

**Selected studies published since the release of the National Research Council report, *Fluoride in Drinking Water: A Scientific Review of EPA's Standards*, in March 2006.**

Also available at <http://www.fluoridealert.org/since-nrc.html>

Year	Rough Category	Study	Journal
2011	Apoptosis	<p>Wang Z, et al. 2011. Sodium fluoride suppress proliferation and induce apoptosis through decreased insulin-like growth factor-I expression and oxidative stress in primary cultured mouse osteoblasts.</p> <p><b>“All the tested NaF inhibited proliferation and arrested cell cycle at S phase in osteoblasts, and further demonstrated to induce apoptosis in osteoblasts. On the other hand, we found that NaF increased oxidative stress and decreased protein expression of IGF-I.</b></p> <p>Our study herein suggested that NaF caused proliferation suppression, and apoptosis may contribute to decrease IGF-I expression and increased oxidative stress damage by NaF in the primary mouse osteoblasts.”</p>	<p>Arch Toxicol. 2011 Apr 2. [Epub ahead of print]  <a href="#">Abstract</a></p>
2011	Apoptosis	<p>Rocha RA, et al. 2011. Arsenic and fluoride induce <b>neural progenitor cell</b> apoptosis.</p>	<p>Toxicol Lett. Mar 22. [Epub ahead of print]  <a href="#">Abstract</a></p>
2011	Apoptosis	<p>Sun Z, et al. 2011. Fluoride-induced apoptosis and gene expression profiling in <b>mice sperm in vivo</b>.</p>	<p>Arch Toxicol. 2011 Feb 22. [Epub ahead of print]  <a href="#">Abstract</a></p>
2011	Apoptosis	<p>Andrade-Vieira LF, et al. 2011. Spent Pot Liner (SPL) induced <b>DNA damage</b> and nuclear alterations in root tip cells of <i>Allium cepa</i> as a consequence of programmed cell death.</p>	<p>Ecotoxicol Environ Saf. 2011 Jan 11. [Epub ahead of print]  <a href="#">Abstract</a></p>
2011	Apoptosis	<p>Yan X, et al. 2011. Fluoride induces apoptosis and alters collagen I expression in <b>rat osteoblasts</b>.</p>	<p>Toxicol Lett. 200(3):133-8. Feb 5.  <a href="#">Abstract</a></p>
2011	Apoptosis	<p>Xu B, et al. 2011. Effects of the Fas/Fas-L pathway on fluoride-induced apoptosis in <b>SH-SY5Y cells</b>.</p>	<p>Environ Toxicol. 26(1):86-92. Feb.  <a href="#">Abstract</a></p>
2011	Apoptosis	<p>Madusudanan Rao S, et al. 2011. Morphometry of buccal mucosal cells in fluorosis - a new paradigm.</p> <p>"Conclusions: <b>Fluorosis induces oxidative stress, DNA damage and apoptosis</b> which can be the reasons for the increase in the nuclear</p>	<p>Hum Exp Toxicol. Mar 15. [Epub ahead of print]  <a href="#">Abstract</a></p>

		size and decrease in the cell size."	
2010	Apoptosis	Gutiérrez-Salinas J, et al. 2010. Exposure to sodium fluoride produces signs of apoptosis in <b>rat leukocytes</b> .	Int J Mol Sci. 11(9):3610-22. Sept. 27. <a href="#">Full Text Article</a>
2010	Apoptosis	Jacinto-Alemán LF, et al. 2010. In vitro effect of sodium fluoride on antioxidative enzymes and apoptosis during <b>murine odontogenesis</b> .	J Oral Pathol Med. 39(9):709-14. Oct. <a href="#">Abstract</a>
2010	Apoptosis	Gutowska I, et al. 2010. Fluoride as a pro-inflammatory factor and inhibitor of ATP bioavailability in differentiated human THP1 monocytic cells.  "The incubation of macrophages in fluoride solutions significantly decreased the amount of synthesized cellular ATP and <b>increased formation of ROS and apoptosis in a dose-dependent pattern.</b> "	Toxicology Letters 196: 74-9. <a href="#">Abstract</a>
2010	Apoptosis	Lu J, et al. 2010. Proteomics analysis of liver samples from puffer fish Takifugu rubripes exposed to excessive fluoride: an insight into molecular response to fluorosis.  "... Consistent with their previously known functions, <b>these identified proteins seem to be involved in apoptosis and other functions associated with fluorosis</b> . These results will greatly contribute to our understanding of the ... <b>toxicological mechanism of fluoride causing fluorosis in both fish and human.</b> "	J Biochem Mol Toxicol. 24(1):21-8. Jan-Feb. <a href="#">Abstract</a>
2010	Apoptosis	Salgado-Bustamante M, et al. 2010. Pattern of expression of apoptosis and inflammatory genes in <b>humans exposed to arsenic and/or fluoride</b> .	Sci Total Environ. 408(4):760-7. Jan 15. <a href="#">Abstract</a>
2009	Apoptosis	Karube H, et al. 2009. NaF activates MAPKs and induces apoptosis in <b>odontoblast-like cells</b> .	J Dent Res. 88(5):461-5. May. <a href="#">Abstract</a>
2009	Apoptosis	Yan X, et al. 2009. Effects of sodium fluoride treatment in vitro on cell proliferation, apoptosis and caspase-3 and caspase-9 mRNA expression by <b>neonatal rat osteoblasts</b> .	Arch Toxicol. 83(5):451-8. May. <a href="#">Abstract</a>
2009	Apoptosis	Herai M, et al. 2009. Induction of apoptosis in <b>human gingival epithelial cells</b> by sodium fluoride.	Fluoride 42(1):3-8. Jan–March. <a href="#">Full Report</a>

2009	Apoptosis	Wang H, et al. 2009. Effects of dietary protein and calcium on <b>thymus</b> apoptosis induced by fluoride in <b>female rats</b> (Wistar rats).	Environ Toxicol. 24(3):218-24. June. <a href="#">Abstract</a>
2008	Apoptosis	Lee JH, et al. 2008. Involvement of both mitochondrial- and death receptor-dependent apoptotic pathways regulated by Bcl-2 family in sodium fluoride-induced apoptosis of the <b>human gingival fibroblasts</b> .	Toxicology 243(3):340-7. Jan 20. <a href="#">Abstract</a>
2008	Apoptosis	Tsai CL, et al. Wu PC. 2008. Induction of apoptosis in <b>rabbit oral mucosa</b> by 1.23% acidulated phosphate fluoride gel.	Arch Toxicol. 82(2):81-7. Feb. <a href="#">Abstract</a>
2008	Apoptosis	Chouhan S, et al. 2008. Effects of fluoride on the tissue oxidative stress and apoptosis in <b>rats</b> : biochemical assays supported by IR spectroscopy data.	Toxicology 5;254(1- 2):61-7. Dec. <a href="#">Abstract</a>
2007	Apoptosis	Yan Q, Zhang Y, Li W, Denbesten PK. 2007. Micromolar fluoride alters <b>ameloblast lineage cells</b> in vitro.	J Dent Res. 86(4):336-40. April. <a href="#">Abstract</a>
2007	Apoptosis	Liu K, et al. 2007. Fluoride-mediated apoptosis and disordering of cell cycle distributions during in vitro organ culture of <b>mouse fetal long bones</b> .	Fluoride 40(1):19-23. Jan-March. <a href="#">Full Report</a>
2007	Apoptosis	Guney M, et al. 2007. Effect of fluoride intoxication on <b>endometrial</b> apoptosis and lipid peroxidation in rats: role of vitamins E and C.	Toxicology. 231(2- 3):215-23. March 7. <a href="#">Abstract</a>
2007	Apoptosis	Huang C, et al. 2007. Toxic effects of sodium fluoride on <b>reproductive function in male mice</b> .	Fluoride 40(3):162-8. July-Sept. <a href="#">Full Report</a>
2007	Apoptosis	Matsui H, et al. 2007. Some characteristics of fluoride-induced cell death in <b>rat thymocytes</b> : Cytotoxicity of sodium fluoride.	Toxicol in Vitro 21(6):1113-20. Sept. <a href="#">Abstract</a>
2007	Apoptosis	Zhang M, et al. 2007. Effects of fluoride on the expression of NCAM, oxidative stress, and apoptosis in <b>primary cultured hippocampal neurons</b> .	Toxicology 236(3):208-16. July 17. <a href="#">Abstract</a>
2006	Apoptosis	Yu RA, et al. 2006. Effects of selenium and zinc on <b>renal</b> oxidative stress and apoptosis induced by fluoride in rats.	Biomed Environ Sci. 19(6):439-44. Dec. <a href="#">Abstract</a>

2006	Apoptosis	Xu H, et al. 2006. Effect of sodium fluoride on the expression of bcl-2 family and osteopontin in rat <b>renal tubular cells</b> .	Biol Trace Elem Res. 109(1):55-60. Jan. <a href="#">Abstract</a>
2006	Apoptosis	He LF, Chen JG. 2006. DNA damage, apoptosis and cell cycle changes induced by fluoride in <b>rat oral mucosal cells and hepatocytes</b> .	World J Gastroenterol. 12(7):1144-8. Feb 21. <a href="#">Full Report</a>
2006	Apoptosis	Ge Y, et al. 2006. Apoptosis in <b>brain cells of offspring rats</b> exposed to high fluoride and low iodine.	Fluoride 39(3);173-8. July-Sept. <a href="#">Full Report</a>
2005	Apoptosis	Otsuki S, et al. 2005. Possible link between <b>glycolysis</b> and apoptosis induced by sodium fluoride.	J Dent Res. 84(10):919-23. Oct. <a href="#">Abstract</a>
2005	Apoptosis	Sun G, Zhang Y, Sun X. 2005. Experimental study of fluoride toxicity <b>on osteoblasts during bone formation</b> . Paper presented at the XXVIth. ISFR conference in Wiesbaden, Germany.	Fluoride 38(3). Sept. <a href="#">See Abstract No. 48.</a>
2005	Apoptosis	Jiang CX, et al. 2005. [ <b>Relationship between spermatogenic cell apoptosis and serum estradiol level</b> in rats exposed to fluoride]	Wei Sheng Yan Jiu. 34(1):32-4. January. [Article in Chinese] <a href="#">Abstract</a>
2011	Asthma	Donoghue AM, et al. 2011. Occupational asthma in the aluminum smelters of Australia and New Zealand: 1991-2006.  "RESULTS: The incidence of occupational asthma across all smelters combined was highest in 1992 at 9.46/1,000/year, declining to 0.36/1,000/year in 2006; a 96.2% reduction. <b>The incidence of occupational asthma was correlated with geometric mean total fluoride concentration</b> , measured as personal samples from employees undertaking anode changing (r(s) = 0.497, P < 0.001)."	Am J Ind Med. 54(3):224-31. Mar. <a href="#">Abstract</a>
2010	Asthma	Abramson MJ, et al. 2010. Is potroom asthma due more to sulphur dioxide than fluoride? An inception cohort study in the Australian aluminium industry.  "... SO(2) exposure was significantly associated with these symptoms, bronchial hyper-responsiveness (BHR) to methacholine (a feature of asthma), airflow limitation (reduced forced expiratory volume in 1 second/forced	Occup Environ Med. Oct;67(10):679-85. <a href="#">Abstract</a>

