. Trace metals in edible tissues of livestock and poultry. *JOAC Int* 75(4):615-625.
- *Conway K, Costa M. 1989. Nonrandom chromosomal alterations in nickel-transformed Chinese hamster embryo cells. *Cancer Res* 49:6032-6038.
- *Cornell RG. 1984. Mortality patterns around stainless-steel workers. In: Sunderman FW Jr, Aitio A, Berlin A, eds. *Nickel in the human environment*. IARC scientific publication no. 53. Lyon, France: International Agency for Research on Cancer, 65-71.
- *Cornell RG, Landis JR. 1984. Mortality patterns among nickel/chromium alloy foundry workers. In: Sunderman FW, Jr, Aitio A, Berlin A, eds. *Nickel in the human environment*. IARC scientific publication no. 53. Lyon, France: International Agency for Research on Cancer, 87-93.
- *Costa M. 1989. Perspectives on the mechanism of nickel carcinogenesis gained from models of *in vitro* carcinogenesis. *Environ Health Perspect* 81:73-76.
- *Costa M. 1995. Model for the epigenetic mechanism of action of nongenotoxic carcinogens. *Am J Clin Nutr* 61(suppl):666S-669S.
- *Costa M, Heck JD. 1982. Specific nickel compounds as carcinogens. *Trends Pharmacol Sci* 3:408-410.
- *Costa M, Mollenhauer HH. 1980. Carcinogenic activity of particulate metal compounds is proportional to their cellular uptake. *Science* 209:515-517.

9. REFERENCES

- *Costa M, Heck JD, Robinson SH. 1982. Selective phagocytosis of crystalline metal sulfide particles and DNA strand breaks as a mechanism for the induction of cellular transformation. *Cancer Res* 42:2757-2763.
- Costa M, Salnikow K, Sutherland JE, et al. 2002. The role of oxidative stress in nickel and chromate genotoxicity. *Mol Cell Biochem* 234-235(1-2):265-275.
- *Costa M, Yan Y, Zhao D, et al. 2003. Molecular mechanisms of nickel carcinogenesis: Gene silencing by nickel delivery to the nucleus and gene activation/inactivation by nickel-induced cell signaling. *J Environ Monit* 5(2):222-223.
- *Costa M, Zhuang Z, Huang X, et al. 1994. Molecular mechanisms of nickel carcinogenesis. *Sci Total Environ* 148:191-199.
- *Cotton FA, Wilkinson G. 1980. *Advanced inorganic chemistry. A comprehensive text.* New York, NY: John Wiley and Sons, 783-798.
- *Covance Laboratories, Inc. 2003. *In vivo* rat micronucleus assay with nickel sulfate hexahydrate. Study Number 7454-100 submitted to NiPERA, 4. August, 2003. Vienna, Virginia: Covance Laboratories, Inc.
- *Cox JE, Doll R, Scott WA, et al. 1981. Mortality of nickel workers: Experience of men working with metallic nickel. *Br J Ind Med* 38:235-239.
- *Cragle DL, Hollis DR, Newport TH, et al. 1984. A retrospective cohort study among workers occupationally exposed to metallic nickel powder at the Oak Ridge Gaseous Diffusion Plant. In: Sunderman FW Jr, Aitio A, Berlin A, eds. *Nickel in the human environment.* IARC scientific publication no. 53. Lyon, France: International Agency for Research on Cancer, 57-64.
- *CRIS. 1994. *Current Research Information System.* Beltsville, MD: U.S. Department of Agriculture.
- *Cronin E, DiMichiel AD, Brown SS. 1980. Oral challenge in nickel-sensitive women with hand eczema. In: Brown SS, Sunderman FW Jr, eds. *Nickel toxicology.* New York, NY: Academic Press, 149-152.
- Curstedt T, Casarett-Bruce M, Camner P. 1984. Changes in glycerophosphatides and their ether analogs in lung lavage of rabbits exposed to nickel dust. *Exp Mol Pathol* 41:26-34.
- Curstedt T, Hafman M, Robertson B, et al. 1983. Rabbit lung after long-term exposure to low nickel dust combustion. I. Effects on phospholipid concentration and surfactant activity. *Environ Res* 30:89-94.
- *Custer CM, Custer TW, Anteau MJ, et al. 2003. Trace elements in lesser scaup (*Aythya affinis*) from the Mississippi Flyway. *Ecotoxicology* 13:47-54.
- *Cyr F, Mehra MC, Mallet VN. 1987. Leaching of chemical contaminants from a municipal landfill site. *Bull Environ Contam Toxicol* 38:775-782.
- *Czerczak S, Gromiec JP. 2001. Nickel, ruthenium, rhodium, palladium, osmium, and platinum. In: Bingham E, Cochrane B, Powell CH, eds. *Patty's toxicology.* 5th ed., Volume 3. New York, NY: John Wiley & Sons, Inc., 195, 213, 222, 246.

9. REFERENCES

- *Dabeka RW. 1989. Survey of lead, cadmium, cobalt, and nickel in infant formulas and evaporated milks and estimation of dietary intakes of the elements by infants 0-12 months old. *Sci Total Environ* 89:279-289.
- *Daldrup T, Haarhoff K, Szathmary SC. 1983. Toedliche nickel sulfaye-intoxikation. *Berichte zur Serichtlichen Medizin* 41:141-144.
- *Danadevi K, Rozati R, Reddy PP, et al. 2003. Semen quality of Indian welders occupationally exposed to nickel and chromium. *Reprod Toxicol* 17:451-456.
- Danadevi K, Rozati R, Saleha Banu B, et al. 2004a. Genotoxic evaluation of welders occupationally exposed to chromium and nickel using the comet and micronucleus assays. *Mutagenesis* 19(1):35-41.
- Danadevi K, Rozati R, Saleha Banu B, et al. 2004b. *In vivo* genotoxic effect of nickel chloride in mice leukocytes using comet assay. *Food Chem Toxicol* 42(5):751-757.
- *Danielsen TE, Langard S, Andersen A. 1996. Incidence of cancer among Norwegian boiler welders. *Occup Environ Med* 53(4):231-234.
- Das KK, Dasgupta S. 2002. Effect of nickel sulfate on testicular steriodogenesis in rats during protein restriction. *Environ Health Perspect* 110(9):923-926.
- Dasika UK, Kanter KR, Vincent R. 2003. Nickel allergy to the percutaneous patent foramen ovale occuder and subsequent systemic nickel allergy. *J Thorac Cardiovasc Surg* 126(6):2112.
- *Davidson CI. 1980. Dry deposition of nickel from the atmosphere. In: Nriagu JO, ed. *Nickel in the environment*. New York, NY: John Wiley and Sons, 137-149.
- De Vito MJ, Maier WE, Diliberto JJ, et al. 1993. Comparative ability of various PCBs, PCDFs, and TCDD to induce cytochrome P450 1A1 and 1A2 activity following 4 weeks of treatment. *Fundam Appl Toxicol* 20:125-130.
- DiGioacchino M, Boscolo P, Cavallucci E, et al. 1998. Lymphocyte subset changes in blood and gastrointestinal mucosa after oral nickel challenge in nickel-sensitized women. *Contact Dermatitis* 43(4):206-211.
- *Deknudt GH, Leonard A. 1982. Mutagenicity tests with nickel salts in the male mouse. *Toxicology* 25:289-292.
- *DeLaune RD, Smith CJ. 1985. Release of nutrients and metals following oxidation of freshwater and saline sediment. *J Environ Qual* 14:164-168.
- *Delescluse J, Dinet Y. 1994. Nickel allergy in Europe: The new European legislation. *Dermatology* 189(suppl 2):56-57.
- *Demirjian YA, Westman TR, Joshi AM, et al. 1984. Land treatment of contaminated sludge with wastewater irrigation. *J Water Pollut Control Fed* 56:370-377.
- DeSilva BD, Doherty VR. 2000. Nickel allergy from orthodontic appliances. *Contact Dermatitis* 42(2):102-103

9. REFERENCES

- *DHHS. 1994. Seventh annual report on carcinogens: Summary 1994. Research Triangle Park, NC: U.S. Department of Health and Human Services, National Institute of Environmental Health Sciences, 262-269.
- *Dhir H, Agarwal K, Sharma A, et al. 1991. Modifying role of *Phyllanthus emblica* and ascorbic acid against nickel clastogenicity in mice. *Cancer Lett* 59:9-18.
- *Dieter MP, Jameson CW, Tucker AN, et al. 1988. Evaluation of tissue disposition, myelopoietic, and immunologic responses in mice after long-term exposure to nickel sulfate in the drinking water. *J Toxicol Environ Health* 24:356-372.
- *DiPaolo JA, Casto BC. 1979. Quantitative studies of *in vitro* morphological transformation of Syrian hamster cells by inorganic metal salts. *Cancer Res* 39:1008-1013.
- *DiPietro ES, Phillips DL, Paschal DC, et al. 1989. Determination of trace elements in human hair: Reference intervals for 28 elements in nonoccupationally exposed adults in the US and effects of hair treatments. *Biol Trace Elem Res* 22:83-100.
- Dogra S, Khanna AK, Kaw JL. 1999. Antibody forming cell response to nickel and nickel-coated fly ash in rats. *Hum Exp Toxicol* 18(5):333-337.
- *Dolan DM, Warry ND, Rossmann R, et al. 1986. Lake Huron, 1980: Intensive survey summary report. Windsor, Ontario, Canada: Surveillance Work Group, 133.
- *Doll R, Mathews JD, Morgan LG. 1977. Cancers of the lung and nasal sinuses in nickel workers. A reassessment of the period of risk. *Br J Ind Med* 34:102-105.
- *Doll R, Morgan LG, Speiger FE. 1970. Cancers of the lung and nasal sinuses in nickel workers. *Br J Cancer* 24:624-632.
- *Dolovich J, Evans SL, Nieboer E. 1984. Occupational asthma from nickel sensitivity: I. Human serum albumin in the antigenic determinant. *Br J Ind Med* 41:51-55.
- *Donat JR, Lao KA, Bruland KW. 1994. Speciation of dissolved copper and nickel in South San Francisco Bay: A multi-method approach. *Anal Chim Acta* 284:547-571.
- *Donskoy E, Donskoy M, Forouhar F, et al. 1986. Hepatic toxicity of nickel chloride in rats. *Ann Clin Lab Sci* 16:108-117.
- Dorn CR, Warner RD, Ahmed W. 1988. Comparison of NiSO₄ and NiCl₂ as sensitizers in the guinea pig. *Int Arch Allergy Appl Immunol* 85:332-336.
- *Dostal LA, Hopfer SM, Lin SM, et al. 1989. Effects of nickel chloride on lactating rats and their suckling pups, and the transfer of nickel through rat milk. *Toxicol Appl Pharmacol* 101:220-231.
- *Dotterud LK, Falk ES. 1994. Metal allergy in north Norwegian schoolchildren and its relationship with ear piercing and atopy. *Contact Dermatitis* 31:308-313.
- *Dressler RL, Storm GL, Tzilkowski WM, et al. 1986. Heavy metals in cottontail rabbits on mined lands treated with sewage sludge. *J Environ Qual* 15:278-281.

9. REFERENCES

- Duarte I, Lazzarini R, Kobata CM. 2003. Contact dermatitis in adolescents. *Am J Contact Dermatitis* 14(4):200-202.
- *Duce RA, Liss PS, Merrill JT, et al. 1991. The atmospheric input of trace species to the world ocean. *J Global Biogeochem Cycles* 5(3):193-259
- *Duke JM. 1980a. Nickel in rocks and ores. In: Nriagu JO, ed. *Nickel in the environment*. New York, NY: John Wiley and Sons, Inc., 27-50.
- *Duke JM. 1980b. Production and uses of nickel. In: Nriagu JO, ed. *Nickel in the environment*. New York, NY: John Wiley and Sons, Inc., 51-65.
- *Dunnick JK, Benson JM, Hobbs CH, et al. 1988. Comparative toxicity of nickel oxide, nickel sulfate, and nickel subsulfide after 12 days of inhalation exposure to F344/N rats and B6C3F1 mice. *Toxicology* 50:145-156.
- *Dunnick JK, Elwell MR, Benson JM, et al. 1989. Lung toxicity after 13-week inhalation exposure to nickel oxide, nickel subsulfide, or nickel sulfate in F344/N rats and B6C3F1 mice. *Fund Appl Toxicol* 12:584-594.
- *Dunnick JK, Elwell MR, Radovsky AE, et al. 1995. Comparative carcinogenic effects of nickel subsulfide, nickel oxide, or nickel sulfate chronic exposure in the lung. *Cancer Res* 55:5251-5256.
- Edwards MJ. 1986. Hyperthermia as a teratogen: A review of experimental studies and their clinical significance. *Teratog Carcinog Mutagen* 6:563-582.
- *Egedahl R, Rice E. 1984. Cancer incidence at a hydrometallurgical nickel refinery. In: Sunderman FW Jr, Aitio A, Berlin A, eds. *Nickel in the human environment*. IARC scientific publication no. 53. Lyon, France: International Agency for Research on Cancer, 47-55.
- *Egedahl RD, Coppock E, Homik R. 1991. Mortality experience at a hydrometallurgical nickel refinery in Fort Saskatchewan, Alberta between 1954 and 1984. *J Soc Occup Med* 41(1):29-33.
- *Egedahl R, Carpenter M, Lundell D. 2001. Mortality experience among employees at a hydrometallurgical nickel refinery and fertiliser complex in Fort Saskatchewan, Alberta (1954-95) *Occup Environ Med* 58(11):711-715.
- Egedahl RD, Fair M, Homik R. 1993. Mortality among employees at a hydrometallurgical nickel refinery and fertilizer complex in Fort Saskatchewan, Alberta (1954-1984). *Can J Public Health* 84:40-44.
- *Elias Z, Mur JM, Pierre F, et al. 1989. Chromosome aberrations in peripheral blood lymphocytes of welders and characterization of their exposure by biological samples analysis. *J Occup Med* 31:477-483.
- *Emmett EA, Risby TH, Jiang L, et al. 1988. Allergic contact dermatitis to nickel: Bioavailability from consumer products and provocation threshold. *J Am Acad Dermatol* 19(2):314-322.
- *English JC, Parker RDR, Sharma RP, et al. 1981. Toxicokinetics of nickel in rats after intratracheal administration of a soluble and insoluble form. *Am Ind Hyg Assoc J* 42:486-492.

9. REFERENCES

- *Enterline PE, Marsh GM. 1982. Mortality among workers in a nickel refinery and alloy plant in West Virginia. *J Natl Cancer Inst* 68:925-933.
- *EPA. 1978. Water-related environmental fate of 129 priority pollutants: Vol. 1. Washington, DC: Office of Water Planning and Standards, U.S. Environmental Protection Agency, 15-1 to 15-8. EPA440479029a.
- *EPA. 1980. Ambient water quality criteria document: Nickel. Washington, DC: U.S. Environmental Protection Agency. EPA440580060 (Errata 1981).
- *EPA. 1981a. Treatability manual: Volume I. Washington, DC: U.S. Environmental Protection Agency, EPA600282001a, I.4.II-1 to I.4.II-4.
- *EPA. 1981b. Database for influent heavy metals in publicly owned treatment works. EPA6005281220. Cincinnati, OH: Municipal Environmental Research Laboratory, U.S. Environmental Protection Agency 1-5.
- *EPA. 1983. Methods for chemical analysis of water and waste. Cincinnati, OH: Environmental Monitoring and Support Laboratory, U.S. Environmental Protection Agency. EPA800479020. 249.2-1 to 249.2-2; 249.1-1 to 249.1-2.
- *EPA. 1985a. Estimation of nickel species in ambient air. Research Triangle Park, NC: Pollution Assessment Branch, U.S. Environmental Protection Agency.
- *EPA. 1985b. Drinking water criteria document for nickel. Cincinnati, OH: Environmental Criteria and Assessment Office, U.S. Environmental Protection Agency. EPA600x84193. PB86117801.
- *EPA. 1986a. Health assessment document for nickel and nickel compounds. Cincinnati, OH: Office of Health and Environmental Assessment, Environmental Criteria and Assessment Office, U.S. Environmental Protection Agency. EPA600883012FF.
- *EPA. 1986b. Test methods for evaluating solid waste. 3rd ed. Washington, DC: U.S. Environmental Protection Agency, 3050-1 to 3050-6; three-6 to three-7; 6010-1 to 6010-17; 7520-1 to 7520-3.
- EPA. 1988. Analysis of clean water act effluent guidelines: Pollutants. Summary of the chemicals regulated by industrial point source category. U.S. Environmental Protection Agency. 40 CFR Parts 400-475.
- *EPA. 1990a. Interim methods for development of inhalation reference doses. Washington, DC: U.S. Environmental Protection Agency, Office of Research and Development. EPA600890066A.
- *EPA. 1990b. Guidelines establishing test procedures for the analysis of pollutants. U.S. Environmental Protection Agency. *Fed Regist* 55(116):24532-24537.
- EPA. 1991a. Environmental Protection Agency. 40 CFR Part 302.4. Hazardous substances and reportable quantities.
- EPA. 1991b. Environmental Protection Agency. 40 CFR Part 131. Amendments to the water quality standards regulation. *Fed Regist* 56:58442.

9. REFERENCES

- EPA. 1991c. Drinking water quantification of toxicologic effects for nickel. U.S. Environmental Protection Agency. PB92173426. ECAO-CIN-443.
- *EPA. 1994. Methods for the determination of metals in environmental samples, supplement 1. U.S. Environmental Protection Agency. National Exposure Research Laboratory. EPA600R94111.
- EPA. 1995a. Removal of legally obsolete or redundant rules. Fed Regist 60(125):33926-33930.
- EPA. 1995b. Toxics criteria for those states not complying with Clean Water Act Section 303(c)(2)(B). Fed Regist 60:44123.
- EPA. 1996a. Drinking water regulations and health advisories. Washington, DC. U.S. Environmental Protection Agency, Office of Water. EPA822R96001.
- EPA. 1996b. List of hazardous substances and reportable quantities. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 302.
- *EPA. 1996c. Method 1640: Determination of trace elements in ambient waters by on-line chelation preconcentration and inductively coupled plasma-mass spectrometry. Washington DC: U.S. Environmental Protection Agency. EPA821R96007.
- *EPA. 1996d. Method 1639: Determination of trace elements in ambient waters by stabilized temperature graphite furnace atomic absorption. Washington, DC: U.S. Environmental Protection Agency. EPA821R96005.
- *EPA. 1996e. Method 1638: Determination of trace elements in ambient waters by inductively coupled plasma-mass spectrometry. Washington, DC: U.S. Environmental Protection Agency. EPA821R96005.
- *EPA. 1997a. Special report on environmental endocrine disruption: An effects assessment and analysis. Washington, DC: U.S. Environmental Protection Agency, Risk Assessment Forum. EPA630R96012.
- EPA. 1997b. Method 200.12: Determination of trace elements in marine waters by stabilized temperature graphite furnace atomic absorption. Cincinnati OH: National Exposure Research Laboratory.
- EPA. 1997c. Method 200.10: Determination of trace elements in marine waters by on-line chelation preconcentration and inductively coupled plasma- mass spectrometry. Cincinnati OH: National Exposure Research Laboratory.
- EPA. 1997d. Method 200.13: Determination of trace elements in marine waters by off-line chelation preconcentration with graphite furnace atomic absorption. Cincinnati OH: National Exposure Research Laboratory, 1-19.
- *EPA. 1999. Compendium of methods for the determination of inorganic compounds in ambient air. Chapters 10-3.2, 10-3.3, 10-3.4, 10-3.5, and 10-3.6. Cincinnati OH: U.S. Environmental Protection Agency, Office of Research and Development. EPA625R96010a.
- *EPA. 2000. National air pollutant emission trends, 1900-1998. Research Triangle Park, NC: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards. EPA454R00002. <http://www.epa.gov/ttn/atw/nata/index.htm>.