		vital capacity ratio) and longitudinal decline in lung function. Fluoride exposure was associated with the same outcomes, but less strongly... further modelling suggested that of the known respiratory irritants, SO(2) was more likely than fluoride to be primarily responsible for the symptoms observed. <b>Fluoride, inhalable dust and SO(2) were the most important airborne contaminants associated with effects on lung function."</b>	
2006	Asthma	Taiwo OA, et al. 2006. Incidence of asthma among <b>aluminum workers</b> .	J Occup Environ Med. 48(3):275-82. March. <a href="#">Abstract</a>
2011	Blood	Amini H, et al. 2011. Drinking Water Fluoride and Blood Pressure? An Environmental Study.  "... <b>Statistically significant positive correlations were found between the mean concentrations of F in the GWRs [ground water resources] and the hypertension prevalence of males</b> (r = 0.48, p = 0.007), females (r = 0.36, p = 0.048), and overall (r = 0.495, p = 0.005). Also, statistically significant positive correlations between the mean concentrations of F in the GWRs and the mean SBP [systolic blood pressure] of males (r = 0.431, p = 0.018)..."	Biol Trace Elem Res. Apr 12. [Epub ahead of print] <a href="#">Abstract</a>
2010	Blood	Sawan RMM, et al. 2010. <b>Fluoride increases lead concentrations</b> in whole blood and in calcified tissues from lead-exposed rats.	Toxicology 271(1-2): 21-6. April 30. <a href="#">Abstract</a>
2010	Blood	Gutiérrez-Salinas J, et al. 2010. Exposure to sodium fluoride produces signs of apoptosis in <b>rat leukocytes</b> .	Int J Mol Sci. 11(9):3610-22. Sept 27. <a href="#">Abstract</a>
2010	Blood	Feng P, et al, 2010. Influence of selenium and fluoride on blood antioxidant capacity of rats. " <b>Fluorosis could induce the decline of blood antioxidant capacity and the fluidity of erythrocyte membrane, as evident in this study</b> , and Se at different levels possess some antagonistic effects on blood induced by fluoride."	Exp Toxicol Pathol. Dec 10. [Epub ahead of print] <a href="#">Abstract</a>
2009	Blood	Gutowska I, et al. 2009. Changes in the concentration of fluoride and biogenic elements in the <b>serum</b> and bones <b>of female</b>	Fluoride 42(1):9-16. Jan-March. <a href="#">Full Report</a>

		<p><b>rats</b> with streptozotocin-induced diabetes.</p> <p>“In our research we observed a <b>statistically significant increase in the concentration of F in the bones of the diabetic rats, with a simultaneous decrease in the concentration of this element in serum.</b>”</p>	
2007	Blood	<p>Grucka-Mamczar E, et al. 2007. Influence of extended exposure to sodium fluoride and caffeine on the activity of carbohydrate metabolism enzymes in <b>rat blood serum and liver.</b></p> <p>“... Glycolysis in extra-hepatic tissues (serum), under the influence of F, was slightly inhibited; however, it was markedly intensified by caffeine. <b>Overall, a more profound influence by caffeine on carbohydrate enzyme activity was observed in blood serum (extra-hepatic tissues) than in the liver.</b>”</p>	<p>Fluoride 40(1):62–66. Jan-March. <a href="#">Full Report</a></p>
2006	Blood	<p>Opydo-Szymaczek J, et al. 2006. Variations in concentration of fluoride in blood plasma of <b>pregnant women</b> and their possible consequences for amelogenesis in a fetus.</p> <p>“... Mean value of fluoride concentration in the samples of blood plasma from the 28th week of pregnancy was lower than the mean concentration detected in the 33rd week of pregnancy (<b>3.29 and 3.73 μmol/l, respectively</b>). These values suggest that apart from drinking water, there were other important sources of fluoride in the examined sample. <b>The results indicate that a reliable assessment of fluoride exposure in a given population cannot be based solely on the concentration of fluoride in drinking water...</b>”</p>	<p>Homo. 57(4):295-307. <a href="#">Abstract</a></p>
2006	Blood	<p>Shanthakumari D, et al. 2006. Antioxidant defense systems in <b>red blood cell lysates of men with dental fluorosis</b> living in Tamil Nadu, India.</p>	<p>Fluoride 39(3):231–9. July-Sept. <a href="#">Full Report</a></p>
2005	Blood	<p>Connett M. 2005. Blood fluoride levels as a <b>tool for assessing risk of fluoride toxicity.</b> Paper presented at the XXVIth. ISFR conference in Wiesbaden, Germany, September.</p>	<p>Fluoride 38(3):226. <a href="#">See Abstract Number 9</a></p>
2005	Blood	<p>Ruiz-Payan A, et al. 2005. <b>Chronic effects</b> of</p>	<p>Fluoride 38(3):246.</p>

		fluoride on growth, <b>blood chemistry</b> , and thyroid hormones in adolescents residing in northern Mexico. Paper presented at the XXVIth Conference of the International Society for Fluoride Research (September 26-29).	<a href="#">Full Article</a> (see Abstract Number 37)
2005	Blood	Xiang Q, et al. 2005. <b>Serum fluoride and skeletal fluorosis</b> in two villages in Jiangsu Province, China.	Fluoride 38(3):178–84. <a href="#">Full Report</a>
2011	Bone	Chen L, et al. 2011. Medication-induced periostitis in lung transplant patients: periostitis deformans revisited.  “ We report five cases of <b>diffuse periostitis resembling hypertrophic osteoarthropathy</b> and <b>perostitis deformans</b> in lung transplantation patients <b>on chronic voriconazole, a fluoride-containing compound...</b> ”	Skeletal Radiol. 40(2):143-8. Feb. <a href="#">Abstract</a>
2011	Bone	Wang Z, et al. 2011. Sodium fluoride suppress proliferation and induce apoptosis through decreased insulin-like growth factor-I expression and oxidative stress in primary cultured mouse osteoblasts.  “ <b>All the tested NaF inhibited proliferation and arrested cell cycle at S phase in osteoblasts, and further demonstrated to induce apoptosis in osteoblasts. On the other hand, we found that NaF increased oxidative stress and decreased protein expression of IGF-I.</b> Our study herein suggested that NaF caused proliferation suppression, and apoptosis may contribute to decrease IGF-I expression and increased oxidative stress damage by NaF in the primary mouse osteoblasts.”	Arch Toxicol. 2011 Apr 2. [Epub ahead of print] <a href="#">Abstract</a>
2011	Bone	Yan X, et al. 2011. Fluoride induces apoptosis and alters collagen I expression in <b>rat osteoblasts</b> .	Toxicol Lett. 200(3):133-8. Feb 5. <a href="#">Abstract</a>
2010	Bone	Sawan RMM, et al. 2010. <b>Fluoride Increases Lead Concentrations in Whole Blood and in Calcified Tissues from Lead-Exposed Rats</b> .	Toxicology 271(1–2): 21–26. <a href="#">Abstract</a>
2010	Bone	Itai K, et al. 2010. Serum ionic fluoride concentrations are related to renal function and menopause status but not to age in a Japanese general population.	Clinica Chimica Acta 411: 263–266. <a href="#">Abstract</a>

		<p>“Conclusion: SIF [serum ionic fluoride] concentrations in middle-aged healthy subjects were increased with an age-related degeneration in renal function. <b>SIF concentrations in post-menopausal women arise from the increased fluoride release from bone after menopause. Age is not related to SIF concentrations.</b>”</p>	
2010	Bone	<p>Tu J, et al. 2010. Interactive effect of fluoride burden with calcitonin receptor gene polymorphisms on the risk of <b>F bone injury</b>.</p> <p>"In this <b>case-control study, a total of 119 cases and 126 controls were enrolled from 2 aluminum plants in Hubei province</b>. F burden (UF) was measured by F ion-selective electrode method... RESULTS: The odds of developing F bone injury for participants in the moderate F burden group versus the mild F burden group were 4.1 (95% CI: 1.9, 8.7); the heavy F burden group versus the mild F burden group were 14.1 (95% CI: 6.5, 30.6). The odds of developing F bone injury for participants with the TC &amp; TT genotypes versus the CC genotype were 2.6 (95% CI: 1.4, 4.7). The interactions between TC &amp; TT genotypes and moderate, heavy F burden were significant (OR = 14.4; OR = 40.3). CONCLUSION: The interactive effect of F burden and CTR genotype was significant, which increased the F bone injury risk."</p>	<p>Int Arch Occup Environ Health. Nov 25. [Epub ahead of print]  <a href="#">Abstract</a></p>
2010	Bone	<p>Song YE, et al. 2010. Effect of fluoride exposure on <b>bone metabolism indicators ALP, BALP, and BGP</b>.</p>	<p>Environ Health Prev Med. 2010 Oct 2. [Epub ahead of print]  <a href="#">Abstract</a></p>
2010	Bone	<p>Shalina TI, Vasil'eva LS. 2010. [<b>Femoral bone morphogenesis in human fetuses</b> in the area of environmental fluoride pollution].</p> <p>"... In the town of Shelekhov, located closely to the pollution source, the <b>growth of bones in both length and width, is delayed</b>. The bone growth was active till week 16, however, <b>during weeks 18-29, osteoresorption prevailed over the osteosynthesis, the bone thickness decreased, while the activity of their growth in length remained reduced.</b>"</p>	<p>Morfologiya. 137(1):54-7. [Article in Russian]  <a href="#">Abstract</a></p>
2010	Bone	<p>Xu H, et al. 2010. Activation of PERK signaling</p>	<p>Toxicology 277(1-3):1-5.</p>

		<p>through fluoride-mediated endoplasmic reticulum stress in OS732 cells.</p> <p>"... <b>This study proved that PERK signaling play major roles in action of fluoride on osteoblast</b>, and suggested that bone response in skeletal fluorosis may be due in part to PERK signaling pathway."</p>	<p>Nov 9. <a href="#">Abstract</a></p>
2009	Bone	<p>Levy SM, et al. 2009. <b>Associations of fluoride intake with children's bone measures at age 11.</b></p> <p>"... In gender-stratified, and body size- and Tanner stage-adjusted linear regression analyses, associations between girls' bone outcomes and fluoride intake for girls were almost all negative; <b>associations for boys were all positive and none was statistically significant when using an alpha = 0.01 criterion...</b>"</p>	<p><a href="#">Community Dent Oral Epidemiol.</a> 37(5):416-26. Oct. <a href="#">Abstract</a></p>
2009	Bone	<p>Gutowska I, et al. 2009. Changes in the concentration of fluoride and biogenic elements in the serum and <b>bones of female rats</b> with streptozotocin-induced diabetes.</p> <p>"In our research we observed a <b>statistically significant increase in the concentration of F in the bones of the diabetic rats, with a simultaneous decrease in the concentration of this element in serum.</b>"</p>	<p>Fluoride 42(1):9-16. Jan-March. <a href="#">Full Report</a></p>
2008	Bone	<p>Qu W, et al. 2008. Sodium fluoride modulates <b>caprine osteoblast proliferation and differentiation.</b></p>	<p>J Bone Miner Metab 26(4):328-34. July. <a href="#">Abstract</a></p>
2007	Bone	<p>Tamer MN, et al. 2007. <b>Osteosclerosis</b> due to endemic fluorosis.</p>	<p>Sci Total Environ. 373(1):43-8. Feb 1. <a href="#">Abstract</a></p>
2007	Bone	<p>Tang Q, et al. 2007. Effect of fluoride on expression of purl gene and CaM gene in <b>newborn rat osteoblasts.</b></p>	<p>Fluoride 40(1):31-6. Jan-March. <a href="#">Full Report</a></p>
2007	Bone	<p>Chavassieux P, et al. 2007. Insights into material and structural basis of bone fragility from diseases associated with fractures: how determinants of the biomechanical properties of bone are compromised by disease.</p> <p><b>"fluorosis and osteomalacia"</b></p>	<p>Endocrine Reviews 28(2):151-64. <a href="#">Abstract</a></p>

2007	Bone	<p>Hallanger Johnson JE, et al. 2007. <b>Fluoride-related bone disease</b> associated with habitual tea consumption.</p> <p>Figure 1. <a href="#">Lateral lumbar spine showing advanced osteosclerosis of the vertebral bodies, with absence of usual marrow space radiolucency</a></p>	<p>Mayo Clin Proc. 82(6):719-24. June.</p> <ul style="list-style-type: none"> <li>• Erratum in: Mayo Clin Proc. 2007 Aug;82(8):1017. dosage error in text.</li> </ul> <p><a href="#">Full Text</a></p>
2007	Bone	<p>Kakei M, et al. 2007. Effect of fluoride ions on <b>apatite crystal formation in rat hard tissues</b>.</p>	<p>Ann Anat. 189(2):175-81.</p> <p><a href="#">Abstract</a></p>
2006	Bone	<p>Bouletreau PH, et al. 2006. Fluoride exposure and <b>bone status</b> in patients with <b>chronic intestinal failure</b> who are receiving home parenteral nutrition.</p> <ul style="list-style-type: none"> <li>• TABLE 3. <a href="#">Spinal bone status</a></li> <li>• TABLE 4. <a href="#">Femoral neck bone mineral density (BMD)</a></li> <li>• TABLE 5. <a href="#">Frequency of osteopenia and osteoporosis at the beginning and the end of the survey</a></li> </ul> <p>"CONCLUSIONS: <b>In chronic intestinal failure, high intakes of fluoride are frequent because of the beverages ingested to compensate for stool losses</b>. Hyperfluoremia has an effect on bone metabolism and may increase skeletal fragility. The consumption of fluoride-rich beverages for extended periods is therefore not advisable."</p>	<p>Am J Clin Nutr. 83(6):1429-37. June.</p> <p><a href="#">Full Article</a></p>
2006	Bone	<p>Claassen H, et al. 2006. Extracellular matrix changes in <b>knee joint cartilage</b> following bone-active drug treatment.</p>	<p>Cell Tissue Res. 324(2):279-89. May.</p> <p><a href="#">Abstract</a></p>
2006	Bone	<p>Harinarayan CV, et al. 2006. <b>Fluorotoxic metabolic bone disease</b>: an osteo-renal syndrome caused by excess fluoride ingestion in the tropics.</p>	<p>Bone 39(4):907-14. Oct.</p> <p><a href="#">Abstract</a></p>
2006	Bone	<p>Clarke E, et al. 2006. <b>Fluorosis as a probable cause of chronic lameness in free ranging eastern grey kangaroos</b> (<i>Macropus giganteus</i>).</p> <p>"... The significant lesions observed were: osteophytosis of the distal tibia and fibula, tarsal bones, metatarsus IV, and proximal coccygeal vertebrae; osteopenia of the femur,</p>	<p>J Zoo Wildl Med. Dec;37(4):477-86.</p> <p><a href="#">Abstract</a></p>

		tibia, and metatarsus IV; incisor enamel hypoplasia; stained, uneven, and abnormal teeth wear; abnormal bone matrix mineralization and mottling; increased bone density; and elevated bone fluoride levels. Microradiography of affected kangaroos exhibited " <b>black osteons</b> ," which are a known manifestation of fluorosis. Collectively, these lesions were consistent with a diagnosis of fluorosis."	
2005	Bone	Nyman JS, et al. 2005. Effect of ultrastructural <b>changes on the toughness of bone</b> .	Micron 36(7-8):566-82. <a href="#">Abstract</a>
2005	Bone	Roos J, Dumolard A, Bourget S, Grange L, Rousseau A, 2005. [ <b>Osteofluorosis caused by excess use of toothpaste</b> .] [Article in French].	Presse Med. 34(20 Pt 1):1518-20. Nov. <a href="#">Abstract</a>
2011	Brain: <i>Animal Studies</i>	Ge Y, et al. 2011. <b>Proteomic Analysis of Brain Proteins of Rats Exposed to High Fluoride and Low Iodine</b> .	Archives of Toxicology Arch Jan;85(1):27-33. <a href="#">Abstract</a>
2011	Brain: <i>Animal Studies</i>	Pereira M, et al. 2011. <b>Memory Impairment Induced by Sodium Fluoride Is Associated with Changes in Brain Monoamine Levels</b> .	Neurotoxicity Research 19(1):55-62. Jan. <a href="#">Abstract</a>
2011	Brain: <i>Animal Studies</i>	Zhu W, et al. 2011. Effects of Fluoride on Synaptic Membrane Fluidity and PSD-95 Expression Level in <b>Rat Hippocampus</b> .	Biological Trace Element Research 139, no 2, 197-203. Feb. <a href="#">Abstract</a>
2010	Brain: <i>Animal Studies</i>	Narayanaswamy M, et al. 2010. Effect of maternal exposure of fluoride on biometals and oxidative stress parameters in <b>developing CNS of rat</b> .  "The results confirm that the fluoride provoked oxidative stress and biometal deformations are synergistic that successively governs the neuronal damage and developing CNS no longer prevents exacerbations of fluoride... A series of active or receptor mediated transport systems inherent to the BBB [blood brain barrier] vasculature fails to control the entry of fluoride into the brain... In cerebral cortex on fluoride exposure, SOD showed significance and high correlation with F; similarly, in cerebellum, catalase (100 ppm group) showed significance and high correlation with F whereas in spinal cord GSH-	Biol Trace Elem Res. 133(1):71-82. Jan. <a href="#">Abstract</a>

		Px (100 ppm group) showed significance and high correlation with copper.”	
2010	Brain: <i>Animal Studies</i>	Basha PM, et al. 2010. Evaluation of Fluoride-Induced Oxidative Stress in Rat Brain: A <b>Multigeneration Study</b> .	Biol Trace Elem Res. Jul 24. [Epub ahead of print] <a href="#">Abstract</a>
2010	Brain: <i>Animal Studies</i>	Basha PM, et al. 2010. Pre and Post Natal Exposure of Fluoride Induced Oxidative Macromolecular Alterations in <b>Developing Central Nervous System of Rat</b> and Amelioration by Antioxidants.	Neurochemical Research, 1017–28. Mar. <a href="#">Abstract</a>
2010	Brain: <i>Animal Studies</i>	Bouaziz H, et al. 2010. Fluoride-Induced <b>Brain Damages in Suckling Mice</b> .	Pesticide Biochemistry and Physiology 96: 24–29.
2010	Brain: <i>Animal Studies</i>	Chouhan S, et al. 2010. Fluoride-induced Changes in Haem Biosynthesis Pathway, Neurological Variables and Tissue Histopathology of Rats. “... changes were accompanied by depletion in GSH:GSSG ratio, <b>whole brain biogenic amine levels</b> and a dose-dependent increase in fluoride concentration. <b>Interestingly and most significantly, these changes were more pronounced at lower concentrations of fluoride compared with higher fluoride dose...</b> ”	Journal of Applied Toxicology 30(1): 63–73. <a href="#">Abstract</a>
2010	Brain: <i>Animal Studies</i>	Gui C Z, et al. 2010. Changes of Learning and Memory Ability and <b>Brain Nicotinic Receptors</b> of Rat Offspring with Coal Burning Fluorosis.	Neurotoxicology and Teratology 32(5):536-41. Sep-Oct. <a href="#">Abstract</a>
2010	Brain: <i>Animal Studies</i>	Kaoud H and Kalifa B. 2010. Effect of <b>Fluoride, Cadmium and Arsenic Intoxication on Brain and Learning-Memory Ability in Rats</b> .	Toxicology Letters 196, suppl. 1 (2010): S53 (abstract from the XII International Congress of Toxicology).
2010	Brain: <i>Animal Studies</i>	Li H, et al. 2010. Toxic Effects of Fluoride on <b>Rat Cerebral Cortex Astrocytes</b> in Vitro.	Wei Sheng Yan Jiu 39(1): 86–88. <a href="#">Abstract</a> (Article in Chinese)
2010	Brain: <i>Animal Studies</i>	Liu YJ, et al. 2010. Alterations of nAChRs and ERK1/2 in the Brains of Rats with Chronic Fluorosis and Their Connections with the <b>Decreased Capacity of Learning and Memory</b> .	Toxicology Letters 192(3): 324–29. <a href="#">Abstract</a>