9. REFERENCES

- *EPA. 2002a. 2002 Edition of the drinking water standards and health advisories. Washington, DC: U.S. Environmental Protection Agency. EPA822R02038. <http://www.epa.gov/waterscience>. June 06, 2003.
- *EPA. 2002b. Test methods for evaluating solid waste, physical/chemical methods. Washington, DC: U.S. Environmental Protection Agency. SW-846. <http://www.epa.gov/epaoswer/hazwaste/test/up4b.htm>.
- *EPA. 2003a. Chemical accident prevention provisions. List of substances. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 68.130. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- *EPA. 2003b. Chemical accident prevention provisions. Table of toxic endpoints. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 68, Appendix A. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- *EPA. 2003c. Criteria for municipal solid waste landfills. List of hazardous inorganic and organic constituents. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 258, Appendix II. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- *EPA. 2003d. Designation, reportable quantities, and notification. Designation of hazardous substance. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 302.4. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- EPA. 2003e. Designation, reportable quantities, and notification. Notification requirements. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 302.6. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- *EPA. 2003f. Effluent guidelines and standards. General provisions. Toxic pollutants. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 401.15. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- *EPA. 2003g. Emergency planning and notification. The list of extremely hazardous substances and their threshold planning quantities. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 355, Appendix A. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- EPA. 2003h. Identification and listing of hazardous waste. Hazardous constituents. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 261, Appendix VIII. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- *EPA. 2003i. Land disposal restrictions. Universal treatment standards. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 268.48. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- *EPA. 2003j. National emission standards for hazardous air pollutants. List of pollutants. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 61.01. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- EPA. 2003k. National primary drinking water regulations. Maximum contaminant level goals for inorganic contaminants. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 141.51. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.

9. REFERENCES

- *EPA. 2003l. National primary drinking water regulations. Maximum contaminant levels for inorganic contaminants. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 141.62. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- EPA. 2003m. Standards for owners and operators of hazardous waste treatment, storage, and disposal facilities. Ground-water monitoring list. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 264, Appendix IX. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- *EPA. 2003n. Standards for the management of specific hazardous wastes and specific types of hazardous waste management facilities. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 266, Appendix V. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- *EPA. 2003o. Standards for the management of specific hazardous wastes and specific types of hazardous waste management facilities. Health-based limits for exclusion of waste-derived residues. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 266, Appendix VII. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- EPA. 2003p. Standards for the use or disposal of sewage sludge. Pollutant limits. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 503.13. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- *EPA. 2003q. Standards for the use or disposal of sewage sludge. Pollutant limits. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 503.43. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- *EPA. 2003r. Toxic chemical release reporting: Community right-to-know. Chemicals and chemical categories to which this part applies. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 372.65. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- *EPA. 2003s. Water quality guidance for the Great Lakes system. Pollutants of initial focus in the Great Lakes water quality initiative. Washington, DC: U.S. Environmental Protection Agency. 40 CFR 132, Table 6. <http://www.epa.gov/epahome/cfr40.htm>. June 06, 2003.
- *EPA. 2003t. National human exposure assessment survey (NHEXAS) databases. Washington, DC: U.S. Environmental Protection Agency. <http://oaspub.epa.gov/eims/eimsapi.search?partner=ord-heds&frm=simple> (query keyword = NHEXAS). August 29, 2003.
- *EPA. 2003u. 1996 modeled ambient concentration for nickel compounds. Washington, DC: U.S. Environmental Protection Agency. http://www.epa.gov/ttnatw01/nata/pdf/nicke_conc.pdf. August 28, 2003.
- Ermolli M, Menne C, Pozzi G, et al. 2001. Nickel, cobalt and chromium-induced cytotoxicity and intracellular accumulation in human hacaT keratinocytes. *Toxicology* 159(1-2):23-31.
- *Eun HC, Marks R. 1990. Dose-response relationships for topically applied antigens. *Br J Dermatol* 122:491-499.
- *Evans LJ. 1989. Chemistry of metal retention by soils. *Environ Sci Technol* 23:1046-1056.
- *Evans EG, Evans GF, Ray DB, et al. 1984. Air quality data for metals 1977 through 1979 from the national air surveillance networks. Research Triangle Park, NC: Office of Research and Development,

9. REFERENCES

Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency. EPA600S483053.

*Evans JE, Miller ML, Andringa A, et al. 1995. Behavioral, histological, and neurochemical effects of nickel(II) on the rat olfactory system. *Toxicol Appl Pharmacol* 130:209-220.

FDA. 1993. Quality standard for foods with no identity standards; bottled water. Food and Drug Administration. *Fed Regist* 58:41612-41619.

*FDA. 2000. Total diet study statistics on element results. Washington, DC: Food and Drug Administration. Revision 1, 1991-1998. April 25, 2000.

*FDA. 2003a. Beverages. Bottled water. Washington, DC: Food and Drug Administration. 21 CFR 165.110. <http://www.access.gpo.gov/cgi-bin/cfrassemble.cgi?title=200321>. June 06, 2003.

*FDA. 2003b. Direct food substances generally recognized as safe. Nickel. Washington, DC: Food and Drug Administration. 21 CFR 184.1537. <http://www.access.gpo.gov/cgi-bin/cfrassemble.cgi?title=200321>. June 06, 2003.

*FDA. 2003c. Indirect food additives: Paper and paperboard components. Components of paper and paperboard in contact with dry food. Washington, DC: Food and Drug Administration. 21 CFR 176.180(b)(2). <http://www.access.gpo.gov/cgi-bin/cfrassemble.cgi?title=200321>. June 06, 2003.

*FEDRIP. 2004. Federal Research in Progress. Springfield, VA: National Technical Information Service.

*Feng X, Melander AP, Klaue B. 2000. Contribution of municipal waste incineration to trace metal deposition on the vicinity. *Water Air Soil Pollution* 119:295-316.

Figa-Talamanca I, Petrelli G. 2000. Reduction in male births among workers exposed to metal fumes. *Int J Epidemiol* 29(2):381-383.

Finch GL, Fisher GL, Hayes TL. 1987. The pulmonary effects and clearance of intratracheally instilled Ni3S2 and TiO2 in mice. *Environ Res* 42:83-93.

*Fischer T. 1989. Occupational nickel dermatitis. In: Maibach HI, Menne T, eds. *Nickel and the skin: Immunology and toxicology*. Boca Raton, FL: CRC Press, Inc., 117-132.

*Fisher GL, Chrisp CE, McNeill DA. 1986. Lifetime effects of intratracheally instilled nickel subsulfide on B6C3F1 mice. *Environ Res* 40:313-320.

*Fletcher GG, Rossetto FE, Turnbull JD, et al. 1994. Toxicity, uptake, and mutagenicity of particulate and soluble nickel compounds. *Environ Health Perspect* 102(suppl 3):69-79.

Fleming CJ, Burden AD, Forsyth A. 1999. The genetics of allergic contact hypersensitivity to nickel. *Contact Dermatitis* 41(5):251-253.

*Flint GN, Packirisamy S. 1995. Systemic nickel: The contribution made by stainless-steel cooking utensils. *Contact Dermatitis* 32:218-224.

9. REFERENCES

- *Fomon SJ. 1966. Body composition of the infant: Part I: The male "reference infant". In: Falkner F, ed. Human development. Philadelphia, PA: WB Saunders, 239-246.
- *Fomon SJ, Haschke F, Ziegler EE, et al. 1982. Body composition of reference children from birth to age 10 years. *Am J Clin Nutr* 35:1169-1175.
- *Forgacs Z, Paksy K, Lazar P, et al. 1998. Effect of Ni²⁺ on the testosterone production of mouse primary Leydig cell culture. *J Toxicol Environ Health A* 55:213-224.
- *Forgacs Z, Nemethy Z, Revesz C, et al. 2001. Specific amino acids moderate the effects on Ni²⁺ on the testosterone production of mouse Leydig cells *in vitro*. *J Toxicol Environ Health A* 62(5):349-358.
- *Foulkes EC, Blanck S. 1984. The selective action of nickel on tubule function in rabbit kidneys. *Toxicology* 33:245-259.
- *Fournier P-G, Govers TR. 2003. Contamination by nickel, copper and zinc during the handling of euro coins. *Contact Dermatitis* 48:181-188.
- *Francis AJ, Dodge CJ. 1990. Anaerobic microbial remobilization of toxic metals coprecipitated with iron oxide. *Environ Sci Technol* 24:373-378.
- *Frankild S, Andersen KE, Nielsen GD. 1995. Effect of sodium lauryl sulfate (SLS) on *in vitro* percutaneous penetration of water, hydrocortisone and nickel. *Contact Dermatitis* 32:338-345.
- Frasier LH, Chaudhuri I. 2003. Short-term inhalation toxicity benchmark for nickel oxide. *Toxicol Sci* 72(S-1):142-143.
- *Frenkel K, Karkoska J, Cohen B, et al. 1994. Occupational exposures to Cd, Ni, and Cr modulate titers of antioxidantized DNA base autoantibodies. *Environ Health Perspect* 102(suppl 3):221-225.
- *Friedland AJ, Johnson AH, Siccama TG. 1986. Zinc, Cu, Ni and Cd in the forest floor in the northeastern United States. *Water Air Soil Pollut* 29:233-243.
- *FSTRAC. 1990. Summary of state and federal drinking water standards and guidelines, 1990. Washington, DC: American Water Works Association.
- *Fullerton A, Andersen JR, Hoelgaard A, et al. 1986. Permeation of nickel salts through human skin *in vitro*. *Contact Dermatitis* 15:173-177.
- *Funakoshi T, Inoue T, Shimada H, et al. 1997. The mechanisms of nickel uptake by rat primary hepatocyte cultures: Role of calcium channels. *Toxicology* 124(1):21-26.
- *Galbreath KC, Crocker CR, Nyberg CM, et al. 2003. Nickel speciation measurements of urban particulate matter: Method evaluation and relevance to risk assessment. *J Environ Monit* 4(3):56N-61N.
- Galloway WB, Lake JL, Phelps DK, et al. 1983. The mussel watch: Intercomparison of trace level constituent determinations. *Environ Toxicol Chem* 2:395-410.
- Gandini C, Locatelli C, Mennoia NV, et al. 2000. Acute occupational poisoning by inhalation of nickel carbonate [Abstract]. *Toxicol Lett* 116(Suppl. 1):84.

9. REFERENCES

- *Gawkrodger DJ, Cook SW, Fell GS, et al. 1986. Nickel dermatitis: The reaction to oral nickel challenge. *Br J Dermatol* 115:33-38.
- *Gawkrodger DJ, Healy J, Howe AM. 1995. The prevention of nickel contact dermatitis. A review of the use of binding agents and barrier creams. *Contact Dermatitis* 32:257-265.
- Gawkrodger DJ, Lewis FM, Shah M. 2000. Contact sensitivity to nickel and other metals in jewelry reactors. *J Am Acad Dermatol* 43(1):31-36.
- *Gerin M, Fletcher AC, Gray C, et al. 1993. Development and use of a welding process exposure matrix in a historical prospective study of lung cancer risk in European welders. *Int J Epidemiol* 22(6, Suppl 2):S22-28.
- *Gerritse RG, Vriesema R, Dalenberg J, et al. 1982. Effect of sewage sludge on trace element mobility in soils. *J Environ Qual* 7:359-364.
- *Ghezzi I, Baldasseroni A, Sesana G, et al. 1989. Behaviour of urinary nickel in low-level occupational exposure. *Med Lav* 80:244-250.
- *Gibbons RD, Dolan DG, May H, et al. 1999. Statistical comparison of leachate from hazardous, codisposal, and municipal solid waste landfills. *Ground Water Monit Remed* (fall) :57-72.
- *Gilman JPW. 1962. Metal carcinogenesis. II. A study on the carcinogenic activity of cobalt, copper, iron and nickel compounds. *Cancer Res* 22:159-162.
- *Gitlitz PH, Sunderman FW Jr, Goldblatt PJ. 1975. Aminoaciduria and proteinuria in rats after a single intraperitoneal injection of Ni(II). *Toxicol Appl Pharmacol* 34:430-440.
- *Giusti L, Yang Y-L, Hewitt CN, et al. 1991. The solubility and partitioning of atmospherically derived trace metals in artificial and natural waters: A review. *Atmos Environ* 27A:1567-1578.
- *Giwerzman A, Carlsen E, Keiding N, et al. 1993. Evidence for increasing incidence of abnormalities of the human testis: A review. *Environ Health Perspect Suppl* 101(2):65-71.
- *Gladney ES, Gordon SE, Zoller WH. 1978. Coal combustion: Source of elements in urban air. *J Environ Sci Health A13*:481-491.
- *Gladney ES, Perrin DR, Robinson RD, et al. 1984. Multitechnique determination of elemental concentrations in NBS urban air particulate SRM 1648 and evaluation of its use for quality assurance. *J Radioanal Nucl Chem* 83:379-386.
- *Godbold JH, Tompkins EA. 1979. A long-term mortality study of workers occupationally exposed to metallic nickel at the Oak Ridge Gaseous Diffusion Plant. *J Occup Med* 21:799-806.
- *Goldberg M, Goldberg P, Leclerc A, et al. 1987. Epidemiology of respiratory cancers related to nickel mining and refining in New Caledonia (1978-1984). *Int J Cancer* 15:300-304.
- *Goldberg M, Goldberg P, Leclerc A, et al. 1994. A 10-year incidence survey of respiratory cancer and a case-control study within a cohort of nickel mining and refining workers in New Caledonia. *Cancer Causes Control* 5:15-25.

9. REFERENCES

- *Goldfrank LR, Weisman RS, Flomenbaum NE, et al. 1990. Goldfrank's toxicologic emergencies. 4th ed. Norwalk, CT: Appleton and Lange, 656-658.
- *Golomb D, Ryan D, Eby N, et al. 1997. Atmospheric deposition of toxics onto Massachusetts Bay. I. Metals. *Atmos Environ* 31(9):1349-1359.
- *Gordon CJ. 1989. Effect of nickel chloride on body temperature and behavioral thermoregulation in the rat. *Neurotoxicol Teratol* 11:317-320.
- *Gordon T, Amdur MO. 1991. Responses of the respiratory system to toxic agents. In: Amdur MO, Doull J, Klaassen CD, eds. Casarett and Doull's toxicology. 4th ed. New York, NY: McGraw-Hill, Inc., 383-406.
- *Gordon CJ, Fogelson L, Stead AG. 1989. Temperature regulation following nickel intoxication in the mouse: Effect of ambient temperature. *Comp Biochem Physiol* 92:73-76.
- *Gosselin RE, Smith RP, Hodge HC. 1984. Clinical toxicology of commercial products, 5th ed. Baltimore, MD: Williams & Wilkins, II, 145.
- *Goutet M, Ban M, Binet S. 2000. Effects of nickel sulfate on pulmonary natural immunity in Wistar rats. *Toxicology* 145(1):15-26.
- *Graham JA, Miller FJ, Daniels MJ, et al. 1978. Influence of cadmium, nickel and chromium on primary immunity in mice. *Environ Res* 16:77-87.
- *Grandjean P. 1984. Human exposure to nickel. In: Sunderman FW Jr, ed. Nickel in the human environment. Proceedings of a joint symposium, IARC scientific publication no. 53. Lyon, France: International Agency for Research on Cancer, 469-485.
- *Graney JR, Landis MS, Norris GA. 2004. Concentrations and solubility of metals from indoor and personal exposure PM2.5 samples. *Atmos Environ* 38(2):237-247.
- *Gray LE Jr, Kavlock RJ, Ostby J, et al. 1986. An evaluation of figure-eight maze activity and general behavioral development following prenatal exposure to forty chemicals: Effects of cytosine arabinoside, dinocap, nitrofen, and vitamin A. *Neurotoxicology* 7:449-462.
- *Green MHL, Muriel WJ, Bridges BA. 1976. Use of simplified fluctuation test to detect low levels of mutagens. *Mutat Res* 38:33-42.
- *Greenberg RR, Zoller WH, Gordon SE. 1978. Composition and size distribution of particles released in refuse incinerators. *Environ Sci Technol* 12:566-573.
- *Grimsrud TK, Berge SR, Haldorsen T, et al. 2002. Exposure to different forms of nickel and risk of lung cancer. *Am J Epidemiol* 156(12):1123-1132.
- *Grimsrud TK, Berge SR, Martinsen JI, et al. 2003. Lung cancer incidence among Norwegian nickel-refinery workers 1953-2000. *J Environ Monit* 5(2):190-197.
- Gupta S, Ahmad N, Hussein MM, et al. 2000. Involvement of nitric oxide in nickel-induced hyperglycemia in rats. *Nitric Oxide* 4(2):129-138.

9. REFERENCES

- *Gutenmann WH, Rutzke M, Kuntz HT, et al. 1994. Elements and polychlorinated biphenyls in sewage sludge of large cities in the United States. *Chemosphere* 28(4):725-728.
- *Guzelian PS, Henry CJ, Olin SS, eds. 1992. Similarities and differences between children and adults: Implications for risk assessment. Washington, DC: International Life Sciences Institute Press.
- Haack E, Warren LA. 2003. Biofilm hydrous manganese oxyhydroxides and metal dynamics in acid rock drainage. *Environ Sci Technol* 37(18):4138-4147.
- *Haber LT, Erdreich L, Diamond GL, et al. 2000. Hazard identification and dose response of inhaled nickel-soluble salts. *Regul Toxicol Pharmacol* 31:210-230.
- Haley PJ, Bise DE, Muggenburg BA, et al. 1987. Immunopathologic effects of nickel subsulfide on the primate pulmonary immune system. *Toxicol Appl Pharmacol* 88:1-12.
- *Haley PJ, Shopp GM, Benson JM, et al. 1990. The immunotoxicity of three nickel compounds following 13-week inhalation exposure in the mouse. *Fundam Appl Toxicol* 15:476-487.
- *Halim M, Conte P, Piccolo A. 2003. Potential availability of heavy metals to phytoextraction from contaminated soils induced by exogenous humic substances. *Chemosphere* 52:265-275.
- *Hamilton-Koch W, Snyder RD, Lavelle JM. 1986. Metal-induced DNA damage and repair in human diploid fibroblasts and Chinese hamster ovary cells. *Chem Biol Interact* 59:17-28.
- *Hansen K, Stern RM. 1984. Toxicity and transformation potency of nickel compounds in BHK cells *in vitro*. In: Sunderman FW Jr, Aitio A, Berlin A, eds. Nickel in the human environment. IARC scientific publication no. 53. Lyon, France: International Agency for Research on Cancer, 193-200.
- *Hansen LD, Fisher JL. 1980. Distribution in coal fly ash particles. *Environ Sci Technol* 14:1111-1117.
- *Hansen KS, Lauritsen JM, Skytthe A. 1996. Cancer incidence among mild steel and stainless steel welders and other metal workers. *Am J Ind Med* 30(4):373-382.
- *Hansson HC, Ekholm AKP, Ross HB. 1988. Rainwater analysis: A comparison between proton-induced x-ray emission and graphite furnace atomic absorption spectroscopy. *Environ Sci Technol* 22:527-531.
- *Hargitai L. 1989. The role of humus status of soils in binding toxic elements and compounds. *Sci Total Environ* 81/82:643-651.
- Harkin A, Hynes MJ, Masterson E, et al. 2003. A toxicokinetic study of nickel-induced immunosuppression in rats. *Immunopharmacol Immunotoxicol* 45(4):655-670.
- *Haro RT, Furst A, Falk H. 1968. Studies on the acute toxicity of nickelocene. *Proc West Pharmacol Soc* 11:39-42.
- Harrison SJ, Vale JA, Watts CD. 1993. The estimation of aerial inputs of metals to estuarine waters from point pattern data using an isoplething technique: Severn Estuary, UK. *Atmos Environ* 27A:2365-2373.
- *Hartwig A, Beyersmann D. 1989. Enhancement of UV-induced mutagenesis and sister-chromatid exchanges by nickel ions in V79 cells: Evidence for inhibition of DNA repair. *Mutat Res* 217:65-73.

9. REFERENCES

- *Hartwig A, Kruger I, Beyersmann D. 1994. Mechanisms in nickel genotoxicity: The significance of interactions with DNA repair. *Toxicol Lett* 72:353-358.
- *Hasanen E, Pohjola V, Hahkala M, et al. 1986. Emissions from power plants fueled by peat, coal, natural gas and oil. *Sci Total Environ* 54:29-51.
- *Hassler E, Lind B, Nilsson B, et al. 1983. Urinary and fecal elimination of nickel in relation to airborne nickel in a battery factory. *Ann Clin Lab Sci* 13:217-224.
- *Hawley GG. 1981. *Condensed chemical dictionary*. 10th ed. New York, NY: Van Nostrand Reinhold Co., 724-725.
- *Hay DJ, Finkelstein A, Klicius R. 1986. The national incinerator testing and evaluation program two-stage incinerator combustion tests. *Chemosphere* 15:9-12.
- *HazDat. 2005. Agency for Toxic Substances and Disease Registry (ATSDR), Atlanta, GA. <http://www.atsdr.cdc.gov>. January 13, 2005.
- Healy J, Johnson S, Little MC, et al. 1998. An *in vitro* study of the use of chelating agents in cleaning nickel-contaminated human skin: an alternative approach to preventing nickel allergic contact dermatitis. *Contact Dermatitis* 39:171-181.
- *Heit M, Klusek C, Baron J. 1984. Evidence of deposition of anthropogenic pollutants in remote Rocky Mountain air. *Water Air Soil Pollut* 22:403-416.
- *Heit M, Schofield C, Driscoll CT, et al. 1989. Trace element concentrations in fish from three Adirondack lakes New York USA with different pH values. *Water Air Soil Pollut* 44:9-30.
- *Helmers E, Schrems O. 1995. Wet deposition of metals to the tropical north and south Atlantic Ocean. *Atmos Environ* 29(19):2475-2484.
- *Hendel RC, Sunderman FW Jr. 1972. Species variations in the proportions of ultrafiltrable and protein-bound serum nickel. *Res Commun Chem Pathol Pharmacol* 4:141-146.
- Henriksson J, Tallkvist J, Tjalve H. 1997. Uptake of nickel into the brain via olfactory neurons in rats. *Toxicol Lett* 91(2):153-162.
- *Herpin U, Siewers U, Markert B, et al. 2004. Second German heavy-metal survey by means of mosses, and comparison of the first and second approach in Germany and other European countries. *Environ Sci Pollut Res* 11(1):57-66.
- Heule F, Tahapary GJ, Bello CR, et al. 1998. Delayed-type hypersensitivity to contact allergens in psoriasis. A clinical evaluation. *Contact Dermatitis* 38(2):78-82.
- Hindsen M, Bruze M, Christensen OB. 1997. The significance of previous allergic contact dermatitis for elicitation of delayed hypersensitivity to nickel. *Contact Dermatitis* 37(3):101-106.
- *Hindsen M, Bruze M, Christensen OB. 2001. Flare-up reactions after oral challenge with nickel in relation to challenge doses and intensity and time of previous patch test reactions. *J Am Acad Dermatol* 44(4):616-623.

9. REFERENCES

- *Hindsen M, Christensen OB, Moller B. 1994. Nickel levels in serum and urine in five different groups of eczema patients following oral ingestion of nickel. *Acta Derm Venereol* 74:176-178.
- Hirano S, Asami T, Kodama N, et al. 1994a. Correlation between inflammatory cellular responses and chemotactic activity in bronchoalveolar lavage fluid following intratracheal instillation of nickel sulfate in rats. *Arch Toxicol* 68(7):444-449.
- *Hirano S, Shimada T, Osugi J, et al. 1994b. Pulmonary clearance and inflammatory potency of intratracheally instilled or acutely inhaled nickel sulfate in rats. *Arch Toxicol* 68:548-554.
- *Ho VC, Johnston MM. 1986. Nickel dermatitis in infants. *Contact Dermatitis* 15:270-273.
- *Ho W, Furst A. 1973. Nickel excretion by rats following a single treatment. *Proc West Pharmacol Soc* 16:245-248.
- *Hoel DG, Davis DL, Miller AB, et al. 1992. Trends in cancer mortality in 15 industrialized countries, 1969-1986. *J Natl Cancer Inst* 84(5):313-320.
- *Hoey MJ. 1966. The effects of metallic salts on the histology and function of the rat testis. *J Reprod Fertil* 12:461-471.
- *Hopfer SM, Sunderman FW Jr. 1978. Manganese inhibition of nickel subsulfide induction of erythrocytosis in rats. *Res Commun Chem Pathol Pharmacol* 19(2):337-345.
- *Hopfer SM, Sunderman FW Jr. 1988. Hypothermia and deranged rhythm of core body temperature in nickel chloride-treated rats. *Res Commun Chem Pathol Pharmacol* 62:495-505.
- *Hopfer SM, Fay WP, Sunderman FW Jr. 1989. Serum nickel concentrations in hemodialysis patients with environmental exposure. *Ann Clin Lab Sci* 19:161-167.
- *Hopfer SM, Sunderman FW Jr, Reid MC, et al. 1984. Increased immunoreactive erythropoietin in serum and kidney extracts of rats with Ni₃S₂-induced erythrocytosis. *Res Commun Chem Pathol Pharmacol* 43:299-305.
- Horak E, Sunderman FW Jr. 1973. Fecal nickel excretion by healthy adults. *Clin Chem* 19:429-430.
- *Horak E, Sunderman FW Jr. 1975a. Effects of Ni(II) upon plasma glucagon and glucose in rats. *Toxicol Appl Pharmacol* 33:388-391.
- *Horak E, Sunderman FW Jr. 1975b. Effects of Ni(II), other divalent metal ions, and glucagon upon plasma glucose concentrations in normal, adrenalectomized and hypophysectomized rats. *Toxicol Appl Pharmacol* 32:316-329.
- *Horak E, Sunderman FW Jr, Sarkar B. 1976. Comparisons of antidotal efficacy of chelating drugs upon acute toxicity of Ni(II) in rats. *Res Commun Chem Pathol Pharmacol* 14:153-165.
- *Horie A, Tanaka I, Haratake J, et al. 1985. Electron microscopy of pulmonary lesions including carcinoma, induced by inhalation exposure of rats to nickel oxide aerosol. In: Brown SS, Sunderman FW Jr, eds. *Progress in nickel toxicology. Proceedings of the 3rd International Congress on Nickel Metabolism and Toxicology.* Oxford, UK: Blackwell, 41-44.

9. REFERENCES

- *Horng CJ, Horng PH, Hsu JW, et al. 2003. Simultaneous determination of urinary cadmium, cobalt, lead, and nickel concentrations in steel production workers by differential pulse stripping voltammetry. *Arch Environ Health* 58(2):104-110.
- HSDB. 1996. Hazardous Substances Data Bank. National Library of Medicine, National Toxicology Information Program, Bethesda, MD.
- *HSDB. 2003. Environmental standards and regulations. Hazardous Substances Data Bank. National Library of Medicine, National Toxicology Information Program, Bethesda, MD.
- *HSDB. 2004. Environmental standards and regulations. Hazardous Substances Data Bank. National Library of Medicine, National Toxicology Information Program, Bethesda, MD.
- *Hsie AW, Johnson NP, Couch DB, et al. 1979. Quantitative mammalian cell mutagenesis and a preliminary study of the mutagenic potential of metallic compounds. In: Kharasch N, ed. *Trace metals in health and disease*. New York, NY: Raven Press, 55-69.
- *Hsieh TH, Yu CP, Oberdörster G. 1999a. A dosimetry model of nickel compounds in the rat lung. *Inhal Toxicol* 11:229-246.
- *Hsieh TH, Yu CP, Oberdörster G. 1999b. Modeling of deposition and clearance of inhaled Ni compounds in the human lung. *Regul Toxicol Pharmacol* 30(1):18-28.
- Huber LT, Redirect L, Diamond GL, et al. 2000. Hazard identification and dose response of inhaled nickel-soluble salts. *Regul Toxicol Pharmacol* 31:210-230.
- *Hueper WC. 1958. Experimental studies in metal carcinogenesis. IX. Pulmonary lesions in guinea pigs and rats exposed to prolonged inhalation of powdered metallic nickel. *Arch Pathol* 65:600-607.
- *IARC. 1986. Environmental carcinogens: Selected methods of analysis. Volume 8. Some metals: As, Be, Cd, Cr, Ni, Pb, Se, Zn. IARC Scientific Publication No. 71. Lyon, France: International Agency for Research on Cancer, World Health Organization. Methods 11 and 17.
- *IARC. 1990. IARC monographs on the evaluation of carcinogenic risks to humans. Volume 49: Chromium, nickel and welding. Lyon, France: International Agency for Research on Cancer, World Health Organization, 257-445.
- IARC. 1994. IARC monographs on the evaluation of carcinogenic risks to humans. Lists of IARC evaluations. Lyon, France: International Agency for Research on Cancer, World Health Organization.
- *Ilback N-G, Fohlman J, Friman GA. 1992. A common viral infection can change nickel target organ distribution. *Toxicol Appl Pharmacol* 114(1):166-170.
- *Ilback N-G, Fohlman J, Friman G. 1994. Changed distribution and immune effects of nickel augment viral-induced inflammatory heart lesions in mice. *Toxicology* 91:203-219.
- *International Committee on Nickel Carcinogenesis in Man. 1990. Report of the International Committee on Nickel Carcinogenesis in Man. *Scand J Work Environ Health* 16(1):1-82.

9. REFERENCES

- *IOM. 2002. Arsenic, boron, nickel, silicon and vanadium. In: Dietary reference intakes for vitamin A, vitamin K, arsenic, boron, chromium, copper, iodine, iron, manganese, molybdenum, nickel, silicon, vanadium and zinc. Institute of Medicine. Washington, DC: National Academy Press.
- *IRIS. 1996. Integrated Risk Information System. Cincinnati, OH: Office of Health and Environmental Assessment, Environmental Criteria and Assessment Office, U.S. Environmental Protection Agency.
- *IRIS. 2005. Nickel. Washington, DC: Integrated Risk Information System. <http://www.epa.gov/iris/>. January 13, 2005.
- *Iscan M, Coban T, Eke BC, et al. 1995. Differential responses of hepatic monooxygenases and glutathione S-transferases of mice to a combination of cadmium and nickel. *Comp Biochem Physiol* 111C(1):61-68.
- Ishihara Y, Kyono H, Serita F, et al. 2000. Inflammatory responses and mucus secretion in rats with acute bronchiolitis induced by nickel chloride. *Inhal Toxicol* 14:417-430.
- *Ishimatsu S, Kawamoto T, Matsuno K, et al. 1995. Distribution of various nickel compounds in rat organs after oral administration. *Biol Trace Elem Res* 49(1):43-52.
- *Iyengar G. 1986. Sampling, storage and pretreatment of biological material. In: O'Neill IK, Schuller P, Fishbein L, eds. Some metals: As, Be, Cd, Cr, Ni, Pb, Se, Zn. IARC Scientific Publication No. 71. Lyon, France: International Agency for Research on Cancer, 141-158.
- *Iyengar G. 1989. Elemental analysis of biological systems. Vol. I: Biomedical, environmental, compositional, and methodological aspects of trace elements. Boca Raton, FL: CRC Press, 173-174.
- *Jakobsson K, Mikoczy Z, Skerfving S. 1997. Deaths and tumours among workers grinding stainless steel: A follow up. *Occup Environ Med* 54(11):825-829.
- *Jasim S, Tjalve H. 1986a. Effects of sodium pyridimethione on the uptake and distribution of nickel, cadmium and zinc in pregnant and non-pregnant mice. *Toxicology* 38:327-350.
- *Jasim S, Tjalve H. 1986b. Effect of zinc pyridimethione on the tissue disposition of nickel and cadmium in mice. *Acta Pharmacol Toxicol* 59:204-208.
- *Jenkins DW. 1980. Nickel accumulation in aquatic biota. In: Nriagu JO, ed. Nickel in the environment. New York, NY: John Wiley and Sons, 283-337.
- Jensen CS, Lisby S, Larsen JK, et al. 2004. Characterization of lymphocyte subpopulations and cytokine profiles in peripheral blood of nickel-sensitive individuals with systemic contact dermatitis after oral nickel exposure. *Contact Dermatitis* 50(1):31-38.
- *Jensen CS, Menne T, Lisby S, et al. 2003. Experimental systemic contact dermatitis from nickel: A dose-response study. *Contact Dermatitis* 49(3):124-132.
- Johansen JD, Menne T, Christophersen J, et al. 2000. Changes in the pattern of sensitization to common contact allergens in Denmark between 1985-86 and 1997-98, with a special view to the effect of preventive strategies. *Br J Dermatol* 142(3):490-495.

9. REFERENCES

- *Johanson CE. 1980. Permeability and vascularity of the developing brain: Cerebellum vs cerebral cortex. *Brain Res* 190:3-16.
- *Johansson A, Camner P. 1986. Adverse effects of metals on the alveolar part of the lung. *Scan Electron Microsc* 2:631-637.
- *Johansson A, Camner P, Jarstrand C, et al. 1980. Morphology and function of alveolar macrophages after long-term nickel exposure. *Environ Res* 23:170-180.
- *Johansson A, Camner P, Robertson B. 1981. Effects of long-term nickel dust exposure on rabbit alveolar epithelium. *Environ Res* 25:391-402.
- *Johansson A, Curstedt T, Jarstrand C, et al. 1988b. Effects on the rabbit lung of combined exposure to nickel and trivalent chromium. *J Aerosol Sci* 19:1075-1078.
- *Johansson A, Curstedt T, Robertson B, et al. 1983. Rabbit lung after inhalation of soluble nickel. II. Effects of lung tissue and phospholipids. *Environ Res* 31:399-412.
- *Johansson A, Curstedt T, Robertson B, et al. 1989. Lung lesions after experimental combined exposure to nickel and trivalent chromium. *Environ Res* 50:103-119.
- *Johansson A, Lundborg M, Skog S, et al. 1987. Lysozyme activity in ultrastructurally defined fractions of alveolar macrophages after inhalation exposure to nickel. *Br J Ind Med* 44:47-52.
- *Johansson A, Wiernik A, Lundborg M, et al. 1988a. Alveolar macrophages in rabbits after combined exposure to nickel and trivalent chromium. *Environ Res* 46:120-132.
- *Johnson DL, Davis BL, Dzubay TG, et al. 1984. Chemical and physical analyses of Houston aerosol for interlaboratory comparison of source apportionment procedures. *Atmos Environ* 18:1539-1553.
- *Jordan WP, King SE. 1979. Nickel feeding in nickel-sensitive patients with hand eczema. *J Am Acad Dermatol* 1:506-508.
- Juhlin L, Johansson GO, Bennich H, et al. 1969. Immunoglobulin E in dermatoses. *Arch Dermatol* 100:12-16.
- *Kaaber K, Veinen NK, Tjell JC. 1978. Low nickel diet in the treatment of patients with chronic nickel dermatitis. *Br J Dermatol* 98:197-201.
- Kaasalainen M, Yli-Halla M. 2003. Use of sequential extraction to assess metal partitioning in soils. *Environ Pollut* 126(2):225-233.
- *Kadota I, Kurita M. 1955. Hyperglycemia and islet cell damage caused by nickelous chloride. *Metab Clin Exp* 4:337-342.
- Kaldor J, Peto J, Easton D, et al. 1986. Models for respiratory cancer in nickel refinery workers. *J Natl Cancer Inst* 77:841-848.
- *Käkelä R, Käkelä A, Hyvarinen H. 1999. Effects of nickel chloride on reproduction of the rat and possible antagonistic role of selenium. *Comp Biochem Physiol C* 123(1):27-33.

9. REFERENCES

- Kalliomaki PL, Hyvarinen KH, Aitio A, et al. 1986. Kinetics of the metal components of intratracheally instilled stainless steel welding fume suspensions in rats. *Br J Ind Med* 43:112-119.
- *Kamboj VP, Kar AB. 1964. Anti-testicular effect of metallic and rare earth salts. *J Reprod Fertil* 7:21-23.
- *Kanematsu M, Hara M, Kada T. 1980. Rec-assay and mutagenicity studies on metal compounds. *Mutat Res* 77:109-116.
- Kanerva L, Jolanki R, Estlander T, et al. 2000. Incidence rates of occupational allergic contact dermatitis caused by metals. *Am J Contact Dermatitis* 11(3):155-160.
- Kang J, Zhang Y, Chen J, et al. 2003. Nickel-induced histone hypoacetylation: The role of reactive oxygen species. *Toxicol Sci* 74:279-286.
- *Kapsenberg ML, Van der Pouw-Kraan T, Stiekeme FE. 1988. Direct and indirect nickel-specific stimulation of T lymphocytes from patients with allergic contact dermatitis to nickel. *Eur J Immunol* 18:977-982.
- Karaczyn AA, Bal W, North SL, et al. 2003. The octapeptidic end of the C-terminal tail of histone H2A is cleaved off in cells exposed to carcinogenic nickel(II). *Chem Res Toxicol* 16(12):1555-1559.
- *Kargacin B, Klein CB, Costa M. 1993. Mutagenic responses of nickel oxides and nickel sulfides in Chinese hamster v79 cell lines at the xanthine-guanine phosphoribosyl transferase locus. *Mutat Res* 300:63-72.
- *Karjalainen S, Kerttula R, Pukkala E. 1992. Cancer risk among workers at a copper/nickel smelter and nickel refinery in Finland. *Int Arch Occup Environ Health* 63:547-551.
- *Kaschl A, Römheld V, Chen Y. 2002. The influence of soluble organic matter from municipal solid waste compost on trace metal leaching in calcareous soils. *Sci Total Environ* 291:45-57.
- *Kashulin NA, Ratkin NE, Dauvalter VA, et al. 2001. Impact of airborne pollution on the drainage area of subarctic lakes and fish. *Chemosphere* 42:51-59.
- Kasprzak KS, Bal W, Karaczyn AA. 2003a. The role of chromatin damage in nickel-induced carcinogenesis. A review of recent developments. *J Environ Monit* 5(2):183-187.
- *Kasprzak KS, Gabryel P, Jarczewska K. 1983. Carcinogenicity of nickel(II) hydroxides and nickel(II) sulfate in Wistar rats and its relation to the *in vitro* dissolution rates. *Carcinogenesis* 4:275-279.
- Kasprzak KS, Marchow L, Breborowicz J. 1973. Pathological reactions in rat lungs following intratracheal injection of nickel subsulfide and 3,4-benzopyrene. *Res Commun Chem Pathol Pharmacol* 6:237-245.
- *Kasprzak KS, Sunderman FW Jr, Salnikow K. 2003b. Nickel carcinogenesis. *Mutat Res* 533(1-2):67-97.
- *Kasprzak KS, Waalkes MP, Poirier LA. 1986. Effects of magnesium acetate on the toxicity of nickelous acetate in rats. *Toxicology* 42:57-68.