2010	Brain: <i>Animal Studies</i>	Zhang J, et al. 2010. Effect of Fluoride on Calcium Ion Concentration and Expression of Nuclear Transcription Factor Kappa-B Rho65 in <b>Rat Hippocampus</b> .	Experimental and Toxicologic Pathology [in press; available online March 19, 2010].
2009	Brain: <i>Animal Studies</i>	Bharti VK and Srivastava RS. 2009. <b>Fluoride-induced Oxidative Stress in Rat's Brain</b> and Its Amelioration by Buffalo (Bubalus Bubalis) Pineal Proteins and Melatonin.	Biological Trace Element Research 130(2): 131–40. <a href="#">Abstract</a>
2009	Brain: <i>Animal Studies</i>	Flora SJ, et al. 2009. <b>Co-exposure to Arsenic and Fluoride on Oxidative Stress</b> , Glutathione Linked Enzymes, Biogenic Amines and DNA Damage in Mouse Brain.	Journal of the Neurological Sciences 285(1–2): 198–205. <a href="#">Abstract</a>
2009	Brain: <i>Animal Studies</i>	Gao Q, et al. 2009. <b>Decreased Learning and Memory Ability in Rats with Fluorosis: Increased Oxidative Stress and Reduced Cholinesterase Activity</b> .	Fluoride 42(4): 277–85. <a href="#">Full Report</a>
2009	Brain: <i>Animal Studies</i>	Kaur T, et al. 2009. <b>Effect of Concurrent Chronic Exposure of Fluoride and Aluminum on Rat Brain</b> .	Drug and Chemical Toxicology 32(3):215–21. <a href="#">Abstract</a>
2009	Brain: <i>Animal Studies</i>	Madhusudhan N, et al. 2009. Fluoride-induced Neuronal Oxidative Stress Amelioration by Antioxidants in Developing Rats.	Fluoride 42(3):179–87. <a href="#">Full Report</a>
2009	Brain: <i>Animal Studies</i>	Niu R, et al. 2009. <b>Decreased Learning Ability and Low Hippocampus Glutamate in Offspring</b> Rats Exposed to Fluoride and Lead.	Environmental Toxicology and Pharmacology 28:254–58.
2009	Brain: <i>Animal Studies</i>	Whitford GM, et al. 2009. Appetitive-based Learning in Rats: Lack of Effect of Chronic Exposure to Fluoride.  Note: This is the <b>only study reported “no significant effect on appetitive-based learning.”</b>	Neurotoxicology and Teratology 31(4):210–15. <a href="#">Abstract</a>
2008	Brain: <i>Animal Studies</i>	Chioca LR, et al. 2008. Subchronic Fluoride Intake Induces <b>Impairment in Habituation and Active Avoidance Tasks</b> in Rats.	European Journal of Pharmacology 579(1–3):196–201. <a href="#">Abstract</a>
2008	Brain: <i>Animal Studies</i>	Chouhan S, et al. 2008. Effects of Fluoride on the <b>Tissue Oxidative Stress and Apoptosis</b> in Rats: Biochemical Assays Supported by IR Spectroscopy Data.	Toxicology 254(1–2):61–67. <a href="#">Abstract</a>
2008	Brain:	Niu R, et al. 2008. Effects of Fluoride and Lead	Fluoride 41(4):276–82.

	<i>Animal Studies</i>	on Locomotor Behavior and Expression of <b>Nissl Body in Brain of Adult Rats</b> .	<a href="#">Full Report</a>
2008	Brain: <i>Animal Studies</i>	Sun ZR, et al. 2008. Effects of High Fluoride Drinking Water on the <b>Cerebral Functions</b> of Mice.	Fluoride 41(2):148–51 . <a href="#">Full Report</a>
2008	Brain: <i>Animal Studies</i>	Wu N, et al. 2008. Behavioral Teratology in Rats exposed to Fluoride.  "Brain slices in the 25 mg/L group also showed <b>a significantly lower average cerebral cortex thickness than in the control group</b> (10.97 $\mu\text{m}$ vs. 11.70 $\mu\text{m}$ ).]"	Fluoride 41(2):129–133 <a href="#">Full Report</a>
2008	Brain: <i>Animal Studies</i>	Zhang M, et al. 2008. Effects of Fluoride on DNA Damage, S-phase Cell-cycle Arrest and the Expression of NF-KappaB in <b>Primary Cultured Rat Hippocampal Neurons</b> .	Toxicology Letters 179(1):1–5. <a href="#">Abstract</a>
2008	Brain: <i>Animal Studies</i>	Zhang Z, et al. 2008. Effect of Fluoride Exposure on <b>Synaptic Structure of Brain Areas Related to Learning-memory in Mice</b> .	Fluoride 41(2):139–43. <a href="#">Full Report</a>
2007	Brain: <i>Animal Studies</i>	Bera I, et al. 2007. <b>Neurofunctional Effects</b> of Developmental Sodium Fluoride Exposure in Rats.	European Review for Medical and Pharmacological Sciences 11(44):211–24. <a href="#">Abstract</a>
2007	Brain: <i>Animal Studies</i>	Chirumari K and Reddy PK. 2007. Dose-Dependent Effects of Fluoride on Neurochemical Milieu in the <b>Hippocampus and Neocortex</b> of Rat Brain.	Fluoride 40(2):101–10. <a href="#">Full Report</a>
2007	Brain: <i>Animal Studies</i>	Ge Y, et al. 2007. Apoptosis in Brain Cells of Offspring Rats <b>Exposed to High Fluoride and Low Iodine</b> .	Fluoride 39(3):173–78. <a href="#">Full Report</a>
2007	Brain: <i>Animal Studies</i>	Xia T, et al. 2007. Effects of Fluoride on Neural Cell Adhesion Molecules mRNA and Protein Expression Levels in <b>Primary Rat Hippocampal Neurons</b> .	Zhonghua Yu Fang Yi Xue Za Zhi 41(6):475–78. (Article in Chinese) <a href="#">Abstract</a>
2007	Brain: <i>Animal Studies</i>	Zhang M, et al. 2007. Effects of Fluoride on the Expression of NCAM, Oxidative Stress, and Apoptosis in <b>Primary Cultured Hippocampal Neurons</b> [rat].	Toxicology 236(3):208–16. <a href="#">Abstract</a>
2006	Brain: <i>Animal Studies</i>	Bhatnagar M, et al.. 2006. <b>Biochemical Changes in Brain</b> and Other Tissues of Young <b>Adult Female Mice</b> from Fluoride in their	Fluoride 39(4):280–84. <a href="#">Full Report</a>

		Drinking Water.	
2005	Brain: <i>Animal Studies</i>	Ge Y, Ning H, Wang S, and Wang J. 2005. Comet Assay of <b>DNA Damage in Brain Cells</b> of Adult Rats Exposed to High Fluoride and Low Iodine.	Fluoride 38(3):209–14. <a href="#">Full Report</a>
2005	Brain: <i>Animal Studies</i>	Krechniak J and Inkielewicz I. 2005. Correlations Between Fluoride <b>Concentration and Free Radical Parameters</b> in Soft Tissues of Rats.	Fluoride 38(4):293–96. <a href="#">Full Report</a>
2005	Brain: <i>Animal Studies</i>	Tsunoda M, et al. 2005. Changes in <b>Fluoride Levels</b> in the Liver, Kidney, and Brain and in Neurotransmitters of Mice after Subacute Administration of Fluorides.	Fluoride 38(4):284–92. <a href="#">Full Report</a>
2008	Brain: <i>Human Fetal Studies</i>	Du L, et al. 2008. <b>The Effect of Fluorine on the Developing Human Brain.</b>	Fluoride 41(4):327–30. <a href="#">Full Report</a>
2008	Brain: <i>Human Fetal Studies</i>	He H, et al. 2008. <b>Effects of Fluorine on the Human Fetus.</b>	Fluoride 41(4):321–26. <a href="#">Full Report</a>
2008	Brain: <i>Human Fetal Studies</i>	Yu Y, et al. 2008. Neurotransmitter and Receptor <b>Changes in the Brains of Fetuses</b> from Areas of Endemic Fluorosis.	Fluoride 41(2):134–38. <a href="#">Full Report</a>
2009	Brain: <i>Children Study</i>	Rocha-Amador D, et al. 2009. Use of the Rey-Osterrieth Complex Figure Test for <b>neurotoxicity evaluation of mixtures in children.</b>  “...The highest proportion of children (89%) with Copy performance below $\_1$ SD was observed in <b>children from F–As area.</b> Approximately 9 out of 10 children were unable to copy the ROCF as expected for their age. For example, the expected score on Copy for a 6-year-old child is $9.94 \_ 2.28$ points. A child classified in the category below $\_1$ SD means that his score was lower than 7.66. In the F–As area children had z-scores as low as $\_5$ SD (scoring only two points on the test). For Immediate Recall, the proportion of children in the lowest category was 59% and almost 6 out of 10 children were unable to draw the figure	Neurotoxicology 30(6):1149-54. Nov. <a href="#">Abstract</a>

		as expected for their age after 3 min had elapsed. Following the same example of a 6-year-old child, the expected value for drawing the figure from memory is 7.26 $\pm$ 2.45. One child classified in the $\pm$ 1 SD category had a score below 4.81 points. Fluoride correlated inversely with Copy and Immediate Recall $r = -0.29$ and $r = -0.27$ (adjusted values). In the F-As area, the mean of FU was 5.6 $\pm$ 1.7 and the proportion of children with FU levels over 2 mg/gcrt was 97.5%. <b>All children had some degree of dental fluorosis as an indicator of chronic exposure to fluoride...</b> "	
2008	Brain: <i>Infant Study</i>	Li J, et al. 2008. Effects of High Fluoride on Neonatal Neurobehavioral Development.	Fluoride 41(2):165–70. <a href="#">Full Report</a>
2008	Brain: <i>Workers Study</i>	Z. Guo Z, et al. 2008. Research on the Neurobehavioural Function of Workers Occupationally Exposed to Fluoride.	Fluoride 41(2):152–55. <a href="#">Full Report</a>
2011	Brain: <i>Human IQ Studies</i>	Ding Y, et al. 2011. The <b>relationships between low levels of urine fluoride on children's intelligence, dental fluorosis in endemic fluorosis areas</b> in Hulunbuir, Inner Mongolia, China.	Journal of Hazardous Materials 186:1942–1946. <a href="#">Abstract</a>
2010	Brain: <i>Human IQ Studies</i>	<ul style="list-style-type: none"> <li>• Xiang Q, et al. 2010. <b>Serum Fluoride Level and Children's Intelligence Quotient</b> in Two Villages in China.</li> </ul> <p><i>Note: this is good paper initially accepted for publication by EHP and put online Dec 17. However, EHP withdrew the report because certain data was published by the lead author in another publication.</i></p>	<p><i>Accepted for publication in Environmental Health Perspectives, and pre-published online December 17.</i></p> <p>- available from FAN.</p>
2008	Brain: <i>Human IQ Studies</i>	Chen Y, et al. 2008. Research on the <b>Intellectual Development of Children in High Fluoride Areas</b> .	Fluoride 41(2):120–24. <a href="#">Full Report</a>
2008	Brain: <i>Human IQ Studies</i>	Guo X, et al. 2008. A Preliminary Investigation of the <b>IQs of 7–13 Year Old Children</b> from an Area with Coal Burning-Related Fluoride Poisoning.	Fluoride 41(2):125–28. <a href="#">Full Report</a>
2008	Brain: <i>Human IQ Studies</i>	Hong F, et al. 2008. Research on the Effects of Fluoride on <b>Child Intellectual Development</b> Under Different Environmental Conditions.	Fluoride 41(2):156–60. <a href="#">Full Report</a>
2008	Brain: <i>Human IQ Studies</i>	Liu S, et al. 2008. Report on the <b>Intellectual Ability of Children Living in High-Fluoride Water Areas</b> .	Fluoride 41(2):144–47. <a href="#">Full Report</a>
2008	Brain: <i>Human IQ Studies</i>	Qin L, et al. 2008. Using the Raven's Standard Progressive Matrices to Determine the Effects	Fluoride 41(2):115–19. <a href="#">Full Report</a>

	<i>Studies</i>	of the Level of Fluoride in Drinking Water on the <b>Intellectual Ability of School-Age Children</b> .	
2008	Brain: <i>Human IQ Studies</i>	Ren D, et al. 2008. A Study of <b>the Intellectual Ability of 8–14 Year-Old Children</b> in High Fluoride, Low Iodine Areas.	Fluoride 41(4):319–20. <a href="#">Full Report</a>
2008	Brain: <i>Human IQ Studies</i>	Wang G, et al. 2008. A Study of the <b>IQ Levels of Four- to Seven-Year-Old Children</b> in High Fluoride Areas.	Fluoride 41(4): 340–43. <a href="#">Full Report</a>
2008	Brain: <i>Human IQ Studies</i>	Wang S, et al. 2008. The Effects of Endemic Fluoride Poisoning Caused by Coal Burning on the <b>Physical Development and Intelligence of Children</b> .	Fluoride 41(4): 344–48. <a href="#">Full Report</a>
2007	Brain: <i>Human IQ Studies</i>	Rocha-Amador D, et al. 2007. <b>Decreased Intelligence in Children and Exposure to Fluoride and Arsenic</b> in Drinking Water.	Cadernos de Saúde Pública 23(suppl. 4): S579–87. <a href="#">Full Report</a>
2007	Brain: <i>Human IQ Studies</i>	Seraj B, et al. 2007. <b>Effect of High Fluoride Concentration in Drinking Water on Children’s Intelligence</b> .	Journal of Dental Medicine 19(2):80–86. <a href="#">English translation</a> (from lead author).
2007	Brain: <i>Human IQ Studies</i>	Trivedi MH, et al. 2007. Effect of High Fluoride Water on Intelligence of School Children in India.	Fluoride 40(3):178–83, <a href="#">Full Report</a>
2007	Brain: <i>Human IQ Studies</i>	Wang SX, et al. 2007. <b>Arsenic and Fluoride Exposure in Drinking Water: Children’s IQ and Growth</b> in Shanyin County, Shanxi Province, China.	Environmental Health Perspectives 115(4):643–47. <a href="#">Full Report</a>
2007	Brain: <i>Human IQ Studies</i>	Fan ZX, et al. 2007. Effect of <b>High Fluoride Exposure on Children’s Intelligence</b> .	Huan Jing Yu Jian Kang Za Zhi 24(10): 802–3. (Article in Chinese)
2011	Brain: <i>Other</i>	Xu B, et al. 2011. Effects of the <b>Fas/Fas-L pathway</b> on fluoride-induced apoptosis in SH-SY5Y cells.	Environ Toxicol. 26(1):86–92. Feb. <a href="#">Abstract</a>
2010	Brain: <i>Other</i>	Lockwood G. 2010. Theoretical context-sensitive elimination times for <b>inhalation anaesthetics</b> .  <i>Note from FAN: Desflurane, Sevoflurane and Isoflurane all break down to the fluoride ion in the body.</i>  “After 4 h of anaesthesia, the model <b>predicted body content</b> to be 28 g nitrous oxide, <b>26 g desflurane, 14 g sevoflurane, or 15 g</b>	Br J Anaesth. 104(5):648–55. May. <a href="#">Abstract</a>

		<b>isoflurane</b> , and <b>99.9% brain elimination times were</b> then 9 h for nitrous oxide, <b>33 h for desflurane</b> , <b>52 h for sevoflurane</b> , and <b>71 h for isoflurane</b> . <b>At this stage of elimination, the whole body still retained between 4% and 13% of the absorbed dose.</b> "	
2009	Brain: <b>Other</b>	Wann BP, et al. 2009. Effect of Olfactory Bulbectomy on <b>Adenylyl Cyclase Activity in the Limbic System</b> .	Brain Research Bulletin 79(1):32–36. <a href="#">Abstract</a>
2009	Brain: <b>Other</b>	García-Montalvo EA, et al. 2009. Fluoride Exposure Impairs Glucose Tolerance Via Decreased Insulin Expression and Oxidative Stress.  "Interestingly, <b>values of F<sup>-</sup> in soft rat tissues (kidney, liver, brain and testis) were similar to those in urine (312 μmolL<sup>-1</sup>)</b> . According to this information, urinary F <sup>-</sup> level is a good indicator of the F <sup>-</sup> concentration in soft tissues. In cases of subchronic exposure, the level of F <sup>-</sup> in the plasma probably does not reflect the levels of F <sup>-</sup> distributed in soft tissues."	Toxicology 263:75–83. <a href="#">Abstract</a>
2008	Brain: <b>Other</b>	Gao Q, et al. 2008. Oxidative Stress Might Be a Mechanism Connected with the Decreased Alpha 7 <b>Nicotinic Receptor</b> Influenced by High-Concentration of Fluoride in <b>SH-SY5Y Neuroblastoma Cells</b> .	Toxicology in Vitro 22(4):837–43. <a href="#">Abstract</a> (Corrigendum in Toxicology in Vitro 22: 1814. The concentrations of fluoride should have been given as mM, instead of μM.)
2008	Brain: <b>Other</b>	Liu M, et al. 2008. Effect of endemic fluorosis on <b>children's intelligence development: a Meta analysis</b> . [Article in Chinese]	Zhongguo Dang Dai Er Ke Za Zhi.10(6):723-5. Dec. <a href="#">Abstract</a>
2009	Co-exposure: Aluminum	Kaur T, et al. 2009. Effect of Concurrent Chronic Exposure of Fluoride and Aluminum on Rat Brain.  <b>Effects were "more pronounced in animals given fluoride and aluminum together ...it can be concluded that aluminum appears to enhance the neurotoxic hazards caused by fluoride."</b>	Drug Chem Toxicol. 32(3):215-21. <a href="#">Abstract</a>
2009	Co-exposure: Aluminum	Kant V, et al. 2009. Alterations in biochemical parameters during subacute toxicity of fluoride	Biol Trace Elem Res. Jul;130(1):20-30.

		<p>alone and in conjunction with aluminum sulfate in goats.</p> <p>"... On the basis of results, it could be concluded that <b>sodium fluoride alone and in conjunction with aluminum sulfate produced significant alterations in the various biochemical parameters of the body.</b>"</p>	<a href="#">Abstract</a>
2006	Co-exposure: Aluminum	<p>Lubkowska A, et al. 2006. The effect of alternating administration of aluminum chloride and sodium fluoride in drinking water on the concentration of fluoride in serum and its content in bones of rats.</p> <p>"CONCLUSIONS: ... longer exposure increased fluoride accumulation in the femur (<math>p &lt; 0.001</math>). All groups exposed to NaF had significantly higher fluoride concentration in the femur as compared with control animals. Groups receiving NaF and AlCl<sub>3</sub> showed lower fluoride concentration in serum and femur compared with those exposed to NaF only and higher in comparison with controls. Fluorine content in the femur of rats exposed to NaF and AlCl<sub>3</sub> for four months was similar to the results obtained after one month of exposure."</p>	<p>Ann Acad Med Stetin. 52 Suppl 1:67-71. [Article in Polish] <a href="#">Abstract</a></p>
2007	Co-exposure: Aluminum	<p>Manoharan V, et al. 2007. Interactive effects of soil acidity and fluoride on soil solution aluminium chemistry and barley (<i>Hordeum vulgare</i> L.) root growth.</p> <p><i>Note from FAN: this is relevant in regards to Dow AgroSciences 2010 proposal to use sulfuryl fluoride as a soil fumigant.</i></p> <p>"Increasing rates of F additions to soil significantly increased the soil solution concentrations of aluminium (Al) and F irrespective of the initial adjusted soil pH, which ranged from 4.25 to 5.48... The results suggested that continuous input of F to soils, and increased soil acidification, may become an F risk issue in the future."</p>	<p>Environ Pollut. Feb;145(3):778-86. <a href="#">Abstract</a></p>
2011	Co-exposure: Arsenic	<p>Flora SJ, et al. 2011. <b>Interactive effect of arsenic and fluoride on cardio-respiratory disorders in male rats:</b> possible role of reactive oxygen species.</p>	<p>Biometals. Jan 18. [Epub ahead of print] <a href="#">Abstract</a></p>
2011	Co-exposure:	<p>Rocha RA, et al. 2011. <b>Arsenic and fluoride</b></p>	<p>Toxicol Lett. Mar 22.</p>

	Arsenic	<a href="#">induce neural progenitor cell apoptosis.</a>	[Epub ahead of print] <a href="#">Abstract</a>
2010	Co-exposure: Arsenic	Kaoud H and Kalifa B. 2010. Effect of <b>Fluoride, Cadmium and Arsenic Intoxication on Brain and Learning-Memory Ability in Rats.</b>  "... These results suggest that learning-memory ability and brain function in rats are affected by HiF, HiCd and HiAs and that oxidative stress in the brain may be one of the causes of this damage."	Toxicology Letters 196, suppl. 1 (2010): S53 (abstract from the XII International Congress of Toxicology).
2010	Co-exposure: Arsenic	Salgado-Bustamante M, et al. 2010. <b>Pattern of expression of apoptosis and inflammatory genes in humans exposed to arsenic and/or fluoride.</b>	Sci Total Environ. 408(4):760-7. Jan 15. <a href="#">Abstract</a>
2009	Co-exposure: Arsenic	Flora SJ, et al. 2009. <b>Co-exposure to Arsenic and Fluoride on Oxidative Stress</b> , Glutathione Linked Enzymes, Biogenic Amines and DNA Damage in Mouse Brain.	Journal of the Neurological Sciences 285(1–2): 198–205. <a href="#">Abstract</a>
2007	Co-exposure: Arsenic	Rocha-Amador D, et al. 2007. <b>Decreased Intelligence in Children and Exposure to Fluoride and Arsenic in Drinking Water.</b>	Cadernos de Saúde Pública 23(suppl. 4): S579–87. <a href="#">Full Report</a>
2007	Co-exposure: Arsenic	Wang SX, et al. 2007. <b>Arsenic and Fluoride Exposure in Drinking Water: Children's IQ and Growth</b> in Shanyin County, Shanxi Province, China.	Environmental Health Perspectives 115(4):643–47. <a href="#">Full Report</a>
2006	Co-exposure: Arsenic	Mittal M and Flora SJ. 2006. Effects of individual and combined exposure to sodium arsenite and sodium fluoride on tissue oxidative stress, <b>arsenic and fluoride levels in male mice.</b>  " Arsenic and fluoride concentration increased significantly on exposure. Interestingly, their concentration decreased significantly on concomitant exposure for 8 weeks. However, the group which was administered arsenic for 4 weeks followed by 4 weeks of fluoride administration showed no such protection suggesting that the antagonistic effect of fluoride on arsenic or vice versa is possible only during interaction at the gastro intestinal sites. These results are new and interesting and require further exploration."	Chem Biol Interact. 25;162(2):128-39. Aug. <a href="#">Abstract</a>
2011	Co-exposure: Lead	Leite GA, et al. 2011. Exposure to lead	Arch Oral Biol. 2011 Jan 24. [Epub ahead of print]