9. REFERENCES

- Kaur P, Dani HM. 2003. Carcinogenicity of nickel is the result of its binding to RNA and not to DNA. *J Environ Pathol Toxicol Oncol* 22(1):29-39.
- Kawanishi S, Inoue S, Oikawa S, et al. 2001. Oxidative DNA damage in cultured cells and rat lungs by carcinogenic nickel compounds. *Free Radic Biol Med* 31(1):108-116.
- Kawanishi S, Oikawa S, Inoue S, et al. 2002. Distinct mechanisms of oxidative DNA damage induced by carcinogenic nickel subsulfide and nickel oxides. *Environ Health Perspect* 110(Suppl 5):789-791.
- *Keczkes K, Basheer AM, Wyatt EH. 1982. The persistence of allergic contact sensitivity: A 10-year follow-up in 100 patients. *Br J Dermatol* 107:461-465.
- *Kempton S, Sterrit RM, Lester JN. 1987. Heavy metal removal in primary sedimentation. I. The influence of metal solubility. *Sci Total Environ* 63:231-247.
- *Kenney MA, McCoy H. 1992. A review of biointeractions of Ni and Mg. I. Enzyme, endocrine, transport, and skeletal systems. *Magnes Res* 5:215-222.
- *Khandelwal S, Tandon SK. 1984. Effect of cadmium pretreatment on nickel toxicity. In: Sunderman FW Jr, Aitio A, Berlin A, eds. *Nickel in the human environment*. IARC scientific publication no. 53. Lyon France: International Agency for Research on Cancer, 293-300.
- *Kilburn KH, Warshaw R, Boylen CT, et al. 1990. Cross-shift and chronic effects of stainless-steel welding related to internal dosimetry of chromium and nickel. *Am J Ind Med* 17:607-615.
- *King LD. 1988. Retention of metals by several soils of the southeastern United States. *J Environ Qual* 17:239-246.
- *Kinney PL, Chillrud SN, Ramstrom S, et al. 2002. Exposure to multiple air toxics in New York City. *Environ Health Perspect* 110 (Suppl 4):539-546.
- *Kirk WS. 1988a. Nickel. Preprint from the Bureau of Mines mineral yearbook. Pittsburgh, PA: Bureau of Mines, U.S. Department of the Interior, 1-12.
- *Kirk WS. 1988b. Nickel. In: *Mineral commodity summaries 1988*. Pittsburgh, PA: Bureau of Mines, U.S. Department of the Interior, 1-12.
- *Klein CB, Kargacin B, Su L. 1994. Metal mutagenic Chinese hamster cell lines. *Environ Health Perspect* 102(Suppl 3):63-7.
- *Kodama Y, Ishimatsu S, Matsuno K, et al. 1985a. Pulmonary deposition and clearance of a nickel oxide aerosol by inhalation. *Biol Trace Elem Res* 7:1-8.
- *Kodama Y, Tanaka Z, Matsuno K, et al. 1985b. Pulmonary deposition and clearance of inhaled nickel oxide aerosol. In: Brown SS, Sunderman FW Jr, eds. *Progress in nickel toxicology*. Proceedings of the 3rd International Congress on Nickel Metabolism and Toxicology. Oxford, UK: Blackwell, 81-84.
- *Kollmeier H, Seemann JW, Muller KM, et al. 1987. Increased chromium and nickel content in lung tissue and bronchial carcinoma. *Am J Ind Med* 11:659-669.

9. REFERENCES

- *Komori M, Nishio K, Kitada M, et al. 1990. Fetus-specific expression of a form of cytochrome P-450 in human livers. *Biochemistry* 29:4430-4433.
- *Koptsik S, Koptsik G, Livantsova S, et al. 2003. Heavy metals in soils near the nickel smelter: Chemistry, spatial variation, and impacts on plant diversity. *J Environ Monit* 5(3):441-450.
- *Koutrakis P, Briggs SLK, Leaderer BP. 1992. Source apportionment of indoor aerosols in Suffolk and Onondaga Counties, New York. *Environ Sci Technol* 26:521-527.
- *Kowalczyk GS, Gordon GE, Rheingrover SW. 1982. Identification of atmospheric particulate sources in Washington, D.C. using chemical element balances. *Environ Sci Technol* 16:79-90.
- Kreyberg L. 1978. Lung cancer in workers in a nickel refinery. *Br J Ind Med* 35:109-116.
- *Krishnan K, Andersen ME. 1994. Physiologically based pharmacokinetic modeling in toxicology. In: Hayes W, ed. *Principles and methods of toxicology*. 3rd ed. New York, NY: Raven Press, Ltd., 149-188.
- *Krishnan K, Andersen ME, Clewell HJ III, et al. 1994. Physiologically based pharmacokinetic modeling of chemical mixtures. In: Yang, RSA, ed. *Toxicology of chemical mixtures*. New York, NY: Academic Press, 399-437.
- Kuck PH. 1997. Nickel. In: U.S. geological survey minerals yearbook. <http://minerals.usgs.gov/minerals/pubs/commodity/nickel/>. June 8, 1997.
- *Kuck PH. 2001. Nickel. In: U.S. geological survey minerals yearbook. <http://minerals.usgs.gov/minerals/pubs/commodity/nickel/>. January 24, 2001.
- *Kuck PH. 2002. Nickel. In: U.S. geological survey minerals yearbook. <http://minerals.usgs.gov/minerals/pubs/commodity/nickel/>. December 30, 2004.
- *Kuligowski J, Halperin KM. 1992. Stainless steel cookware as a significant source of nickel, chromium, and iron. *Arch Environ Contam Toxicol* 23:211-215.
- *LaBauve JM, Kotuby-Amacher J, Gambrell RP. 1988. The effect of soil properties and a synthetic municipal landfill leachate on the retention of Ca, Ni, Pb, and Zn in soil and sediment materials. *J Water Pollut Control Fed* 60:379.
- *LaBella FS, Dular R, Lemon P, et al. 1973. Prolactin secretion is specifically inhibited by nickel. *Nature* 245:330-332.
- Laila AMA, Azza FA, El-Sehely M, et al. 2003. Effect of chelating agent (DMSA) and vitamin C on nickel induced testicular toxicity in rats: Toxicological, biochemical and histological study. *Toxicology* 191(1):52.
- *Landing WM, Perry JJ Jr, Guentzel JL. 1995. Relationships between the atmospheric deposition of trace elements, major ions, and mercury in Florida: The FAMS Project (1992-1993). *Water Air Soil Pollut* 80:343-352.

9. REFERENCES

- *Landsberger S, Jervis RE, Kajrys G, et al. 1983. Characterization of trace elemental pollutants in urban snow using proton induced x-ray emission and instrumental neutron activation analysis. *Int J Environ Anal Chem* 16:95-130.
- *Larramendy ML, Popescu NC, DiPaolo JA. 1981. Induction by inorganic metal salts of sister chromatid exchanges and chromosome aberrations in human and Syrian hamster cell strands. *Environ Mutagen* 3:597-606.
- *Larsen PF, Zdanowicz V, Johnson AC. 1983. Trace metal distribution in the surficial sediments of Penobscot Bay, Maine. *Bull Environ Contam Toxicol* 31:566-573.
- *Larsson-Stymne B, Widstrom L. 1985. Ear piercing--a cause of nickel allergy in schoolgirls? *Contact Dermatitis* 13:289-293.
- *Laschelles K, Nicholls D. 1991. Nickel compounds. In: Elvers B, Hawkins S, Schulz G, eds. *Ullmann's encyclopedia of industrial chemistry*. Volume A17. 5th edition. Weinheim, Germany: VCH Verlagsgesellschaft, 235.
- *Lechner JF, Tokiwa T, McClendon IA, et al. 1984. Effects of nickel sulfate on growth and differentiation of normal human bronchial epithelial cells. *Carcinogenesis* 5:1697-1703.
- *Lee AY, Lee YS. 1990. A case of allergic contact dermatitis due to nickel in underground water. *Contact Dermatitis* 22:141-143.
- *Lee RE Jr, Crish HL, Riley AE, et al. 1975. Concentration and size of trace metal emissions from a power plant, a store plant and a cotton gin. *Environ Sci Technol* 9:643-647.
- *Lee RE Jr, Goranson SS, Enrione RE, et al. 1972. National air surveillance cascade impactor network. II. Size distribution measurements of trace metal components. *Environ Sci Technol* 6(12):1025-1030.
- *Lee Y-W, Klein CB, Kargacin B, et al. 1995. Carcinogenic nickel silences gene expression by chromatin condensation and DNA methylation: A new model for epigenetic carcinogens. *Mol Cell Biol* 15:2547-2557.
- *Lee-Chen SF, Yu CT, Wu DR, et al. 1994. Differential effects of luminol, nickel and arsenite on the rejoining of ultraviolet light and alkylation-induced DNA breaks. *Environ Mol Mutagen* 23:116-120.
- *Leeder JS, Kearns GL. 1997. Pharmacokinetics in pediatrics: Implications for practice. *Pediatr Clin North Am* 44(1):55-77.
- *Leikauf GD. 2002. Hazardous air pollutants and asthma. *Environ Health Perspect* 110(Suppl 4):505-526.
- *Leung H-W. 1993. Physiologically-based pharmacokinetic modeling. In: Ballantyne B, Marrs T, Turner P, eds. *General and applied toxicology*. New York, NY: Stockton Press, I:153-164.
- Levin C, Maibach HI. 2000. An overview of the efficacy of topical corticosteroids in experimental human nickel contact dermatitis. *Contact Dermatitis* 43:317-321.

9. REFERENCES

- *Li J, Davidson G, Huang Y, et al. 2004. Nickel compounds act through phosphatidylinositol-3-kinase/Akt-dependent, p70(S6k)-independent pathway to induce hypoxia inducible factor transactivation and Cap43 expression in mouse epidermal C141 cells. *Cancer Res* 64(1):94-101.
- Li W, Zhao Y, Gantz DL, et al. 2003. Nickel (Ni²⁺) enhancement of microtubule assembly *in vitro* is dependent on GTP function. *Toxicol Appl Pharmacol* 193:202-208.
- *Ligeti L, Rubanyi G, Kaller A, et al. 1980. Effect of nickel ions on hemodynamics, cardiac performance and coronary blood flow in anesthetized dogs. In: Anke M, Schneider HJ, Bruckner C, eds. 3rd Trace Element Symposium: Nickel. Jena, East Germany: Freidrick-Schiller-Universitaet, 117-122.
- *Lioy PJ, Daisey JM, Morandi MT, et al. 1987. The airborne toxic element and organic substances (ATEOS) study design. In: Lioy PJ, Daisey JM, eds. Toxic air pollutants: A comprehensive study of non-criteria air pollutants. Chelsea, MI: Lewis Publishers, Inc., 3-42.
- Lindermann M, Bohmer J, Zabel M, et al. 2003. ELISpot: A new tool for the detection of nickel sensitization. *Clin Exp Allergy* 33(7):992-998.
- Linneberg A, Nielsen NH, Menne T, et al. 2003. Smoking might be a risk factor for contact allergy. *J Allergy Clin Immunol* 111(5):980-984.
- Lisby S, Hansen LH, Skov L, et al. 1999. Nickel-induced activation of T cells in individuals with negative patch test to nickel sulphate. *Arch Dermatol Res* 291(5):247-252.
- *Livingston, AL. 1978. Forage plant estrogens. *J Toxicol Environ Health* 4:301-324.
- *Lloyd GK. 1980. Dermal absorption and conjugation of nickel in relation to the induction of allergic contact dermatitis: Preliminary results. In: Brown SS, Sunderman FW Jr, eds. Nickel toxicology. London, UK: Academic Press, 145-148.
- *Lottermoser B. 2002. Exposure assessment of naturally metal enriched topsoils, Port MacQuarie, Australia. *Environ Geochem Health* 24:183-190.
- *Lu CC, Matsumoto N, Iijimi S. 1979. Teratogenic effects of nickel chloride on embryonic mice and its transfer to embryonic mice. *Teratology* 19:137-142.
- *Lucassen ECHET, Smolders AJP, Roelofs JGM. 2002. Potential sensitivity of mires to drought, acidification and mobilization of heavy metals: The sediment S/Ca +Mg) ratio as diagnostic tool. *Environ Pollut* 120:635-646.
- Lukin A, Dauvalter V, Kashulin N, et al. 2003. Assessment of copper-nickel industry impact on a subarctic lake ecosystem. *Sci Total Environ* 306:73-83.
- *Lumb G, Sunderman FW. 1988. The mechanism of malignant tumor induction by nickel subsulfide. *Ann Clin Lab Sci* 18:353-366.
- *Lytle TF, Lytle JS. 1990. Heavy metals in the eastern oyster, *Crassostrea virginica*, of the Mississippi sound. *Bull Environ Contam Toxicol* 44:142-148.
- *Magari SR, Schwartz J, Williams PL, et al. 2002. The association of particulate air metal concentrations with heart rate variability. *Environ Health Perspect* 110(9):875-880.

9. REFERENCES

- *Magnus K, Andersen A, Hogetveit AC. 1982. Cancer of respiratory organs among workers at a nickel refinery in Norway. *Int J Cancer* 30:681-685.
- *Manceau A, Tamura N, Celestre RS, et al. 2003. Molecular-scale speciation of Zn and Ni in soil ferromanganese nodules from Loess soils of the Mississippi Basin. *Environ Sci Technol* 37:75-80.
- *Mann H, Fyfe WS, Kerrich R, et al. 1989. Retardation of toxic heavy metal dispersion from nickel-copper mine tailings, Sudbury district, Ontario: Role of acidophilic microorganisms. I. Biological pathway of metal retardation. *Biorecovery* 1:155-172.
- *Marcus JM, Thompson AM. 1986. Heavy metals in oyster tissue around three coastal marinas. *Bull Environ Contam Toxicol* 36:587-594.
- *Mart L, Nurnberg HW, Dryssen D. 1984. Trace metal levels in the eastern Arctic Ocean. *Sci Total Environ* 39:1-14.
- *Martin TD, Brockhoff CA, Creed JT, et al. 1992. Determination of metals and trace elements in water and wastes by inductively coupled plasma-atomic emission spectrometry. In: Smoley KC, ed. *Methods for the determination of metals in environmental samples*. Boca Raton, FL: CRC Press, 33-78.
- *Martino M, Turner A, Millward GE. 2003. Influence of organic complexation on the adsorption kinetics of nickel in river waters. *Environ Sci Technol* 37(11):2383-2388.
- *Marzin DR, Phi HV. 1985. Study of the mutagenicity of metal derivatives with *Salmonella typhimurium* TA102. *Mutat Res* 155:49-51.
- *Mas A, Peligero MJ, Arola L, et al. 1986. Distribution and kinetics of injected nickel in the pregnant rat. *Clin Exp Pharmacol Physiol* 13:91-96.
- *Mastromatteo E. 1986. Yant memorial lecture: Nickel. *Am Ind Hyg Assoc J* 47:589-601.
- *Mathur AK, Gupta BN. 1994. Dermal toxicity of nickel and chromium in guinea pigs. *Vet Hum Toxicol* 36(2):131-132.
- Mathur AK, Gupta BN. 1998. Dermal toxicity of linear alkylbenzene sulfonate, chromium, and nickel in guinea pigs. *J Toxicol Cutaneous Ocul Toxicol* 17(4):191-196.
- *Mathur AK, Agarwal C, Singh A, et al. 1988. Effect of sodium lauryl sulphate and nickel alone and in combination on the skin of guinea pigs. *Toxicol Lett* 42:249-256.
- *Mathur AK, Datta KK, Tandon SK, et al. 1977. Effect of nickel sulphate on male rats. *Bull Environ Contam Toxicol* 17:241-247.
- *Mathur AK, Dikshith TSS, Lal MM, et al. 1978. Distribution of nickel and cytogenetic changes in poisoned rats. *Toxicology* 10:105-113.
- *Mathur AK, Gupta BN, Singh S, et al. 1992. Cutaneous toxicity of sodium lauryl sulphate, nickel, and their combination in guinea pigs: Biochemical and histopathological observations. *Bull Environ Contam Toxicol* 49:871-878.