		exacerbates dental fluorosis.  "This study shows that <b>lead exacerbates dental fluorosis in rodents, suggesting that co-exposure to lead may affect the degree of fluorosis.</b> "	<a href="#">Abstract</a>
2010	Co-exposure: Lead	Sawan RMM, et al. 2010. <b>Fluoride increases lead concentrations</b> in whole blood and in calcified tissues from lead-exposed rats.	Toxicology 271(1-2): 21-6. April 30. <a href="#">Abstract</a>
2009	Co-exposure: Lead	Niu R, et al. 2009. <b>Decreased Learning Ability and Low Hippocampus Glutamate in Offspring Rats Exposed to Fluoride and Lead.</b>	
2008	Co-exposure: Lead	Liu H, et al. 2008. <b>Changes caused by fluoride and lead</b> in energy metabolic enzyme activities in the reproductive system of <b>male offspring rats.</b>	Fluoride 41(3):184-91. July-Sept. <a href="#">Full Article</a>
2007	Cytotoxicity	Matsui H, et al. 2007. Some characteristics of fluoride-induced cell death in <b>rat thymocytes:</b> cytotoxicity of sodium fluoride.	Toxicol In Vitro. 21(6):1113-20. Sept. <a href="#">Abstract</a>
2005	Cytotoxicity	Satoh R, et al. 2005. Changes in fluoride sensitivity during in vitro senescence of normal <b>human oral cells.</b>	Anticancer Res. 25(3B):2085-90. May-June. <a href="#">Abstract</a>
2009	Dental Caries	Warren JJ, et al. 2009. Considerations on optimal fluoride intake and dental caries outcomes--a longitudinal study.  "... These findings suggest that achieving a caries-free status may have relatively little to do with fluoride <i>intake</i> , while fluorosis is clearly more dependent on fluoride intake ... CONCLUSIONS: Given the overlap among caries/fluorosis groups in mean fluoride intake and extreme variability in individual fluoride intakes, firmly recommending an "optimal" fluoride intake is problematic."	J Pub Health Dent 69(2): 111-115. <a href="#">Abstract</a>
2007	Dental Caries	Broffitt L, et al. 2007. <b>An investigation of bottled water use and caries in the mixed</b>	Journal of Public Health Dentistry 67(3):151-8.

		<b>dentition.</b>	<a href="#">Abstract</a>
2007	Dental Caries	<p>Cheng KK, et al. 2007. Adding fluoride to water supplies.</p> <p>“... “If fluoride is a medicine, evidence on its effects should be subject to the standards of proof expected of drugs, including evidence from randomized trials... There have been no randomized trials of water fluoridation... Although the prevalence of caries varies between countries, levels everywhere have fallen greatly in the past three decades, and national rates of caries are now universally low. <b>This trend has occurred regardless of the concentration of fluoride in water or the use of fluoridated salt</b>, and it probably reflects use of fluoridated toothpastes and other factors, including perhaps aspects of nutrition.”</p>	British Medical Journal 335(7622):699-702.
2007	Dental Caries	<p>Maupomé G, et al. 2007. A comparison of dental treatment utilization and costs by HMO members living in fluoridated and nonfluoridated areas.</p> <p>In the largest region examined in the study, representing over 75% of the HMO members surveyed (the Portland metro area of Oregon), fewer children and adults in the non-fluoridated areas required treatment than children and adults in the fluoridated areas. Moreover, the children and adults in the non-fluoridated area who sought treatment accrued lower total costs over the 5-year period than those in the fluoridated area. As noted by the authors, the <b>“Portland metro had lower treatment costs for the NF (Non-Fluoridated) area...”</b></p>	Journal of Public Health Dentistry 67(4):224-33.
2007	Dental Caries	<p>Pizzo G, et al. 2007. <b>Community water fluoridation and caries prevention: a critical review.</b></p> <p>“For the past 50 years, CWF (Community Water Fluoridation) has been considered the most cost-effective measure for the control of caries at the community level. However, it is now accepted that systemic fluoride plays a limited role in caries prevention. Several</p>	Clinical Oral Investigations 11(3):189-93.

		epidemiologic studies conducted in fluoridated and nonfluoridated communities clearly indicated that CWF may be unnecessary for caries prevention, particularly in the industrialized countries where the caries level has [become] low."	
2006	Dental Caries	Burt BA, et al. 2006. Dietary patterns related to caries in a <b>low-income adult population</b> .  "This population had severe caries, poor oral hygiene, and diets that are high in sugars and fats and low in fruits and vegetables... <b>Interventions to promote oral health are unlikely to be successful without improvements in the social and physical environment.</b> "	Caries Res. 40(6):473-80. <a href="#">Abstract</a>
2005	Dental Caries	Neurath C. 2005. Tooth decay <b>trends in nonfluoridated and fluoridated countries</b> .	Fluoride 38(4):324–5. Nov. <a href="#">Full Report</a>
2011	Dental Fluorosis	Leite GA, et al. 2011. Exposure to lead exacerbates dental fluorosis.  "This study shows that <b>lead exacerbates dental fluorosis in rodents, suggesting that co-exposure to lead may affect the degree of fluorosis.</b> "	Arch Oral Biol. 2011 Jan 24. [Epub ahead of print] <a href="#">Abstract</a>
2011	Dental Fluorosis	Riksen EA, et al. 2011. Fluoride reduces the expression of enamel proteins and cytokines in an ameloblast-derived cell line.  "Conclusions. <b>These results indicate that fluoride may impact on the expression of structural enamel proteins and the protease responsible for processing these proteins during the secretory stage of amelogenesis</b> and go some way to explaining the mineralization defect that characterises fluorotic enamel."	Arch Oral Biol. 56(4): 324-330. April. <a href="#">Abstract</a>
2011	Dental Fluorosis	Jiménez-Farfán MD, et al. 2011. Fluoride consumption and its impact on oral health.  "CONCLUSIONS: Data from our study show that, <b>despite values of excretion within an optimal fluoride intake range, the prevalence of caries was significant in both groups, and</b>	Int J Environ Res Public Health. 8(1):148-60. Jan. <a href="#">Full Article</a>

		<b>60% of the 11- to 12-year-old children presented with dental fluorosis.</b> In addition, <b>variable fluoride concentrations in products frequently consumed by children were found."</b>	
2010	Dental Fluorosis	Beltran-Aguilar ED, et al. 2010. Prevalence and severity of dental fluorosis in the United States, 1999-2004.  See Table 23. <b>Mexican-Americans and Black Americans had significantly higher levels of moderate dental fluorosis compared to White Americans</b> and <b>Mexican-Americans had significantly higher levels of severe dental fluorosis</b> compared to Black or White Americans.	NCHS data brief, no 53. Hyattsville, MD: National Center for Health Statistics. <a href="#">Full Report</a> (See Table 23)
2010	Dental Fluorosis	Choubisa SL, et al. 2010. Osteo-dental fluorosis in relation to age and sex in tribal districts of Rajasthan, India.  " <b>... males showed relatively a higher incidence of dental and skeletal fluorosis compared to their counterparts...</b> "	J Environ Sci Eng. 52(3):199-204. July. <a href="#">Abstract</a>
2010	Dental Fluorosis	Levy SM, et al. 2010. Associations between fluorosis of permanent incisors and fluoride intake from infant formula, other dietary sources and dentifrice during early childhood.  "CONCLUSIONS: <b>Greater fluoride intakes from reconstituted powdered formulas (when participants were aged 3-9 months) and other water-added beverages (when participants were aged 3-9 months) increased fluorosis risk</b> , as did higher dentifrice intake by participants when aged 16 to 36 months."	Journal of the American Dental Association 141(10):1190-1201. <a href="#">Abstract</a>
2010	Dental Fluorosis	Martinez-Mier EA, et al. 2010. <b>Differences in exposure and biological markers of fluoride among White and African American children.</b>	Journal of Public Health Dentistry 70:234-240. <a href="#">Abstract</a>
2010	Dental Fluorosis	Verkerk RH. 2010. The paradox of overlapping micronutrient risks and benefits obligates risk/benefit analysis.  "Conventional risk assessment on fluoride as undertaken by European and US authorities is explored in detail, and <b>it is shown that risk</b>	Toxicology 278(1):27-38. Nov 28. <a href="#">Abstract</a>

		<b>management, if applied by public authorities in a manner which is consistent with that used for other nutrients, would make public drinking water fluoridation programmes unfeasible in light of dental fluorosis risk to children."</b>	
2009	Dental Fluorosis	<p>Sohn W, et al. 2009. Fluoride ingestion is related to fluid consumption patterns.</p> <p><b>"...African-American children ingested significantly more fluoride than White children in bivariate analysis.</b> This association remained significant after accounting for fluid consumption pattern and other confounding factors in the model.</p> <p>CONCLUSION: Our results raise concerns that some children are ingesting significantly more fluoride than others depending on sociodemographic factors and fluid consumption patterns. Additional research is warranted to investigate the variation in the amounts of fluoride ingestion by these factors and <b>its impact on fluorosis</b> prevalence in different population groups.</p>	<p>J Public Health Dent. 2069(4):267-75. Fall.  <a href="#">Abstract</a></p>
2009	Dental Fluorosis	<p>Warren JJ, et al. 2009. Considerations on optimal fluoride intake assessing dental fluorosis and dental caries outcomes - <b>a longitudinal study.</b></p> <p><b>"CONCLUSIONS: Given the overlap among caries/fluorosis groups in mean fluoride intake and extreme variability in individual fluoride intakes, firmly recommending an "optimal" fluoride intake is problematic."</b></p>	<p>J Public Health Dent. 69(2):111-5. Spring.  <a href="#">Abstract</a></p>
2009	Dental Fluorosis	<p>Nyvad B, et al. 2009. Diagnosing dental caries in populations with different levels of dental fluorosis [in Denmark].</p> <p><b>"The prevalence of dental fluorosis was 45% in the 1.1 ppm fluoride area and 21% in the 0.3 ppm fluoride area."</b></p>	<p>Eur J Oral Sci. 117(2):161-8. April.  <a href="#">Abstract</a></p>
2008	Dental Fluorosis	<p>Sharma R, et al. 2008. Fluoride induces endoplasmic reticulum stress and <b>inhibits</b></p>	<p>Environ Health Perspect. 116(9):1142-6. Sept.</p>