9. REFERENCES

- *May TW, Wiedmeyer RH, Gober J, et al. 2001. Influence of mining-related activities on concentrations of metals in water and sediment from streams of the Black Hills, South Dakota. *Arch Environ Contam Toxicol* 40:1-9.
- *Mayer C, Klein RG, Wesch H, et al. 1998. Nickel subsulfide is genotoxic *in vitro* but shows no mutagenic potential in respiratory tract tissues of BigBlue(TM) rats and Muta(TM) Mouse mice *in vivo* after inhalation. *Mutat Res* 420(1-3):85-98.
- *Mayr U, Butsch A, Schneider S. 1992. Validation of two *in vitro* test systems for estrogenic activities with zearalenone, phytoestrogens and cereal extracts. *Toxicology* 74:135-149.
- M'Bemba Meka P, Chakrabarti SK. 2001. Effects of different nickel compounds on the transport of para-aminohippurate ion by rat renal cortical slices. *Toxicol Lett* 122(3):235-244.
- *McConnell LH, Fink JN, Schlueter DP, et al. 1973. Asthma caused by nickel sensitivity. *Ann Intern Med* 78:888-890.
- *McCoy H, Kenney MA. 1992. A review of biointeractions of Ni and Mg. II. Immune system and oncology. *Magnes Res* 5(3):223-232.
- McDowell SA, Gammon K, Bachurski CJ, et al. 2003. Differential gene expression in the initiation and progression of nickel-induced acute lung injury. *Am J Respir Cell Mol Biol* 28(2):188-198.
- *McGeer JC, Brix KV, Skeaff JM, et al. 2003. Inverse relationship between bioconcentration factor and exposure concentration for metals: implications for hazard assessment of metals in the aquatic environment. *Environ Toxicol Chem* 22(5):1017-1037.
- *McGregor DB, Brown A, Cattanch P, et al. 1988. Responses of the L5178Y TK+/TK- mouse lymphoma cell forward mutation assay. III. 72 coded chemicals. *Environ Mol Mutagen* 12:85-154.
- McNeely MD, Nechay MW, Sunderman FW Jr. 1972. Measurements of nickel in serum and urine as indices of environmental exposure to nickel. *Clin Chem* 18:992-995.
- *McNeill DA, Chrisp CE, Fisher GL. 1990. Tumorigenicity of nickel subsulfide in strain A/J mice. *Drug Chem Toxicol* 13:71-86.
- Meding B. 2000. Differences between the sexes with regard to work-related skin disease. *Contact Dermatitis* 43:65-71.
- Meding B. 2003. Epidemiology of nickel allergy. *J Environ Monit* 5(2):188-189.
- *Medinsky MA, Benson JM, Hobbs CH. 1987. Lung clearance and disposition of ⁶³Ni in F344/N rats after intratracheal instillation of nickel sulfate solutions. *Environ Res* 43:168-178.
- *Meijer C, Bredberg M, Fischer T, et al. 1995. Ear piercing, and nickel and cobalt sensitization, in 520 young Swedish men doing compulsory military service. *Contact Dermatitis* 32:147-149.
- *Melnyk LJ, Morgan JN, Fernando R, et al. 2003. Determination of metals in composite diet samples by inductively coupled plasma-mass spectrometry. *J AOAC Int* 86(2):439-447.

9. REFERENCES

- *Menne T. 1994. Quantitative aspects of nickel dermatitis: Sensitization and eliciting threshold concentrations. *Sci Total Environ* 148:275-281.
- *Menne T, Calvin G. 1993. Concentration threshold of non-occluded nickel exposure in nickel-sensitive individuals and controls with and without surfactant. *Contact Dermatitis* 29:180-184.
- *Menne T, Holm NV. 1983. Nickel allergy in a female twin population. *Int J Dermatol* 22:22-28.
- *Menne T, Maibach HI. 1987. Systemic contact allergy reactions. *Sem Dermatol* 6:108-118.
- *Menne T, Maibach HI. 1989. Nickel allergic contact dermatitis: A review. *J Am Coll Toxicol* 8:1271-1273.
- Menne T, Thorboe A. 1976. Nickel dermatitis--nickel excretion. *Contact Dermatitis* 2:353-354.
- *Menne T, Brandrup F, Thestrup-Pedersen K, et al. 1987. Patch test reactivity to nickel alloys. *Contact Dermatitis* 16:255-259.
- *Menne T, Christophersen J, Green A. 1989. Epidemiology of nickel dermatitis. In: Maibach HI, Menne T, eds. *Nickel and the skin: Immunology and toxicology*. Boca Raton, FL: CRC Press, Inc., 109-115.
- *Meranger JC, Subramanian KS, Chalifoux C. 1981. Survey for cadmium, cobalt, chromium, copper, nickel, lead, calcium, and magnesium in Canadian drinking water supplies. *J AOAC* 64:44-53.
- Merritt K, Crowe TD, Brown SA. 1989. Elimination of nickel, cobalt, and chromium following repeated injections of high dose metal salts. *J Biomed Mater Res* 23:845-862.
- Merzenich H, Hartwig A, Ahrens W, et al. 2001. Biomonitoring on carcinogenic metals and oxidative DNA damage in a cross-sectional study. *Cancer Epidemiol Biomarkers Prev* 10(5):515-522.
- Migally N, Murthy RC, Doye A, et al. 1982. Changes in pulmonary alveolar macrophages in rats exposed to oxides of zinc and nickel. *J Submicrosc Cytol* 14:621-626.
- Minoia C, Sabbioni E, Ronchi A, et al. 1994. Trace element reference values in tissues from inhabitants of the European Community. IV. Influence of dietary factors. *Sci Total Environ* 141:181-195.
- *Misra M, Athar M, Hasan SK, et al. 1988. Alleviation of nickel-induced biochemical alterations by chelating agents. *Fundam Appl Toxicol* 11:285-292.
- *Miura T, Patierno SR, Sakuramoto T. 1989. Morphological and neoplastic transformation of C3H/10t1/2 Cl 8 mouse embryo cells by insoluble carcinogenic nickel compounds. *Environ Mol Mutagen* 14:65-78.
- *Miyaki M, Akamatsu N, Ono T, et al. 1979. Mutagenicity of metal cations in cultured cells from Chinese hamster. *Mutat Res* 68:259-263.
- *Moller H. 1984. Attempts to induce contact allergy to nickel in the mouse. *Contact Dermatitis* 10:65-68.

9. REFERENCES

- *Moon J, Davison AJ, Smith TJ, et al. 1988. Correlation clusters in the accumulation of metals in human scalp hair: Effects of age, community of residence and abundances of metals in air and water supplies. *Sci Total Environ* 72:87-112.
- *Morgan LG, Rouge PJC. 1984. Biological monitoring in nickel refinery workers. In: Sunderman FW Jr, ed. Proceedings of a joint symposium. Lyon, France: International Agency for Research on Cancer, 507-520.
- *Morimoto Y, Nambu Z, Tanaka I, et al. 1995. Effects of nickel oxide on the production of tumor necrosis factor by alveolar macrophages of rats. *Biol Trace Elem Res* 48(3):287-296.
- *Morita T, Asano N, Awogi T, et al. 1997. Evaluation of the rodent micronucleus assay in the screening of IARC carcinogens (groups 1, 2A, and 2B). The summary report of the 6th collaborative study by CSGMT/JEMS · MMS. *Mutat Res* 389:3-122.
- Morris DL. 1998. Intradermal testing and sublingual desensitization for nickel. *Cutis* 61(3):129-132.
- *Morselli PL, Franco-Morselli R, Bossi L. 1980. Clinical pharmacokinetics in newborns and infants: Age-related differences and therapeutic implications. *Clin Pharmacokin* 5:485-527.
- *Moschandreas DJ, Karuchit S, Berry MR, et al. 2002. Exposure apportionment: Ranking food items by their contribution to dietary exposure. *J Expo Anal Environ Epidemiol* 12:233-243.
- *Moulin JJ, Clavel T, Roy D, et al. 2000. Risk of lung cancer in workers producing stainless steel and metallic alloys. *Int Arch Occup Environ Health* 73(3):171-80.
- *Moulin JJ, Portefaix P, Wild P, et al. 1990. Mortality study among workers producing ferroalloys and stainless steel in France. *Br J Ind Med* 47(8):537-543.
- *Moulin JJ, Wild P, Mantout B, et al. 1993. Mortality from lung cancer and cardiovascular disease among stainless-steel producing workers. *Cancer Causes Control* 4:75-81.
- *Mouvet C, Bourg ACM. 1983. Speciation (including adsorbed species) of copper, lead, nickel, and zinc in the Meuse River. *Water Res* 17:641-649.
- *Mozzanica N, Rizzolo L, Veneroni G, et al. 1990. HLA-A, B, C and DR antigens in nickel contact sensitivity. *Br J Dermatol* 122:309-314.
- Mudroch A, Arafat N, Davies S. 1984. Changes in chemical speciation of soluble metals in Quebec lakes. *Environ Tech Lett* 5:237-244.
- *Muir DCF, Jadon N, Julian JA, et al. 1994. Cancer of the respiratory tract in nickel sinter plant workers: Effect of removal from sinter plant exposure. *Occup Environ Med* 51(1):19-22.
- *Muir DCF, Julian J, Jadon N, et al. 1993. Prevalence of small opacities in chest radiographs of nickel sinter plant workers. *Br J Ind Med* 50:428-431.
- *Müller-Fassbender M, Elsenhans B, McKie AT, et al. 2003. Different behaviour of ⁶³Ni and ⁵⁹Fe during absorption in iron-deficient and iron-adequate jejunal rat segments ex vivo. *Toxicology* 185(1-2):141-153.

9. REFERENCES

- *Mumma RO, Raupach DC, Waldman JP, et al. 1984. National survey of elements and other constituents in municipal sewage sludge. *Arch Environ Contam Toxicol* 13:75-83.
- *Mustafa S, Haq I. 1988. Adsorption of copper, cobalt and nickel on amorphous iron hydroxide from aqueous electrolyte solution. *Environ Technol Lett* 9:1379-1386.
- *Myron DR, Zimmerman TJ, Shuler TR, et al. 1978. Intake of nickel and vanadium by humans. A survey of selected diets. *Am J Clin Nutr* 31:527-531.
- *NAS. 1975. Nickel. National Academy of Sciences. Washington, DC: National Academy Press, 4, 5, 17.
- NAS. 1989. Recommended dietary allowance. National Academy of Sciences. Washington DC: National Academy Press.
- *NAS. 2002. Dietary reference intakes for vitamin A, vitamin K, arsenic, boron, chromium, copper, iodine, iron, manganese, molybdenum, nickel, silicon, vanadium, and zinc. Washington, DC: National Academy of Sciences. <http://books.nap.edu/books/0309072794/html/521.html>. January 13, 2005.
- NAS/NRC. 1989. Biologic markers in reproductive toxicology. National Academy of Sciences/National Research Council. Washington, DC: National Academy Press, 15-35.
- NATICH. 1996. Acceptable ambient air concentration guidelines/standards; concentrations, units, and averaging times report. National Air Toxics Information Clearinghouse.
- Nestle FO, Speidel H, Speidel MO. 2002. Metallurgy: High nickel release from 1- and 2-Euro coins. *Nature* 419(6903):132.
- *Nethercott JR, Holness DL. 1990. Cutaneous nickel sensitivity in Toronto, Canada. *J Am Acad Dermatol* 22:756-761.
- *Newhook R, Hirtle H, Byrne K, et al. 2003. Releases from copper smelters and refineries and zinc plants in Canada: human health exposure and risk characterization. *Sci Total Environ* 301:25-41.
- Nguyen VD, Merks AGA, Valenta P. 1990. Atmospheric deposition of acid, heavy metals, dissolved organic carbon and nutrients in the Dutch Delta Area in 1980-1986. *Sci Total Environ* 99:71-91.
- *Nielsen FH. 1980. Effect of form of iron on the interaction between nickel and iron in rats: Growth and blood parameters. *J Nutr* 110:965-973.
- *Nielsen FH. 1982. Possible future implications of nickel, arsenic, silicon, vanadium, and other ultratrace elements in human nutrition. In: *Clinical and biochemical nutritional aspects of trace elements*. New York, NY: Alan R. Liss, Inc., 379-404.
- *Nielsen FH. 1990. Other trace elements. In: Brown ML, ed. *Present knowledge in nutrition*. 6th edition, Washington, DC: International Life Sciences Institute Press, 294-307.
- *Nielsen FH, Ollerich DA. 1974. Nickel: A new essential trace element. *FASEB J* 33:1767-1772.
- *Nielsen FH, Sandstead HH. 1974. Are nickel, vanadium, silicon, fluorine, and tin essential for man? *Ann J Clin Nutr* 27:515-520.

9. REFERENCES

- *Nielsen GD, Flyvholm M. 1984. Risks of high nickel intake with diet. In: Sunderman FW Jr, ed. Nickel in the human environment. Proceedings of a joint symposium. IARC scientific publication no. 53. Lyon, France: International Agency for Research on Cancer, 333-338.
- *Nielsen FH, Hunt CD, Uthus EO. 1980. Interactions between essential trace and ultratrace elements. *Ann NY Acad Sci* 355:152-162.
- *Nielsen FH, Myron DR, Givand SH, et al. 1975. Nickel deficiency in rats. *J Nutr* 105:1620-1630.
- *Nielsen FH, Shuler TR, McLeod TG, et al. 1984. Nickel influences iron metabolism through physiologic, pharmacologic and toxicologic mechanisms in the rat. *J Nutr* 114:1280-1288.
- *Nielsen GD, Jepson LV, Jorgensen PJ, et al. 1990. Nickel-sensitive patients with vesicular hand eczema: Oral challenge with a diet naturally high in nickel. *Br J Dermatol* 122:299-308.
- *Nielsen NH, Linneberg A, Menne T, et al. 2002. Incidence of allergic contact sensitization in Danish adults between 1990 and 1998; the Copenhagen Allergy Study, Denmark. *Br J Dermatol* 147(3):487-492.
- Nielsen NH, Menne T, Kristiansen J, et al. 1999. Effects of repeated skin exposure to low nickel concentrations: A model for allergic contact dermatitis to nickel on the hands. *Br J Dermatol* 141(4):676-682.
- *Nightingale HI. 1987. Water quality beneath urban runoff water management basins. *Water Res Bull* 23:197-205.
- NIOSH. 1989. National Occupational Exposure Survey (NOES). Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health. March 29, 1989.
- *NIOSH. 1990. National Occupational Exposure Survey (NOES). Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health. July 1, 1990.
- NIOSH. 1994a. Documentation for immediately dangerous to life or health concentrations (IDLHs). Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health.
- *NIOSH. 1994b. NIOSH manual of analytical methods. 4th ed. Methods 6007, 6300, 8005, 8310. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control.
- NIOSH. 1994c. NIOSH pocket guide to chemical hazards. Cincinnati, OH: U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health. NIOSH Publications.
- *NIOSH. 2003a. NIOSH pocket guide to chemical hazards. Nickel carbonyl. Washington, DC: National Institute for Occupational Safety and Health. <http://www.cdc.gov/niosh/npg/npg.html>. June 06, 2003.
- *NIOSH. 2003b. NIOSH pocket guide to chemical hazards. Nickel metal and other compounds. Washington, DC: National Institute for Occupational Safety and Health. <http://www.cdc.gov/niosh/npg/npg.html>. June 06, 2003.

9. REFERENCES

- *NOAA. 1987. A summary of selected data on chemical contaminants in tissues collected during 1984, 1985, and 1986. NOAA Tech. Memorandum NOS OMA38. Rockville, MD: National Oceanic Atmospheric Administration.
- *Norgaard O. 1955. Investigation with radioactive Ni-57 into the resorption of nickel through the skin in normal and in nickel-hypersensitive persons. *Acta Derm Venereol* 35:111-117.
- *Norgaard O. 1957. Investigations with radioactive nickel, cobalt and sodium on the resorption through the skin in rabbits, guinea pigs and man. *Acta Derm Venereol* 37:440-445.
- *North American Contact Dermatitis Group. 1973. Epidemiology of contact dermatitis in North America: 1972. *Arch Dermatol* 108:537-549.
- *Novey HS, Habib M, Wells ID. 1983. Asthma and IgE antibodies induced by chromium and nickel salts. *J Allergy Clin Immunol* 72:407-412.
- *NRC. 1993. National Research Council. Pesticides in the diets of infants and children. Washington, DC: National Academy Press.
- Nriagu JO. 1989. A global assessment of natural sources of atmospheric trace metals. *Nature* 338:47-49.
- *Nriagu JO, Coker RD. 1980. Trace metals in humic and fulvic acids from Lake Ontario sediments. *Environ Sci Technol* 14:443-446.
- *Nriagu JO, Pacyna JM. 1988. Quantitative assessment of worldwide contamination of air, water and soils by trace metals. *Nature* 333:134-139.
- *Nriagu JO, Lawson G, Wong HKT, et al. 1996. Dissolved trace metals in Lakes Superior, Erie, and Ontario. *Environ Sci Technol* 30:178-187.
- NTD. 1995. The export connection. National Trade Data Base.
- *NTP. 1996a. NTP technical report on the toxicology and carcinogenesis studies of nickel oxide (CAS No. 1313-99-1) in F344/N rats and B6C3F1 mice (inhalation studies). Research Triangle Park, NC: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health. NTP-TRS No. 451.
- *NTP. 1996b. NTP technical report on the toxicology and carcinogenesis studies of nickel subsulfide (CAS No. 12035-72-2) in F344/N rats and B6C3F1 mice (inhalation studies). Research Triangle Park, NC: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health. NTP-TRS No. 453.
- *NTP. 1996c. NTP technical report on the toxicology and carcinogenesis studies of nickel sulfate hexahydrate (CAS No. 10101-97-0) in F344/N rats and B6C3F1 mice (inhalation studies). Research Triangle Park, NC: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health. NTP-TRS No. 454.
- *NTP. 2002. Report on carcinogens. Bethesda, MD: U.S. Department of Health and Human Services, Public Health Service, National Toxicology Program. <http://ehp.niehs.nih.gov/roc/toc10/html>. June 06, 2003.

9. REFERENCES

- *Nygren O. 2002. New approaches for assessment of occupational exposure to metals using on-site measurements. *J Environ Monit* 4:623-627.
- *Obone E, Chakrabarti SK, Bai C, et al. 1999. Toxicity and bioaccumulation of nickel sulfate in Sprague-Dawley rats following 13 weeks of subchronic exposure. *J Toxicol Environ Health A* 57:379-401.
- *Odland JO, Nieboer E, Romanova N, et al. 2003. Intercommunity and temporal variation of eleven essential and five toxic elements in human placentas from deliveries in thirteen arctic and sub-arctic areas of Russia and Norway. *J Environ Monit* 5(1):166-174.
- *Ogawa HI, Shibahara T, Iwata H, et al. 1994. Genotoxic activities *in vivo* of cobaltous chloride and other metal chlorides as assayed in the *Drosophila* wing spot test. *Mutat Res* 320:133-140.
- *Ohanian EV. 1986. Health effects of corrosion products in drinking water. *Trace Subst Environ Health* 20:122-138.
- *Ohno H, Hanaoka F, Yamada M. 1982. Inducibility of sister chromatid exchanges by heavy metal ions. *Mutat Res* 104:141-145.
- Ohshima S. 2003. Induction of genetic instability and chromosomal instability by nickel sulfate in V79 Chinese hamster cells. *Mutagenesis* 18(2):133-137.
- *Ojajarvi IA, Partanen TJ, Ahblom A, et al. 2000. Occupational exposures and pancreatic cancer: A meta-analysis. *Occup Environ Med* 57(5):316-324.
- *Oliveira JP, Bastos de Siqueira MEP, Da Silva CS. 2000. Urinary nickel as bioindicator of workers' Ni exposure in a galvanizing plant in Brazil. *Int Arch Occup Environ Health* 73(1):65-68.
- Oller AR. 2002. Respiratory carcinogenicity assessment of soluble nickel compounds. *Environ Health Perspect Suppl* 110(5):841-844.
- *Oller AR, Costa M, Oberdorster G. 1997. Carcinogenicity assessment of selected nickel compounds. *Toxicol Appl Pharmacol* 143:152-166.
- *Olsen I, Jonsen J. 1979. Whole-body autoradiography of ⁶³Ni in mice throughout gestation. *Toxicology* 12:165-172.
- *O'Rourke MK, Van De Water PK, Jin S, et al. 1999. Evaluations of primary metals from NHEXAS Arizona: distributions and preliminary exposures. *J Expo Anal Environ Epidemiol* 9:435-445.
- OSHA. 1989. U.S. Department of Labor. Occupational Safety and Health Administration. Air contaminants: Final rule. 29 CFR 1910, 2946.
- OSHA. 1993. U.S. Department of Labor. Occupational Safety and Health Administration. Air contaminants: Final rule. 29 CFR 1910.
- *OSHA. 2003a. Occupational safety and health standards. Limits for air contaminants. Washington, DC: Occupational Safety and Health Administration. 29 CFR 1910.1000, Table Z-1. <http://www.osha.gov/comp-links.html>. June 06, 2003.