		<p><b>protein synthesis</b> and secretion.</p> <p>"CONCLUSIONS: These data suggest that F(-) initiates an ER stress response in ameloblasts that interferes with protein synthesis and secretion. Consequently, ameloblast function during enamel development may be impaired, and this may culminate in dental fluorosis."</p>	<p><a href="#">Full Report</a></p>
2008	Dental Fluorosis	<p>Dincer E. 2008. Why do I have white spots on my front teeth?</p> <p>"Because their swallowing reflex is not fully developed, <b>children under the age of 6 can swallow between 25% and 33% of fluoridated toothpaste with each brushing.</b> In order to better educate parents about fluorosis and its effect on children's teeth, it is worth revisiting the guidelines for toothpaste use."</p>	<p>NY State Dent J. 74(1):58-60. Jan.</p> <p><a href="#">Abstract</a></p>
2008	Dental Fluorosis	<p>Wurtz T, et al. 2008. <b>Fluoride at non-toxic dose</b> affects odontoblast gene expression in vitro.</p>	<p>Toxicology 249(1):26-34. July 10.</p> <p><a href="#">Abstract</a></p>
2007	Dental Fluorosis	<p>Xiong X, et al. 2007. Dose–effect relationship between drinking water fluoride levels and <b>damage to liver and kidney functions in children.</b></p> <p>"... our results suggest that drinking water fluoride levels over 2.0 mg/L can cause damage to liver and kidney functions in children and that the <b>dental fluorosis was independent of damage to the liver but not the kidney.</b>"</p>	<p>Environ Res. 103(1):112-6. Jan.</p> <p><a href="#">Abstract</a></p>
2007	Dental Fluorosis	<p>Vandana KL, et al. 2007. Periodontal changes in fluorosed and nonfluorosed teeth <b>by Scanning Electron Microscopy.</b></p>	<p>Fluoride 40(2):128–33. April-June.</p> <p><a href="#">Full Report</a></p>
2007	Dental Fluorosis	<p>Waidyasekera PG, et al. 2007. <b>Caries susceptibility</b> of human fluorosed enamel and dentine.</p> <p>"CONCLUSIONS: Moderately fluorosed enamel showed a significant caries resistance. In contrast, <b>mild and moderately fluorosed dentine was significantly caries susceptible in vitro.</b>"</p>	<p>J Dent. 35(4):343-9. April.</p> <p><a href="#">Abstract</a></p>

2007	Dental Fluorosis	Ruan JP, et al. 2007. Dental fluorosis <b>in children in areas with fluoride-polluted air, high-fluoride water, and low-fluoride water as well as low-fluoride air</b> : a study of deciduous and permanent teeth in the Shaanxi province, China.	Acta Odontol Scand. 65(2):65-71. April. <a href="#">Abstract</a>
2006	Dental Fluorosis	Lyaruu DM, et al. 2006. <b>Short exposure to high levels of fluoride induces</b> stage-dependent structural changes in ameloblasts and <b>enamel mineralization</b> .	Eur J Oral Sci 114 (Suppl. 1):111-5. <a href="#">Abstract</a>
2005	Dental Fluorosis	Bharati P, et al. 2005. Clinical symptoms of <b>dental and skeletal fluorosis</b> in Gadag and Bagalkot Districts of Karnataka.	J. Hum. Ecol. 18(2):105-7.
2005	Dental Fluorosis	Cunha-Cruz J, et al. 2005. <b>Dental fluorosis increases caries risk</b> .	Journal of Evidence Based Dental Practice 5:170-1.
2005	Dental Fluorosis	Beltran-Aguilar ED et al. 2005. Surveillance for Dental Caries, Dental Sealants, Tooth Retention, Edentulism, and <b>Enamel Fluorosis</b> -- - United States, 1988--1994 and 1999--2002. <b>See Table 23.</b>	MMWR. Surveillance Summaries. 54(03);1-44. August 26. <a href="#">Full Article</a>
2005	Dental Fluorosis	Heikens A, et al. 2005. The impact of the hyperacid Ijen Crater Lake: <b>risks of excess fluoride</b> to human health.  " <b>Based on the total daily intake, the lowest F concentration in drinking water that poses a risk of developing fluorosis is approximately 0.5 mg/l for dental fluorosis and 1.1 mg/l for skeletal fluorosis.</b> "	Sci Total Environ. 346(1-3):56-69. June 15. <a href="#">Abstract</a>
2010	Developmental	Flace P, et al. 2010. Effects of developmental fluoride exposure on rat ultrasonic <b>vocalization, acoustic startle reflex and pre-pulse inhibition</b> .	Eur Rev Med Pharmacol Sci. 14(6):507-12. June. <a href="#">Abstract</a>
2007	Developmental	Wang SX, et al. 2007. <b>Arsenic and Fluoride Exposure in Drinking Water: Children's IQ and Growth</b> in Shanyin County, Shanxi Province, China.  "... The statistically significant differences were found in the following comparisons: <b>Children's height in the control group was significantly higher than that in high-fluoride group (<math>p &lt; 0.05</math>)</b> ... It is less surprising that exposure to	Environmental Health Perspectives 115(4):643-47. <a href="#">Full Report</a>

		fluoride affected children's growth function, especially height. Previous studies have demonstrated multiple effects of exposure to high concentrations of fluoride on children's morphology, growth and development, and on bones and teeth ( <a href="#">Qian et al. 1989</a> ; <a href="#">Xu and Huo 2000</a> ). This is because fluoride accumulates in bone and reduces calcium uptake, thereby influencing growth."	
2011	DNA	Andrade-Vieira LF, et al. 2011. Spent Pot Liner (SPL) induced <b>DNA damage</b> and nuclear alterations in root tip cells of <i>Allium cepa</i> <b>as a consequence of programmed cell death</b> .	Ecotoxicol Environ Saf. 2011 Jan 11. [Epub ahead of print] <a href="#">Abstract</a>
2011	DNA	Madusudan Rao S, et al. 2011. Morphometry of buccal mucosal cells in fluorosis - a new paradigm.  "Conclusions: ... <b>Fluorosis induces oxidative stress, DNA damage and apoptosis</b> which can be the reasons for the increase in the nuclear size and decrease in the cell size..."	Hum Exp Toxicol. Mar 15. [Epub ahead of print] <a href="#">Abstract</a>
2010	DNA	Li H, et al. 2010. [Toxic effects of fluoride on <b>rat cerebral cortex astrocytes in vitro</b> ].  "Conclusion: <b>NaF can induce cell cycle arrest from S to G2/M and inhibit activities of 5'-NT,SDH and ACP in astrocytes.</b> "	Wei Sheng Yan Jiu. 39(1):86-8. Jan. [Article in Chinese] <a href="#">Abstract</a>
2010	DNA	Shashi A, et al. 2010. Histochemical pattern of gastrocnemius muscle in fluoride toxicity syndrome.  "Conclusions: <b>The findings of present study demonstrate that certain concentrations of fluoride can induce muscle lesions and damage DNA, RNA, and protein in muscle cells</b> and excessive intake and accumulation of fluoride is therefore a serious risk factor for muscular abnormalities in fluorosis."	Asian Pacific Journal of Tropical Medicine 3(2):136-140. Feb.
2009	DNA	Zhang R, et al. 2009. A stable and sensitive testing system for potential carcinogens based on DNA damage-induced <b>gene expression in human HepG2 cell</b> .  "The results showed that all 20 [including <b>sodium fluoride</b> ] tested known carcinogenic	Toxicol In Vitro. 23(1):158-65. Feb. <a href="#">Abstract</a>

		and genotoxic agents were able to induce gadd153-Luc expression at a sublethal dose.”	
2008	DNA	Jia L, et al. 2008. DNA damage induced by fluoride in <b>rat kidney</b> cells.	Fluoride 41(4):297-300. October-December. <a href="#">Full Report</a>
2008	DNA	Zhang M, et al. 2008. Effects of fluoride on DNA damage, S-phase cell-cycle arrest and the expression of NF- B in <b>primary cultured rat hippocampal neurons</b> .	Toxicology Letters 179(1):1–5. <a href="#">Abstract</a>
2006	DNA	He LF, Chen JG. 2006. DNA damage, apoptosis and cell cycle changes induced by fluoride in <b>rat oral mucosal cells and hepatocytes</b> .	World J Gastroenterol. 12(7):1144-8. February 21. <a href="#">Full Report</a>
2006	DNA	Zhang Y, et al. 2006. DNA damage induced by fluoride in <b>rat osteoblasts</b> .	Fluoride 39(3)191–4. July-Sept. <a href="#">Full Report</a>
2005	DNA	Ge Y, et al. 2005. Comet assay of <b>DNA damage in brain cells of adult rats</b> exposed to high fluoride and low iodine.	Fluoride 38(3):209-14. <a href="#">Full Report</a>
2005	DNA	Ge Y, et al. 2005. DNA damage in <b>thyroid gland cells of rats</b> exposed to long-term intake of high fluoride and low iodine.	Fluoride 38(4):318–23. November. <a href="#">Full Report</a>
2008	Dyspepsia	Spittle B. 2008. Dyspepsia associated with fluoridated water.	Fluoride 41(1):89-92. Jan-March. <a href="#">Full Report</a>
2008	Enzymes	Moolenburgh H. 2008. Fluoride and <b>serum cholinesterase</b> . Letter.	Fluoride 41(3): 227. July-Sept. <a href="#">Full Report</a>
2005	Enzymes	Adamek E, et al. 2005. In vitro and in vivo effects of fluoride ions on enzyme activity.	Ann Acad Med Stetin. 51(2):69-85.
2011	Exposure	Vernacchio L, et al. 2011. Vitamin, Fluoride, and Iron <b>Use among US Children Younger than 12 Years of Age</b> : Results from the Slone Survey 1998-2007.  “...Between February 1998 and April 2007, there were 2,857 children 0 to 11 years of age enrolled from the 48 contiguous United States ... The response rate to the survey was 61%... <b>Overall, fluoride was used by 3.3% of participants</b> and iron by 9.7%... <b>Use of each was highest in the 2- to 5-year-old age group</b>	J Am Diet Assoc. 111:285-289.