9. REFERENCES

- *OSHA. 2003b. Occupational safety and health standards. List of highly hazardous chemicals, toxics, and reactives. Washington, DC: Occupational Safety and Health Administration. 29 CFR 1910.119, Appendix A. <http://www.osha.gov/comp-links.html>. June 06, 2003.
- OSHA. 2003c. Occupational safety and health standards. National Research Council recommendations concerning chemical hygiene in laboratories. Washington, DC: Occupational Safety and Health Administration. 29 CFR 1910.1450, Appendix A. <http://www.osha.gov/comp-links.html>. June 06, 2003.
- *OSHA. 2003d. Occupational safety and health standards for shipyard employment. Air contaminants. Washington, DC: Occupational Safety and Health Administration. 29 CFR 1915.1000. <http://www.osha.gov/comp-links.html>. June 06, 2003.
- *OSHA. 2003e. Safety and health regulations for construction. Gases, vapors, fumes, dusts, and mists. Washington, DC: Occupational Safety and Health Administration. 29 CFR 1926.55, Appendix A. <http://www.osha.gov/comp-links.html>. June 06, 2003.
- *OSHA. 2003f. Safety and health regulations for construction. List of highly hazardous chemicals, toxics, and reactives. Washington, DC: Occupational Safety and Health Administration. 29 CFR 1926.64, Appendix 5. <http://www.osha.gov/comp-links.html>. June 06, 2003.
- Oshima S. 2001. Induction of aneuploidy by nickel sulfate in V79 Chinese hamster cells. *Mutat Res* 492(1-2):39-50.
- *Oskarsson A, Tjalve H. 1979. An autoradiographic study on the distribution of $^{63}\text{NiCl}_2$ in mice. *Ann Clin Lab Sci* 9:47-59.
- *Ottolenghi AD, Haseman JK, Payne WW, et al. 1974. Inhalation studies of nickel sulfide in pulmonary carcinogenesis of rats. *JNCI* 54:1165-1172.
- *Owen GM, Brozek J. 1966. Influence of age, sex and nutrition on body composition during childhood and adolescence. In: Falkner F, ed. *Human development*. Philadelphia, PA: WB Saunders, 222-238.
- *Pacyna JM. 1984. Estimation of the atmospheric emissions of trace elements from anthropogenic sources in Europe. *Atmos Environ* 18:41-50.
- *Pacyna JM, Ottar B. 1985. Transport and chemical composition of the summer aerosol in the Norwegian arctic. *Atmos Environ* 19:2109-2120.
- *Page GW. 1981. Comparison of groundwater and surface water for patterns and levels of contamination by toxic substances. *Environ Sci Technol* 15:1475-1481.
- *Pandey R, Srivastava SP. 2000. Spermatotoxic effects of nickel in mice. *Bull Environ Contam Toxicol* 64(2):161-167.
- *Pandey R, Kumar R, Singh SP, et al. 1999. Male reproductive effect of nickel sulphate in mice. *BioMetals* 12(4):339-346.
- *Pang D, Burges DC, Sorhan T. 1996. Mortality studies of nickel platers with special reference to cancers of the stomach and lung. *Occup Environ Med* 53(10):714-717.

9. REFERENCES

- *Patierno SR, Costa M. 1985. DNA-protein cross-links induced by nickel compounds in intact cultured mammalian cells. *Chem Biol Interact* 55:75-91.
- *Patierno SR, Costa M. 1987. Effects of nickel(II) on nuclear protein binding to DNA in intact mammalian cells. *Cancer Biochem Biophys* 9:113-126.
- *Patriarca M, Lyon TD, Fell GS. 1997. Nickel metabolism in humans investigated with an oral stable isotope. *Am J Clin Nutr* 66(3):616-621.
- *Pattenden NJ, Branson JR, Fisher EMR. 1982. Trace element measurement in wet and dry deposition and airborne particulate at an urban site. *Deposition Atmos Pollut Proc Colloq*, 173-184.
- *Pedersen E, Hogetveit AC, Andersen A. 1973. Cancer of respiratory organs among workers at a nickel refinery in Norway. *Int J Cancer* 12:32-41.
- Pellizzari ED, Smith DJ, Clayton CA, et al. 2001. An assessment of the data quality for NHEXAS- Part I: exposure to metals and volatile organic chemicals in Region 5. *J Expo Anal Environ Epidemiol* 11:140-154.
- *Pennington JAT, Jones JW. 1987. Molybdenum, nickel, cobalt, vanadium, and strontium in total diets. *J Am Diet Assoc* 87:1644-1650.
- *Peralta-Videa JR, Gardea-Torresdey E, Gomez E, et al. 2002. Effect of mixed cadmium, copper, nickel and zinc at different pHs upon alfalfa growth and heavy metal uptake. *Environ Pollut* 119:291-301.
- Pereira MC, Pereira ML, Sousa JP. 1998. Evaluation of nickel toxicity on liver, spleen, and kidney of mice after administration of high-dose metal ion. *J Biomed Mater Res* 40(1):40-47.
- *Peto R, Cuckle H, Doll R, et al. 1984. Respiratory cancer mortality of Welsh nickel refinery workers. In: Sunderman FW Jr, Aitio A, Berlin A, eds. *Nickel in the human environment*. IARC scientific publication no. 53. Lyon, France: International Agency for Research on Cancer, 37-46.
- *Pikalek P, Necasek J. 1983. The mutagenic activity of nickel in *Cornebacterium* sp. *Folia Microbiol* 26:17-21.
- *Pitt R, Field R, Lalor M, et al. 1995. Urban stormwater toxic pollutants: Assessment, sources, and treatability. *Water Environ Res* 67(3):260-275.
- *Polednak AP. 1981. Mortality among welders, including a group exposed to nickel oxides. *Arch Environ Health* 36:235-242.
- *Pool-Zobel BL, Lotzmann N, Knoll M, et al. 1994. Detection of genotoxic effects in human gastric and nasal mucosa cells isolated from biopsy samples. *Environ and Mol Mutagen* 24:23-45.
- Pott F, Ziem U, Reiffer FJ, et al. 1987. Carcinogenicity studies on fibres, metal compounds and some other dusts in rats. *Exp Pathol* 32:129-152.
- *Poulton DJ. 1987. Trace contaminant status of Hamilton Harbor. *J Great Lakes Res* 13:193-202.
- *Poulton DJ, Simpson KJ, Barton DR, et al. 1988. Trace metals and benthic invertebrates in sediments of nearshore Lake Ontario and Hamilton Harbor. *J Great Lakes Res* 14:52-65.

9. REFERENCES

- Prows DR, Leikauf G. 2001. Quantitative trait analysis of nickel-induced acute lung injury in mice. *Am J Respir Cell Mol Biol* 24(6):740-746.
- Prows DR, McDowell SA, Aronow BJ, et al. 2003. Genetic susceptibility to nickel-induced acute lung injury. *Chemosphere* 51(10):1139-1148.
- *Prystowsky SD, Allen AM, Smith RW, et al. 1979. Allergic contact hypersensitivity to nickel, neomycin, ethylenediamine and benzocaine. *Arch Dermatol* 115:959-962.
- Pulido MD, Parrish AR. 2003. Metal-induced apoptosis: Mechanisms. *Mutat Res* 533:227-241.
- Purello D'Ambrosio F, Bagnato F, Guarneri B, et al. 1998. The role of nickel in foods exacerbating nickel contact dermatitis. *Allergy* 53:143-145.
- Qu W, Kasprzak KS, Kadiiska M, et al. 2001. Mechanisms of arsenic-induced cross-tolerance to nickel cytotoxicity, genotoxicity, and apoptosis in rat liver epithelial cells. *Toxicol Sci* 63(2):189-195.
- *QueHee SS, Finelli VN, Fricke FL, et al. 1982. Metal content of stack emissions, coal and fly ash from some eastern and western power plants in the USA as obtained by ICP-AES. *Int J Environ Anal Chem* 13:1-18.
- *Radike M, Warshawsky D, Caruso J, et al. 2002. Distribution and accumulation of a mixture of arsenic, cadmium, chromium, nickel and vanadium in mouse small intestine, kidneys, pancreas, and femur following oral administration in water or feed. *J Toxicol Environ Health A* 65(23):2029-2052.
- *Rai D, Zachara JM. 1984. Chemical attenuation rates, coefficients, and constants in leachate migration. Volume 1: A critical Review. Palo Alto, CA: Electric Power Research Institute.
- *Raithel HJ, Schaller KH, Akshen LA, et al. 1989. Analyses of chromium and nickel in human pulmonary tissue. Investigations in lung cancer patients and a control population under special consideration of medical expertise aspects. *Int Arch Occup Environ Health* 61:507-512.
- *Raithel HJ, Schaller KH, Reith A, et al. 1988. Investigations on the quantitative determination of nickel and chromium in human lung tissue industrial medical toxicological and occupational medical expertise aspects. *Int Arch Occup Environ Health* 60:55-66.
- *Rasmuson A. 1985. Mutagenic effects of some water-soluble metal compounds in a somatic eye-color test system in *Drosophila melanogaster*. *Mutat Res* 157:157-162.
- *Redmond CK. 1984. Site-specific cancer mortality among workers involved in the production of high nickel alloys: In: Sunderman FW Jr, Aitio A, Berlin A, eds. Nickel in the human environment. IARC scientific publication no. 53. Lyon, France: International Agency for Research on Cancer, 73-86.
- Reimann C, DeCaritat P, Halleraker JH, et al. 1997. Rainwater composition in eight arctic catchments in Northern Europe (Finland, Norway and Russia). *Atmos Environ* 31(2):159-170.
- *Reith AK, Reichborn-Kjennerud S, Aubele M, et al. 1994. Biological monitoring of chemical exposure in nickel workers by imagining cytometry (ICM) of nasal smears. *Anal Cell Path* 6:9-21.
- *Rendall REG, Phillips JI, Renton KA. 1994. Death following exposure to fine particulate nickel from a metal arc process. *Ann Occup Hyg* 38(6):921-930.

9. REFERENCES

- *Rezuke WN, Knight JA, Sunderman FW Jr. 1987. Reference values for nickel concentrations in human tissues and bile. *Am J Ind Med* 11:419-426.
- *Rice KE. 1999. Trace-element concentrations in streambed sediment across the conterminous United States. *Environ Sci Technol* 33:2499-2504.
- *Richter RO, Theis TL. 1980. Nickel. In: Nriagu JO, ed. *Nickel in the environment*. New York, NY: John Wiley and Sons, Inc., 189-202.
- *Ries MW, Kampmann C, Rupprecht H-J, et al. 2003. Nickel release after implantation of the Amplatzer occluder. *Am Heart J* 145(4):737-741.
- Riley MR, Boesewetter DE, Kim AM, et al. 2003. Effects of metals Cu, Fe, Ni, V, and Zn on rat lung epithelial cells. *Toxicology* 190(3):171-184.
- *Roberts RS, Julian JA, Muir DCF, et al. 1989a. A study of mortality in workers engaged in the mining, smelting, and refining of nickel. II: Mortality from cancer of the respiratory tract and kidney. *Toxicol Ind Health* 5(6):975-993.
- *Roberts RS, Julian JA, Swezey D, et al. 1989b. A study of mortality in workers engaged in the mining, smelting, and refining of nickel. I: Methodology and mortality by major cause groups. *Toxicol Ind Health* 5(6):957-974.
- Robertson GL, Lebowitz MD, O'Rourke MK, et al. 1999. The National Human Exposure Assessment Survey (NHEXAS) study in Arizona – introduction and preliminary results. *J Expo Anal Environ Epidemiol* 9:427-434.
- *Robinson SH, Costa M. 1982. The induction of DNA strand breakage by nickel compounds in cultured Chinese hamster ovary cells. *Cancer Lett* 15:35-40.
- *Rodriguez-Arnaiz R, Ramos P. 1986. Mutagenicity of nickel sulphate in *Drosophila melanogaster*. *Mutat Res* 170:115-117.
- Roelofs-Haarhuis K, Wu X, Nowak M, et al. 2003. Infectious nickel tolerance: A reciprocal interplay of tolerogenic APCs and T suppressor cells that is driven by immunization. *J Immunol* 171(6):2863-2872.
- *Rope SK, Arthur WJ, Craig TH, et al. 1988. Nutrient and trace elements in soil and desert vegetation of southern Idaho. *Environ Monit Assess* 10:1-24.
- *Rossmann R. 1988. Estimation of trace metal storage in Lake St. Clair post-settlement sediments using composite samples. *J Great Lakes Res* 14:66-75.
- Roul S, Ducombe G, Taleb A. 1999. Usefulness of the European standard series for patch testing in children A 3-year single-centre study of 337 patients. *Contact Dermatitis* 40(5):232-235.
- *RTECS. 2004. Registry of Toxic Effects of Chemical Substances. Washington, DC: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health. June 2004.

9. REFERENCES

- *RTI. 1985. Final report (draft): Dose-range finding study of nickel chloride administered to CD rats in the drinking water. Research Triangle Park, NC: Office of Solid Waste Management, U.S. Environmental Protection Agency.
- *RTI. 1986. Two-generation reproduction and fertility study of nickel chloride administered to CD rats in the drinking water: 90-Day exposure of CD rats to nickel chloride administered in the drinking water. Final study report (I of III). Research Triangle Park, NC: Office of Solid Waste Management, U.S. Environmental Protection Agency.
- *RTI. 1988a. Two-generation reproduction and fertility study of nickel chloride administered to CD rats in the drinking water: Fertility and reproductive performance of the Po generation. Final study report (II of III). Research Triangle Park, NC: Office of Solid Waste Management, U.S. Environmental Protection Agency.
- *RTI. 1988b. Two-generation reproduction and fertility study of nickel chloride administered to CD rats in the drinking water: Fertility and reproductive performance of the F1 generation. Final study report (III of III). Research Triangle Park, NC: Office of Solid Waste Management, U.S. Environmental Protection Agency.
- *Rubanyi G, Ligeti L, Koller A, et al. 1984. Possible role of nickel ions in the pathogenesis of ischemic coronary vasoconstriction in the dog heart. *J Mol Cell Cardiol* 16:533-546.
- *Rubin ES. 1999. Toxic releases from power plants. *Environ Sci Technol* 33:3062-3067.
- *Rudd T, Lake DL, Mehrotra I, et al. 1988. Characterization of metal forms in sewage sludge by chemical extraction and progressive acidification. *Sci Total Environ* 74:149-175.
- Rudzki E, Rebandel P, Karas Z. 1997. Patch testing with lower concentrations of chromate and nickel. *Contact Dermatitis* 37(1):46.
- *Rybicka EH. 1989. Metals and their chemical and mineralogical forms in industrial pollutants of the atmosphere. *Environ Technol Lett* 10:921-928.
- *Rydh CJ, Svärd B. 2003. Impact on global metal flows arising from the use of portable rechargeable batteries. *Sci Total Environ* 302:167-184.
- *Sabbioni E, Goetz L, Bignoli G. 1984. Health and environmental implications of trace metals released from coal-fired power plants: An assessment study of the situation in the European community. *Sci Total Environ* 40:141-154.
- *Sadiq M, Enfield CG. 1984a. Solid phase formation and solution chemistry of nickel in soils. 1. Theoretical. *Soil Sci* 138:262-270.
- *Sadiq M, Enfield CG. 1984b. Solid phase formation and solution chemistry of nickel in soils. 2. Experimental. *Soil Sci* 138:335-340.
- Salnikow K, Blasgosklonny MV, Ryan H, et al. 2000a. Carcinogenic nickel induces genes involved with hypoxic stress. *Cancer Res* 60(1):38-41.
- Salnikow K, Davidson T, Kluz T, et al. 2003a. Genechip analysis of signaling pathways effected by nickel. *J Environ Monit* 5(2):206-209.

9. REFERENCES

- Salnikow K, Davidson T, Zhang Q, et al. 2003b. The involvement of hypoxia-induced transcription factor-1-dependent pathway in nickel carcinogenesis. *Cancer Res* 63(13):3524-3540.
- Salnikow K, Li X, Lippmann M. 2004. Effect of nickel and iron co-exposure on human lung cells. *Toxicol Appl Pharmacol* 196(2):258-265.
- *Salnikow K, Su W, Blagosklonny MV, et al. 2000b. Carcinogenic metals induce hypoxia-inducible factor-stimulated transcription by reactive oxygen species-independent mechanism. *Cancer Res* 60(13):3375-3378.
- *Saltzman BE, Cholak J, Schafer JL, et al. 1985. Concentration of six metals in the air of eight cities. *Environ Sci Technol* 19:328-333.
- *Sanford WE, Nieboer E. 1992. Renal toxicity of nickel in humans. In: Nieboer E, Nriagu JO, eds. *Nickel and human health: Current perspectives: Proceedings of the Fourth International Conference on Nickel Metabolism and Toxicology; September 1988, Helsinki, Finland*. New York: John Wiley & Sons, Inc., 123-134.
- *Santucci B, Manna F, Cannistraci C, et al. 1994. Serum and urine concentrations in nickel-sensitive patients after prolonged oral administration. *Contact Dermatitis* 30:97-101.
- *Sañudo-Wilhelmy SA, Gill GA. 1999. Impact of the Clean Water Act on the levels of toxic metals in urban estuaries: The Hudson River Estuary revisited. *Environ Sci Technol* 33(20):3477-3481.
- Saplakoglu U, Iscan M, Iscan M. 1997. DNA single-strand breakage in rat lung, liver and kidney after single and combined treatments of nickel and cadmium. *Mutat Res* 394(1-3):133-140.
- Saricaoglu H, Tunali S, Bulbul E, et al. 1998. Prevention of nickel-induced allergic contact reactions with pentoxifylline. *Contact Dermatitis* 39(5):244-247.
- Saripalli YV, Gadzia JE, Belsito DV. 2003. Tacrolimus ointment 0.1% in the treatment of nickel-induced allergic contact dermatitis. *J Am Acad Dermatol* 49(3):477-482.
- *Sarkar B. 1984. Nickel metabolism. In: Sunderman FW Jr, Aitio A, Berlin A, eds. *Nickel in the human environment*. IARC scientific publication no. 53. Lyon, France: International Agency for Research on Cancer, 367-384.
- *Saxholm HJK, Reith A, Brogger A. 1981. Oncogenic transformation and cell lysis in C3H/10T1/2 cells and increased sister chromatid exchange in human lymphocytes by nickel subsulfide. *Cancer Res* 41:4136-4139.
- *Schmidt JA, Andren AW. 1980. The atmospheric chemistry of nickel. In: Nriagu JO, ed. *Nickel in the environment*. New York, NY: John Wiley and Sons, Inc., 93-135.
- Schnuch A, Geier J, Lessmann H, et al. 2003. [Decrease in nickel sensitization in young patients—successful intervention through nickel exposure regulation? Results of IVDK, 1992-2001] *Hautarzt* 54:626-632. (German)
- *Schroeder HA, Mitchener M. 1971. Toxic effects of tract elements on the reproduction of mice and rats. *Arch Environ Health* 23:102.

9. REFERENCES

- *Schroeder HA, Mitchener M. 1975. Life-term effects of mercury, methyl mercury and nine other trace metals on mice. *J Nutr* 105:452-458.
- *Schroeder HA, Balassa JJ, Vinton WH Jr. 1964. Chromium, lead, cadmium, nickel and titanium in mice: Effect on mortality, tumors and tissue levels. *J Nutr* 83:239-250.
- *Schroeder HA, Mitchener M, Nason AP. 1974. Life-term effects of nickel in rats: Survival, tumors, interactions with trace elements and tissue levels. *J Nutr* 104:239-243.
- *Schroeder WH, Dobson M, Kane DM. 1987. Toxic trace elements associated with airborne particulate matter: A review. *Air Pollut Control Assoc* 11:1267-1287.
- Schubert HJ. 2000. Airborne nickel dermatitis. *Contact Dermatitis* 42:118-119.
- Scott LK, Grier LR, Arnold TC, et al. 2002. Respiratory failure from inhalational nickel carbonyl exposure treated with continuous high-volume hemofiltration and disulfiram. *Inhal Toxicol* 14(11):1103-1109.
- *Scudlark JR, Conko KM, Church TM. 1994. Atmospheric wet deposition of trace elements to Chesapeake Bay: CBAD Study year 1 results. *Atmos Environ* 28(8):1487-1498.
- *Sedlak DL, Phinney JT, Bedsworth WW. 1997. Strongly complexed Cu and Ni in wastewater effluents and surface runoff. *Environ Sci Technol* 31:3010-3016.
- Seidenari S, Belletti B, Mantovani L, et al. 1996. Nickel sulfate 5-20% aq does not evoke irritation on the skin of non-nickel-sensitive subjects. *Contact Dermatitis* 35(4):260-261.
- *Seidenberg JM, Anderson DG, Becker RA. 1986. Validation of an *in vivo* developmental toxicity screen in the mouse. *Teratog Carcinog Mutagen* 6:361-374.
- *Seilkop SK. 2001. Occupational exposures and pancreatic cancer: A meta-analysis. *Occup Environ Med* 58(1):63-64.
- *Seilkop SK, Oller AR. 2003. Respiratory cancer risks associated with low-level nickel exposure: An integrated assessment based on animal, epidemiological, and mechanistic data. *Regul Toxicol Pharmacol* 37:173-190.
- Sen P, Costa M. 1986a. Incidence and localization of sister chromatid exchanges induced by nickel and chromium compounds. *Carcinogenesis* 7:1527-1533.
- *Sen P, Costa M. 1986b. Pathway of nickel uptake influences its interaction with heterochromatic DNA. *Toxicol Appl Pharmacol* 84:278-285.
- *Sen P, Conway K, Costa M. 1987. Comparison of the localization of chromosome damage induced by calcium chromate and nickel compounds. *Cancer Res* 47:2142-2147.
- Seoane AI, Dulout FN. 2001. Genotoxic ability of cadmium, chromium and nickel salts studied by kinetochore staining in the cytokinesis-blocked micronucleus assay. *Mutat Res* 490(2):99-106.
- *Setchell BP, Waites GMH. 1975. The blood-testis barrier. In: Creep RO, Astwood EB, Geiger SR, eds. *Handbook of physiology: Endocrinology V*. Washington, DC: American Physiological Society.

9. REFERENCES

- *Shacklette HT, Boerngen JG. 1984. Element concentration in soils and other surficial materials of the conterminous United States. U.S. Geological Survey professional paper 1270. Alexandria, VA: U.S. Geological Survey.
- *Shannon HS, Julian JA, Muir DCF, et al. 1984a. A mortality study of Falcon Bridge workers. In: Sunderman FW Jr, Aitio A, Berlin A, eds. Nickel in the environment. IARC scientific publications no. 53. Lyon, France: International Agency for Research on Cancer, 117-124.
- *Shannon HS, Julian JA, Roberts, RS. 1984b. A mortality study of 11,500 nickel workers. *J Natl Cancer Inst* 73(6):1251-1258.
- *Shannon HS, Walsh C, Jadon N, et al. 1991. Mortality of 11,500 nickel workers -- extended follow up and relationship to environmental conditions. *Toxicol Ind Health* 7:277-294.
- Shah M, Lewis FM, Gawkrödger DJ. 1998. Nickel as an occupational allergen. A survey of 368 nickel-sensitive subjects. *Arch Dermatol* 134(10):1231-1236.
- Shiao YH, Lee SH, Kasprzak KS. 1998. Cell cycle arrest, apoptosis and p53 expression in nickel(II) acetate-treated Chinese hamster ovary cells. *Carcinogenesis* 19(7):1203-1207.
- *Shiller AM, Boyle EA. 1987. Variability of dissolved trace metals in the Mississippi River (USA). *Geochim Cosmochim Acta* 51:3273-3278.
- Shimada H, Funakoshi T, Inoue T, et al. 2000. The effects of sulfhydryl blockers and metal ions on nickel accumulation by rat primary hepatocyte cultures. *Toxicol Lett* 118(1-2):87-92.
- Shiraishi K, Yamagami Y, Kameoka K, et al. 1988. Mineral contents in model diet samples for different age groups. *J Nutr Sci Vitaminol (Tokyo)* 34(1):55-65.
- *Shirakawa T, Kusaka Y, Fujimura N, et al. 1990. Hard metal asthma - cross immunological and respiratory activity between cobalt and nickel. *Thorax* 45:267-271.
- Shum KW, Meyer JD, Chen Y, et al. 2003. Occupational contact dermatitis to nickel: Experience of the British dermatologists (EPIDERM) and occupational physicians (OPRA) surveillance schemes. *Occup Environ Med* 60(12):954-957.
- *Siller GM, Seymour GJ. 1994. Kinetics and specificity of nickel hypersensitivity in the murine model. *Australas J Dermatol* 35:77-81.
- Silvennoinen-Kassinen S, Ilonen J, Tiilikainen A, et al. 1979. No significant association between HLA and nickel contact sensitivity. *Tissue Antigens* 14(5):459-461.
- *Simonato L, Fletcher AC, Andersen A, et al. 1991. A historical prospective study of European stainless steel, mild steel, and shipyard welders. *Br J Ind Med* 48(3):145-154.
- *Simonetti V, Manzini BM, Seidenari S. 1998. Patch testing with nickel sulfate: comparison between 2 nickel sulfate preparations and 2 different test sites on the back. *Contact Dermatitis* 39(4):187-191.
- *Singh I. 1984. Induction of gene conversion and reverse mutation by manganese sulphate and nickel sulphate in *Saccharomyces cerevisiae*. *Mutat Res* 137:47-49.

9. REFERENCES

- *Sjovall P, Christensen OB, Moller H. 1987. Oral hyposensitization in nickel allergy. *J Am Acad Dermatol* 17(1):774-778.
- *Smart GA, Sherlock JC. 1987. Nickel in foods and the diet. *Food Addit Contam* 4:61-71.
- *Smart GA, Sherlock C, Norman JA. 1987. Dietary intakes of lead and other metals: A study of young children from an urban population in the UK. *Food Addit Contam* 5(1):85-93.
- *Smialowicz RJ, Rogers RR, Riddle MM, et al. 1985. Immunologic effects of nickel. II. Suppression of natural killer cell activity. *Environ Res* 36:56-66.
- *Smialowicz RJ, Rogers RR, Riddle MM, et al. 1986. Immunological studies in mice following in utero exposure to NiCl₂. *Toxicology* 38:293-303.
- *Smialowicz RJ, Rogers RR, Rowe DG, et al. 1987. The effects of nickel on immune function in the rat. *Toxicology* 44:271-281.
- *Smith SR. 1994. Effect of soil pH on availability to crops of metals in sewage sludge-treated soils. I. Nickel, copper and zinc uptake and toxicity to ryegrass. *Environ Pollut* 85(3):321-327.
- Smith JC, Hackley B. 1968. Distribution and excretion of nickel-63 administered intravenously to rats. *J Nutr* 95:541-546.
- Smith GM, Williams FLR, Lloyd OLL. 1987. Respiratory cancer and air pollution from iron foundries in a Scottish town: An epidemiological and environmental study. *Br J Ind Med* 44:795-802.
- *Smith MK, George EL, Stober JA. 1993. Perinatal toxicity associated with nickel chloride exposure. *Environ Res* 61:200-211.
- *Sobti RC, Gill RK. 1989. Incidence of micronuclei and abnormalities in the head of spermatozoa caused by the salts of a heavy metal nickel. *Cytologia* 54:249-254.
- *Solomons NW, Viteri F, Shuler TR, et al. 1982. Bioavailability of nickel in man: Effects of food and chemically defined dietary constituents on the absorption of inorganic nickel. *J Nutr* 112:39-50.
- Sommer S, Wilkinson SM. 2001. Allergic contact dermatitis caused by a nickel-containing headband. *Contact Dermatitis* 44(3):178.
- *Sorahan T. 2004. Mortality of workers at a plant manufacturing nickel alloys, 1958-2000. *Occup Med* 54(1):28-34.
- Sorahan T, Esmen NA. 2004. Lung cancer mortality in UK nickel-cadmium battery workers, 1947-2000. *Occup Environ Med* 61(2):108-116.
- *Sörme L, Lagerkvist R. 2002. Sources of heavy metals in urban wastewater in Stockholm. *Sci Total Environ* 298:131-145.
- Sowder AG, Bertsch PM, Morris PJ. 2003. Partitioning and availability of uranium and nickel in contaminated riparian sediments. *J Environ Qual* 32(3):885-898.

9. REFERENCES

- *Spiegelberg T, Koerdel W, Hochrainer D. 1984. Effect of NiO inhalation on alveolar macrophages and the humoral immune system of rats. *Ecotoxicol Environ Safety* 8:516-525.
- *Springborn Laboratories. 2000a. A one-generation reproduction range-finding study in rats with nickel sulfate hexahydrate. Spencerville, OH: Springborn Laboratories, Inc. SLI Study No. 3472.3.
- *Springborn Laboratories. 2000b. An oral (gavage) two-generation reproduction toxicity study in Sprague-Dawley rats with nickel sulfate hexahydrate. Final Report. Volume 1 of 3. Spencerville, OH: Springborn Laboratories, Inc. SLI Study No. 3472.4.
- *Springborn Laboratories. 2002. A range-finding 90-day oral (gavage) toxicity study in Fischer 344 rats with nickel sulfate hexahydrate. Spencerville, OH: Springborn Laboratories, Inc. SLI Study No. 3472.6.
- *Spruit D, Bongaarts PJM. 1977. Nickel content of plasma, urine and hair in contact dermatitis. *Dermatologica* 154:291-300.
- *Srivastava RC, Hussein MM, Srivastava SK, et al. 1995. Effect of pre-exposure to cadmium and silver on nickel induced toxic manifestations in mice: possible role of ceruloplasmin and metallothionein. *Bull Environ Contam Toxicol* 54:751-759.
- *Stedman DH, Hikade DA. 1980. Nickel toxicology. In: Brown SS, Sunderman FW Jr, eds. *Proceedings of the international conference on nickel toxicology*, September, Swansea, Wales. London, UK: Academic Press, 183-186.
- *Stephenson T, Lawson PS, Rudd T, et al. 1987. Mechanism of metal removal in activated sludge. *J Environ Eng* 113:1074-1087.
- *Stoepler M. 1980. Analysis of nickel in biological material and natural waters. In: Nriagu JO, ed. *Nickel in the environment*. New York, NY: John Wiley and Sons, Inc., 661-821.
- *Stoepler M. 1984. Analytical chemistry of nickel. In: Sunderman FW Jr, Aitio A, Berlin A, eds. *Nickel in the human environment*. IARC scientific publication no. 53. Lyon, France: International Agency for Research on Cancer, 459-485.
- *Stoessel RP, Michaelis W. 1986. Wet and dry deposition of heavy metals. In: *Proceedings of the 2nd International Conference on Environmental Contamination*, Amsterdam, Netherlands: CEP Consultants, Ltd., 85-88.
- *Stutz DR, Janusz SJ. 1988. *Hazardous materials injuries--a handbook for pre-hospital care*. 2nd ed. Beltsville, MD: Bradford Communications Corporation, 218-219.
- *Suedel BC, Boraczek JA, Peddicord RK, et al. 1994. Trophic transfer and biomagnification potential of contaminants in aquatic ecosystems. *Rev Environ Contam Toxicol* 136:21-89.
- *Sumino K, Hayakawa K, Shibata T, et al. 1975. Heavy metals in normal Japanese tissues: Amounts of 15 heavy metals in 30 subjects. *Arch Environ Health* 30:487-494.
- Summer B, Sander CA, Przybilla B, et al. 2001. Molecular analysis of T-cell clonality with concomitant specific T-cell proliferation *in vitro* in nickel-allergic individuals. *Allergy* 56(8):767-770.

9. REFERENCES

- *Sunderman FW Jr. 1986. Sources of exposure and biological effects of nickel. In: O'Neill IK, Schuller P, Fishbein L, eds. Environmental carcinogens selected methods of analysis. Volume 8: Some metals: As, Be, Cd, Cr, Ni, Pb, Se, Zn. IARC scientific publication no. 71. Lyon, France: International Agency for Research on Cancer, 79-92.
- *Sunderman FW Jr. 1989a. Carcinogenicity of metal alloys in orthopedic prostheses: Clinical and experimental studies. *Fundam Appl Toxicol* 13:205-216.
- *Sunderman FW Jr. 1989b. Mechanisms of nickel carcinogenesis. *Scand J Work Environ Health* 15:1-12.
- *Sunderman FW Jr. 1993. Biological monitoring of nickel in humans. *Scand J Work Environ Health* 19(Suppl 1):34-38.
- *Sunderman FW Jr, Barber AM. 1988. Finger-loops, oncogenes, and metals. *Ann Clin Lab Sci* 18:267-288.
- *Sunderman FW Jr, Horak E. 1981. Biochemical indices of nephrotoxicity, exemplified by studies of nickel nephropathy. In: Brown SS, Davies DS, eds. Organ-directed toxicity: Chemical indices and mechanisms. London, UK: Pergamon Press, 52-64.
- *Sunderman FW Jr, Maenza RM. 1976. Comparisons of carcinogenicities of nickel compounds in rats. *Res Commun Chem Pathol Pharmacol* 14:319-330.
- *Sunderman FW Jr, McCully KS. 1983. Effects of manganese compounds on carcinogenicity of nickel subsulfide in rats. *Carcinogenesis* 4:461-465.
- *Sunderman FW Jr, Oskarsson A. 1991. Nickel. In: Merian E, ed. Metals and their compounds in the environment. New York, NY: VCH Verlagsgesellschaft, 1101-1126.
- *Sunderman FW Jr, Aitio A, Morgan LG, et al. 1986. Biological monitoring of nickel. *Toxicol Ind Health* 2:17-78.
- *Sunderman FW Jr, Dingle B, Hopfer SM, et al. 1988. Acute nickel toxicity in electroplating workers who accidentally ingested a solution of nickel sulfate and nickel chloride. *Am J Ind Med* 14:257-266.
- *Sunderman FW Jr, Hopfer SM, Knight JA, et al. 1987. Physicochemical characteristics and biological effects of nickel oxides. *Carcinogenesis* 8:305-313.
- *Sunderman FW Jr, Hopfer SM, Sweeney KR, et al. 1989b. Nickel absorption and kinetics in human volunteers. *Proc Soc Exp Biol Med* 191:5-11.
- *Sunderman FW Jr, Hopfer SM, Swift T, et al. 1989c. Cobalt, chromium, and nickel concentrations in body fluids of patients with porous-coated knee or hip prostheses. *J Orthop Res* 7:307-315.
- *Sunderman FW Jr, Kasprzak K, Horak E, et al. 1976. Effects of triethylenetetramine upon the metabolism and toxicity of $^{63}\text{NiCl}_2$ in rats. *Toxicol Appl Pharmacol* 38:177-188.
- *Sunderman FW Jr, Morgan LG, Andersen A, et al. 1989a. Histopathology of sinonasal and lung cancers in nickel refinery workers. *Ann Clin Lab Sci* 19:44-50.

9. REFERENCES

- *Sunderman FW Jr, Shen SK, Mitchell JM, et al. 1978. Embryotoxicity and fetal toxicity of nickel in rats. *Toxicol Appl Pharmacol* 43:381-390.
- *Svenes KB, Andersen I. 1998. Distribution of nickel in lungs from former nickel workers. *Int Arch Occup Environ Health* 71(6):424-428.
- *Sweeney MD, Naidu AS. 1989. Heavy metal in sediments of the inner shelf of the Beaufort Sea, northern arctic Alaska. *Mar Poll Bull* 20:140-143.
- *Sweet CW, Vermette SJ, Landsberger S. 1993. Sources of toxic trace elements in urban air in Illinois. *Environ Sci Technol* 27:2502-2510.
- *Szakmary E, Movai V, Naray M, et al. 1995. Haemodynamic effect of nickel chloride in pregnant rats. *Acta Physiologica Hungarica* 83(1):3-12.
- Szepietowski JC, McKenzie RC, Keohane SG, et al. 1997. Atopic and non-atopic individuals react to nickel challenge in a similar way. A study of the cytokine profile in nickel-induced contact dermatitis. *Br J Dermatol* 137(2):195-200.
- *Takagi Y, Matsuda S, Imai S, et al. 1986. Trace elements in human hair: An international comparison. *Bull Environ Contam Toxicol* 36:793-800.
- *Takagi Y, Matsuda S, Imai S, et al. 1988. Survey of trace elements in human nails: An international comparison. *Bull Environ Contam Toxicol* 41:690-695.
- Takahashi S, Oishi M, Takeda E, et al. 1999. Physicochemical characteristics and toxicity of nickel oxide particles calcined at different temperatures. *Biol Trace Elem Res* 69(2):161-174.
- *Takenaka S, Hochrainer D, Oldiges H. 1985. Alveolar proteinosis induced in rats by long-term inhalation of nickel oxide. In: Brown SS, Sunderman FW Jr, eds. *Progress in nickel toxicology. Proceedings of the 3rd International Congress on Nickel Metabolism and Toxicology*, Oxford, UK: Blackwell, 89-92.
- *Tallkvist J, Tjalve H. 1994. Nickel absorption from perfused rat jejunal and ileal segments. *Pharmacol Toxicol* 75:233-243.
- *Tallkvist J, Tjalve H. 1997. Effect of dietary iron-deficiency on the disposition of nickel in rats. *Toxicol Lett* 92:131-138.
- Tallkvist J, Tjalve H. 1998. Transport of nickel across monolayers of human intestinal Caco-2 cells. *Toxicol Appl Pharmacol* 151(1):117-122.
- *Tanaka I, Horie A, Haratake J, et al. 1988. Lung burden of green nickel oxide aerosol and histopathological findings in rats after continuous inhalation. *Biol Trace Elem Res* 16:19-26.
- *Tanaka I, Ishimatsu S, Matsuno K, et al. 1985. Biological half time of deposited nickel oxide aerosol in rat lung by inhalation. *Biol Trace Element Res* 8:203-210.
- *Taylor GJ, Crowder AA. 1983. Accumulation of atmospherically deposited metals in wetland soils of Sudbury, Ontario. *Water Air Soil Pollut* 19:29-42.

9. REFERENCES

- *Tedeschi RE, Sunderman FW. 1957. Nickel poisoning. V. The metabolism of nickel under normal conditions and after exposure to nickel carbonyl. *Arch Ind Health* 16:486-488.
- *Templeton DM, Sunderman FW Jr, Herber RFM. 1994. Tentative reference values for nickel concentrations in human serum, plasma, blood, and urine: Evaluation according to the TRACY protocol. *Sci Tot Environ* 148:243-251.
- *Thomas KW, Pellizzari ED, Berry MR. 1999. Population-based intakes and tap water concentrations for selected elements in the EPA Region V National Human Exposure Assessment Survey (NHEXAS). *J Expo Anal Environ Epidemiol* 9:402-413.
- Thomas P, Barnstorf S, Summer B, et al. 2003. Immuno-allergological properties of aluminum oxide (Al₂O₃) ceramics and nickel sulfate in humans. *Biomaterials* 24(6):959-966.
- Thomas P, Rueff F, Przybilla B. 2000. Cheilitis due to nickel contact allergy in a trumpet player. *Contact Dermatitis* 42(6):351-352.
- *Tien JK, Howson TE. 1981. Nickel and nickel alloys. In: Grayson M, Eckroth D, eds. *Kirk-Othmer encyclopedia of chemical technology*, Vol. 15, 3rd ed. New York, NY: John Wiley and Sons, Inc., 787-801.
- *Tipton IH, Cook MJ. 1963. Trace elements in human tissue. Part II. Adult subjects from the United States. *Health Phys* 9:103-145.
- *Todorovska N, Karadjova I, Stafilov T. 2002. ETAAS determination of nickel in serum and urine. *Anal Bioanal Chem* 373(4-5):310-313.
- *Tola S, Kilpio J, Virtamo M. 1979. Urinary and plasma concentrations of nickel as indicators of exposure to nickel in an electroplating shop. *J Occup Med* 21:184-188.
- *Torjussen W. 1985. Occupational nasal cancer caused by nickel and nickel compounds. *Rhinology* 23:101-105.
- *Torjussen W, Andersen I. 1979. Nickel concentrations in nasal mucosa, plasma and urine in active and retired nickel workers. *Ann Clin Lab Sci* 9:289-298.
- Torjussen W, Zachariassen H, Andersen I. 2003. Cigarette smoking and nickel exposure. *J Environ Monit* 5(2):198-201.
- Toya T, Serita F, Sawatari K, et al. 1997. Lung lesions induced by intratracheal instillation of nickel fumes and nickel oxide powder in rats. *Ind Health* 35(1):69-77.
- *TRI02. 2004. TRI explorer: Providing access to EPA's toxics release inventory data. Washington, DC: Office of Information Analysis and Access, Offices of Environmental Information, U.S. Environmental Protection Agency. Toxic Release Inventory. <http://www.epa.gov/triexplorer/>. December 30, 2004.
- *Turk JL, Parker D. 1977. Sensitization with Cr, Ni, and Zr salts and allergic type granuloma formation in the guinea pig. *J Invest Dermatol* 68:341-345.

9. REFERENCES

- Turkall RM, Skowronski GA, Suh DH, et al. 2003. Effect of a chemical mixture on dermal penetration of arsenic and nickel in male pig *in vitro*. *J Toxicol Environ Health A* 66(7):647-655.
- *Tyler LD, McBride MB. 1982. Mobility and extractability of cadmium, copper, nickel, and zinc in organic and mineral soil columns. *Soil Sci* 134:198-205.
- *United States Treasury. 2004. Fact sheets: Currency & coins. Manufacturing process for U.S. coins. <http://www.treas.gov/education/fact-sheets/currency/manufacturing.shtml>. December 30, 2004.
- *U.S. Department of Commerce. 1987. Statistical abstracts of the United States. 108th ed. Washington, DC: Bureau of the Census, U.S. Department of Commerce, 670-681.
- *U.S. NRC. 2003. Standards for protection against radiation. Annual limits on intake (ALIs) and derived air concentrations (DACs) of radionuclides for occupational exposure; effluent concentrations, concentrations for release to sewerage. Washington, DC: U.S. Nuclear Regulatory Commission. 10 CFR 20, Appendix B. <http://www.nrc.gov/reading-rm/doc-collections/cfr/>. June 06, 2003.
- USC. 2003. Hazardous air pollutants. Washington, DC: United States Code. 42 USC 7412 <http://www4.law.cornell.edu/uscode/>. June 06, 2003.
- USGS. 1999. Selected elements and organic chemicals in bed sediment and fish tissue of the Tualatin River Basin, Oregon, 1992-1996. U.S. Geological Survey. Water-resources investigation report 99-4107.
- *USGS. 2000a. Concentrations of selected trace elements in fish tissue and streambed sediment in the Clark Fork-Pend Oreille and Spokane River Basins, Washington, Idaho, and Montana, 1998. US Geological Survey.
- *USGS. 2000b. Trace elements and organochlorine compounds in bed sediment and fish tissue at selected sites in New Jersey streams- sources and effects. U.S. Geological Survey. Water-resources investigation report 99-4235.
- *USGS. 2002. Analytical methods for chemical analysis of geologic and other materials. Denver, CO: U.S. Geological Survey. Open-File Report 02-223.
- *USGS. 2003. Nickel. U.S. Geological Survey, Mineral Commodity Summaries, January 2004. <http://minerals.usgs.gov/minerals/pubs/commodity/nickel/nickemcs04.pdf>. January 13, 2005.
- *Uter W, Pfahlberg A, Gefeller O, et al. 2003. Risk factors for contact allergy to nickel - results of a multifactorial analysis. *Contact Dermatitis* 48(1):33-38.
- Vago II, Gyori Z, Loch J. 1996. Comparison of chromium and nickel uptake of plants grown in different soils. *Anal Bioanal Chem* 354(5-6):714-717.
- *Valentine R, Fisher GL. 1984. Pulmonary clearance of intratracheally administered $^{63}\text{Ni}_3\text{S}_2$ in strain A/J mice. *Environ Res* 34:328-334.
- *van den Berg CM, Achterberg EP. 1994. Automated in-line sampling and analysis of trace elements in surface waters. *Trends Anal Chem* 13(9):348-352.
- Vander Pluym CJ, Coe JY. 2001. Does nickel toxicity occur in children after implantation of Amplatzer (R) Occluders. *Pediatr Res* 49(4):40A.

9. REFERENCES

- *van Geen A, Rosener P, Boyle E. 1988. Entrainment of trace-metal-enriched Atlantic-shelf water in the inflow to the Mediterranean Sea. *Nature* 331:423-426.
- *van Hoogstraten IMW, von Blomberg ME, Boden D, et al. 1994. Effects of oral exposure to nickel or chromium on cutaneous sensitization. *Curr Probl Dermatol* 20:237-241.
- *Van Winkle MR, Scheff PA. 2001. Volatile organic compounds, polycyclic aromatic hydrocarbons and elements in the air of ten urban homes. *Indoor Air* 11:49-64.
- *Veien NK, Menne T. 1990. Nickel contact allergy and a nickel-restricted diet. *Semin Dermatol* 9(3):197-205.
- *Veien NK, Hattel T, Justesen O, et al. 1982. Contact dermatitis in children. *Contact Dermatitis* 8:373-375.
- *Veien NK, Hattel T, Justesen O, et al. 1987. Oral challenge with nickel and cobalt in patients with positive patch tests to nickel and/or cobalt. *Acta Derm Venereol* 67:321-325.
- *Versieck J. 1985. Trace elements in human body fluids and tissues. *CRC Crit Rev Clin Lab Sci* 22(2):97-184.
- *Vieira I, Sonnier M, Cresteil T. 1996. Developmental expression of CYP2E1 in the human liver: Hypermethylation control of gene expression during the neonatal period. *Eur J Biochem* 238:476-483.
- Vincent JH, Werner MA. 2003. Critical evaluation of historical occupational aerosol exposure records: Applications to nickel and lead. *Ann Occup Hyg* 47(1):49-59.
- Vollmer J, Fritz M, Dormy A, et al. 1997. Dominance of the BV17 element in nickel-specific human T cell receptors related to severity of contact sensitivity. *Eur J Immunol* 27(8):1865-1874.
- *Vong RJ, Baker BM, Brechtel FJ, et al. 1997. Ionic and trace element composition of cloud water collected on the Olympic Peninsula of Washington state. *Atmos Environ* 31(13):1991-2001.
- Voutsas D, Samara C. 2002. Labile and bioaccessible fractions of heavy metals in the airborne particulate matter from urban and industrial areas. *Atmos Environ* 36:3583-3590.
- *Vyskocil A, Senft A, Viau C, et al. 1994a. Biochemical renal changes in workers exposed to soluble nickel compounds. *Hum Exp Toxicol* 13:257-261.
- *Vyskocil A, Viau C, Cizkova M. 1994b. Chronic nephrotoxicity of soluble nickel in rats. *Hum Exp Toxicol* 13:689-693.
- *Waalkes MP, Kasprzak KS, Ohshima M, et al. 1985. Protective effects of zinc acetate toward the toxicity of nickelous acetate in rats. *Toxicology* 34:29-41.
- *Wahlberg JE. 1976. Sensitization and testing of guinea pigs with nickel sulfate. *Dermatologica* 152-321.
- Wahlberg JE, Liden C. 2000. Cross-reactivity patterns of cobalt and nickel studied with repeated open applications (ROATs) to the skin of guinea pigs. *Am J Contact Dermatitis* 11(1):42-48.

9. REFERENCES

- *Waksvik H, Boysen M. 1982. Cytogenic analysis of lymphocytes from workers in a nickel refinery. *Mutat Res* 103:185-190.
- *Wall LM, Calnan CD. 1980. Occupational nickel dermatitis in the electroforming industry. *Contact Dermatitis* 6:414-420.
- Wallengren J, Larsson B. 2001. Nitric oxide participates in prick test and irritant patch test reactions in human skin. *Arch Dermatol Res* 293:121-125.
- Wang SJ, Paek DM, Kim RH, et al. 2002. Variation of systolic blood pressure in rats exposed to cadmium and nickel. *Environ Res* 88(2):116-119.
- *Wantke F, Hemmer W, Jarisch R, et al. 1996. Patch test reactions in children, adults and the elderly. A comparative study in patients with suspected allergic contact dermatitis. *Contact Dermatitis* 34(5):316-319
- *Warner JS. 1984. Occupation exposure to airborne nickel in producing and using primary nickel products. In: Sunderman FW Jr, Aitio A, Berlin A, eds. *Nickel in the human environment*. IARC scientific publication no. 53. Lyon, France: International Agency for Research on Cancer, 419-437.
- Wataha JC, Lockwood PE, Marek M, et al. 1999. Ability of Ni-containing biomedical alloys to activate monocytes and endothelial cells *in vitro*. *J Biomed Mater Res* 45(3):251-257.
- *Watanabe C, Weiss B, Cox C, et al. 1990. Modification by nickel of instrumental thermoregulatory behavior in rats. *Fundam Appl Toxicol* 14:578-588.
- *Webber MD, Shames A. 1987. Heavy metal concentrations in Halton Region soils: An assessment for future municipal sludge utilization. *J Soil Sci* 67:893-903.
- *Wehner AP. 1986. 2. Health and environmental effects of aerosols: Biological effects and fate of inhaled man-made and natural aerosols in animal models. *J Aerosol Sci* 17:305-315.
- *Wehner AP, Craig DK. 1972. Toxicology of inhaled NiO and CoO in Syrian golden hamsters. *Am Ind Hyg Assoc J* 33:147-155.
- *Wehner AP, Busch RH, Olson RJ, et al. 1975. Chronic inhalation of nickel oxide and cigarette smoke by hamsters. *Am Ind Hyg Assoc J* 36:801-809.
- *Wehner AP, Stuart BO, Sanders CL. 1979. Inhalation studies with Syrian golden hamsters. *Prog Exp Tumor Res* 24:177-198.
- *Weischer CH, Kordel W, Hochrainer D. 1980. Effects of NiCl₂ and NiO in Wistar rats after oral uptake and inhalation exposure, respectively. *Zent Bakteriell Mikrobiol Hyg (B)* 171:336-351.
- Weng L, Lexmond TM, Wolthoorn A, et al. 2003. Phytotoxicity and bioavailability of nickel: Chemical speciation and bioaccumulation. *Environ Toxicol Chem* 22(9):2180-2187.
- *Weng LP, Wolthoorn A, Lexmond TM, et al. 2004. Understanding the effects of soil characteristics on phytotoxicity and bioavailability of nickel using speciation models. *Environ Sci Technol* 38(1):156-162.

9. REFERENCES

- Werfel U, Langen V, Eickhoff I, et al. 1998. Elevated DNA single-strand breakage frequencies in lymphocytes of welders exposed to chromium and nickel. *Carcinogenesis* 19(3):413-418.
- *Werner MA, Thomassen Y, Hefland S, et al. 1999. Correlation of urinary nickel excretion with observed 'total' and inhalable aerosol exposures of nickel refinery workers. *J Environ Monit* 1:557-562.
- *West JR, Smith HW, Chasis H. 1948. Glomerular filtration rate, effective renal blood flow, and maximal tubular excretory capacity in infancy. *J Pediatr* 32:10-18.
- *Whanger PD. 1973. Effects of dietary nickel on enzyme activities and mineral content in rats. *Toxicol Appl Pharmacol* 25:323-331.
- *WHO. 1991. Environmental health criteria 108: Nickel. International programme on chemical safety. World Health Organization. <http://www.inchem.org/documents/ehc/ehc/ehc108.htm>. January 17, 2005.
- *WHO. 1998. Guidelines for drinking water quality. Nickel. Geneva, Switzerland: World Health Organization. <http://www.who.int/en/>. June 06, 2003.
- *WHO. 2000. Air quality guidelines. Geneva, Switzerland: World Health Organization. <http://www.who.int/en/>. June 06, 2003.
- *Widdowson EM, Dickerson JWT. 1964. Chemical composition of the body. In: Comar CL, Bronner F, eds. *Mineral metabolism: An advanced treatise. Volume II: The elements Part A*. New York: Academic Press.
- *Wiersema JM, Wright L, Rogers B, et al. 1984. Human exposure to potentially toxic elements through ambient air in Texas. *Proc APCA Annu Meet* 1:1-15.
- *Wilkinson DS, Wilkinson JD. 1989. Nickel allergy and hand eczema. In: Maibach HI, Menne T, eds. *Nickel and the skin: Immunology and toxicology*. Boca Raton, FL: CRC Press, Inc., 133-163
- *Windholz M. 1983. *The Merck index*. 10th ed. Rahway, NJ: Merck and Co., 932-933, 1171.
- *Windom HL, Schropp SJ, Calder FD, et al. 1989. Natural trace metal concentrations in estuarine and coastal marine sediments of the southeastern United States. *Environ Sci Technol* 23:314-320.
- *Winger PV, Schultz DP, Johnson WW. 1990. Environmental contaminant concentrations in biota from the lower Savannah River, Georgia and South Carolina. *Arch Environ Contam Toxicol* 19:101-117.
- *Wong PK. 1988. Mutagenicity of heavy metals. *Bull Environ Contam Toxicol* 40:597-603.
- *Wong JL, Wu T-G. 1991. Speciation of airborne nickel in occupational exposure. *Environ Sci Technol* 25(2):306-309.
- *Wood JM. 1987. Biological processes in the cycling of elements between soil or sediments and the aqueous environment. *Hydrobiologia* 149:31-42.
- Wozniak K, Blasiak J. 2002. Free radicals-mediated induction of oxidized DNA bases and DNA-protein cross-links by nickel chloride. *Mutat Res* 514(1-2):233-243.

9. REFERENCES

- *Wulf HC. 1980. Sister chromatid exchanges in human lymphocytes exposed to nickel and lead. *Dan Med Bull* 27:40-42.
- Yadav JS, Yadav AS, Sharma T. 2001. Chromosome damage in nickel-chrome electroplaters. *J Hum Ecol* 12(3):185-189.
- *Yeats PA. 1988. The distribution of trace metals in ocean waters. *Sci Total Environ* 72:131-149.
- *Young TC, DePinto JV, Seger ES. 1982. Transport and fate of heavy metals in Onondaga Lake, New York, USA. *Bull Environ Contam Toxicol* 29:554-560.
- *Yu CP, Hsieh TH, Oller AR, et al. 2001. Evaluation of the human nickel retention model with workplace data. *Regul Toxicol Pharmacol* 33:165-172.
- *Yunes N, Moyano S, Cerutti S, et al. 2003. On-line preconcentration and determination of nickel in natural water samples by flow injection-inductively coupled plasma optical emission spectrometry (FI-ICP-OES) *Talanta* 59(5):943-949.
- *Zaroogian GE, Johnson M. 1984. Nickel uptake and loss in the bivalves *Crassostrea virginica* and *Mytilus edulis*. *Arch Environ Contam Toxicol* 13:411-418.
- *Zatka VJ, Warner JS, Maskery D. 1992. Chemical speciation of nickel in airborne dusts: Analytical method and results of an interlaboratory test program. *Environ Sci Technol* 26:138-144.
- Zhai H, Chang Y-C, Singh M, et al. 1999. *In vivo* nickel allergic contact dermatitis: Human model for topical therapeutics. *Contact Dermatitis* 40:203-208.
- Zhai H, Chew A, Bashir SJ, et al. 2003. Provocative use test of nickel coins in nickel-sensitized subjects and controls. *Br J Dermatol* 149(2):311-317.
- *Zhang Q, Kusaka Y, Donaldson K. 2000. Comparative injurious and proinflammatory effects of three ultrafine metals in macrophages from young and old rats. *Inhal Toxicol* 12:267-273.
- Zhang Q, Kusaka Y, Sato K, et al. 2003. Comparative toxicity of standard nickel and ultrafine nickel in lung after intratracheal instillation. *J Occup Health* 45(1):23-30.
- Zhang Z, Suo Z, Holm R, et al. 1987. Diagnostic implications of p53 protein reactivity in nasal mucosa of nickel workers. *Anal Quant Cytol Histol* 19(4):345-350.
- *Ziegler EE, Edwards BB, Jensen RL, et al. 1978. Absorption and retention of lead by infants. *Pediatr Res* 12:29-34.
- *Zissu D, Cavelier C, De Ceaurriz J. 1987. Experimental sensitization of guinea pigs to nickel and patch testing with metal samples. *Food Chem Toxicol* 25:83-85.
- *Zoroddu MA, Schinocca L, Kowalik-Jankowska T, et al. 2002. Molecular mechanisms in nickel carcinogenesis: Modeling Ni (II) binding site in histone H4. *Environ Health Perspect Suppl* 110(5):719-723.