		<b>for both (4.3% for fluoride and 12.4% for iron).</b>	
2010	Exposure	<p>Lockwood G. 2010. Theoretical context-sensitive elimination times for inhalation anaesthetics.</p> <p><i>Note from FAN: Desflurane, Sevoflurane and Isoflurane all break down to the fluoride ion in the body.</i></p> <p>“After 4 h of anaesthesia, the model <b>predicted body content</b> to be 28 g nitrous oxide, <b>26 g desflurane, 14 g sevoflurane, or 15 g isoflurane</b>, and <b>99.9% brain elimination times were</b> then 9 h for nitrous oxide, <b>33 h for desflurane, 52 h for sevoflurane, and 71 h for isoflurane. At this stage of elimination, the whole body still retained between 4% and 13% of the absorbed dose.</b>”</p>	Br J Anaesth. 104(5):648-55. May. <a href="#">Abstract</a>
2010	Exposure	<p>Mansfield P. 2010. Fluoride consumption: the effect of water fluoridation.</p> <p>Mansfield re-analyzed data from the 2000-2003 UK National Diet and Nutrition Survey. Using a revised calculation to estimate fluoride intake (i.e. 45% fluoride excretion rate based on current literature, instead of 100% excretion rate as was originally proposed), the author found that the original estimate of those exceeding the Safe Intake (SI) level for fluoride (0.05 mg/kg body weight/day, as established by the Committee on the Medical Aspects of Food Policy) was an order of magnitude too low--<b>25% of the UK population is now estimated to exceed the SI for fluoride, and nearly two-thirds of those living in fully fluoridated areas exceed the SI for fluoride.</b></p>	Fluoride 43(4): 223-231. <a href="#">Full Report</a>
2010	Exposure	<p>Mason SC, et al. 2010. Evaluation of salivary fluoride retention from a new high fluoride mouthrinse.</p> <p><b>Single-use treatment with the new mouthrinse containing 450 ppm fluoride resulted in statistically significantly higher salivary fluoride levels throughout the 120 min test period. Total fluoride retention (AUC<sub>0-120</sub>) was also statistically significantly greater</b> versus comparator rinse treatments.</p>	J Dent. 38(Suppl 3):S30-S36. Nov. <a href="#">Abstract</a>
2009	Exposure	Rodrigues MH, et al. 2009. Dietary fluoride	J Dent Res. 88(2):142-5.

		<p>intake by children receiving different sources of systemic fluoride.</p> <p>“The aim of this study was to estimate the dietary F intake by children receiving F from artificially fluoridated water (AFW-Brazil, 0.6-0.8 mg F/L), naturally fluoridated water (NFW-Brazil, 0.6-0.9 mg F/L), fluoridated salt (FS-Peru, 180-200 mg F/Kg), and fluoridated milk (FM-Peru, 0.25 mg F). Children (n=21-26) aged 4-6 yrs old participated in each community. A non-fluoridated community (NoF) was evaluated as the control population... <b>The results indicate that the dietary F intake must be considered before a systemic method of fluoridation is implemented.</b>”</p>	<p>Feb. <a href="#">Abstract</a></p>
2009	Exposure: Children	<p>Sohn W, et al. 2009. Fluoride ingestion is related to fluid consumption patterns.</p> <p>“There was substantial variation in the estimated amount of fluoride ingestion depending on the children's fluid consumption patterns as well as age, gender, and race/ethnicity. <a href="#">African-American children ingested significantly more fluoride than White children in bivariate analysis.</a> This association remained significant after accounting for fluid consumption pattern and other confounding factors in the model.</p> <p>CONCLUSION: Our results raise concerns that some children are ingesting significantly more fluoride than others depending on sociodemographic factors and fluid consumption patterns. Additional research is warranted to investigate the variation in the amounts of fluoride ingestion by these factors and its impact on fluorosis prevalence in different population groups.</p>	<p>J Public Health Dent. 2069(4):267-75. Fall. <a href="#">Abstract</a></p>
2007	Exposure	<p>Opydo-Szymaczek J, et al. 2007. Transplacental passage of fluoride in pregnant Polish women assessed on the basis of fluoride concentrations in maternal and cord blood plasma.</p>	<p>Fluoride 40(1):46-50. <a href="#">Full Report</a></p>
2007	Exposure	<p>Kanbak M, et al. 2007. Renal safety and extrahepatic defluorination of <a href="#">sevoflurane</a> in</p>	<p>Transplant Proc.</p>

		hepatic transplantations.	39(5):1544-8. June.
2006	Exposure	<p>Hong L, et al. 2006. <b>Fluoride intake levels in relation to fluorosis development</b> in permanent maxillary central incisors and first molars.</p> <p>“... As part of the longitudinal Iowa Fluoride Study, subjects were followed from birth to 36 months... Cumulatively from birth to 36 months, average daily intake of 0.04 mg F/kg BW or less carried relatively low risk for fluorosis (12.9% for maxillary central incisors, 6.8% for first molars). Average daily intake of 0.04-0.06 mg F/kg BW showed a significantly elevated risk for fluorosis (23.0% for maxillary central incisors, 14.5% for first molars), while fluorosis risk was even higher for average intake above 0.06 mg F/kg BW (38.0% for maxillary central incisors, 32.4% for first molars).”</p>	Caries Res. 40(6):494-500. <a href="#">Abstract</a>
2006	Exposure	<p>Hong L, et al. 2006. <b>Timing of fluoride intake</b> in relation to development of fluorosis on maxillary central incisors.</p> <p>“... The <b>first two years of life were most important</b> to fluorosis development in permanent maxillary central incisors; however, this study also suggests the importance of other individual years.”</p>	Community Dent Oral Epidemiol. 34(4):299-309. <a href="#">Abstract</a>
2006	Exposure	Krook LP, Justus C. 2006. Fluoride poisoning of <b>horses</b> from artificially fluoridated drinking water.	Fluoride 39(1)3-10. Jan-Mar. <a href="#">Full Report</a>
2006	Exposure	ADA (American Dental Association). 2006. Interim Guidance on <b>Reconstituted Infant Formula</b> . 2006.	American Dental Association, <a href="#">ADA,eGRAM. Nov 9.</a>
2005	Exposure	Erdal S, et al. 2005. A quantitative look at fluorosis, fluoride exposure, and <b>intake in children</b> using a health risk assessment approach.	Environ Health Persp113:111-7. <a href="#">Full Report</a>
2006	Exposure	Pagliari AV, et al. 2006. Analysis of fluoride concentration in <b>mother's milk substitutes</b> .	Braz Oral Res. 20(3):269-74. <a href="#">Abstract</a>
2005	Exposure	Zuanon ACC, Aranha AMF. 2005. <b>Mouthwash</b>	J Clin Pediatr Dent

		<b>ingestion</b> by preschool children.	30(1):15-18.
2010	Exposure: Tea	Pehrsson PR, et al. 2010. The fluoride content of select brewed and microwave-brewed black teas in the United States.  "Conclusions: ... <b>on average, the dry tea contributes 3–4 times as much fluoride to the brewed tea as does the water. The fluoride provided by brewed tea may contribute significantly amounts of F, and should be considered when assessing total daily intake.</b> "	Journal of Food Composition and Analysis. Published ahead of print. Dec 27.
2010	Exposure: Tea	Joshi S, et al. 2010. <b>Skeletal fluorosis due to excessive tea</b> and toothpaste consumption.	Osteoporos Int. Oct 9. [Epub ahead of print] <a href="#">Abstract</a>
2010	Exposure: Tea	Cressey P, et al. 2010. Estimated dietary fluoride intake for New Zealanders.  "Intake of fluoride was driven by consumption of dietary staples (bread, potatoes), beverages ( <b>particularly tea</b> , soft drinks, and beer), and the fluoride status of drinking water."	J Public Health Dent. 70(4):327-36. Fall. <a href="#">Abstract</a>
2009	Exposure: Tea	de Lourdes Azpeitia-Valadez M, et al. 2009. [Risk factors for dental fluorosis in children between 6 and 15 years old].  "Prepared gaseous drink and <b>tea consumption</b> , age in relation to the exhibition of periodic applications of fluoride and the area of residence are the <b>main risk factors for dental fluorosis.</b> "	Rev Med Inst Mex Seguro Soc. May-47(3):265-70. June. [Article in Spanish] <a href="#">Abstract</a>
2008	Exposure: Tea	Whyte MP, et al. 2008. <b>Skeletal fluorosis from instant tea.</b>  "CONCLUSIONS: <b>SF [skeletal fluorosis] from habitual consumption of large volumes of extra strength instant tea calls for recognition and better understanding of a skeletal safety limit for this modern preparation of the world's most popular beverage.</b> "	J Bone Miner Res. 23(5):759-69. May. <a href="#">Abstract</a>
2008	Exposure: Tea	Yi J, Cao J. 2008. <b>Tea and fluorosis.</b>  "... Long-term consumption of high fluoride tea could result in chronic fluoride intoxication. This review summarized those data of the fluoride content in various tea commodities, and estimated the risk of	Journal of Fluorine Chemistry 129:76-81.

		fluorosis caused by high fluoride tea commodities. We also introduced fluorosis caused by tea from case reports, epidemiology observations and animal models... <b>it is urgent that governmental and international agencies adopt safe standards of fluoride content in tea commodities.</b> "	
2007	Exposure: Tea	Hallanger Johnson JE, et al. 2007. <b>Fluoride-related bone disease</b> associated with habitual tea consumption.  Figure 1. <a href="#">Lateral lumbar spine showing advanced osteosclerosis of the vertebral bodies, with absence of usual marrow space radiolucency</a>	Mayo Clin Proc. 82(6):719-24. June. • Erratum in: Mayo Clin Proc. 2007 Aug;82(8):1017. dosage error in text. <a href="#">Full Text</a>
2006	Exposure: Tea	Whyte MP. 2006. <b>Fluoride Levels in Bottled Teas</b> . Letter to Editor.	American Journal of Medicine, 119(2):189-90. February.
2005	Exposure: Tea	Whyte MP, et al. 2005. <b>Skeletal fluorosis</b> and instant tea.  "CONCLUSIONS: SF [skeletal fluorosis] from habitual consumption of large volumes of extra strength instant tea calls for recognition and better understanding of a skeletal safety limit for this modern preparation of <b>the world's most popular beverage.</b> "	Am J Med. 118(1):78-82. Jan. <a href="#">Abstract</a>
2005	Exposure: Tea	Pehrsson P et al. 2005. The <b>fluoride content of brewed and microwave brewed black teas</b> .	U.S. Department of Agriculture. <a href="#">Full Article</a>
2005	Exposure: Tea	Sun DJ et al. 2005. Dose-response relationship between <b>dental fluorosis and fluoride in brick tea</b> . Presented at the 26th International Society for Fluoride Research in Wiesbaden, Germany (September).	Fluoride 38(3):253. <a href="#">Full Article</a> (see Abstract 47)
2006	Fetotoxicity	Helal M, El Dakdoky M. 2006. <b>Fetotoxicity of fluoride in rats</b> alleviated by some antioxidants.	Fluoride 39(3):202-10. July-Sept. <a href="#">Full Report</a>
2007	Fluoridation	Cheng KK, et al. 2007. <b>Adding fluoride to water supplies</b> .  "...If fluoride is a medicine, evidence on its effects should be subject to the standards of proof expected of drugs, including evidence	British Medical Journal 335(7622):699-702. <a href="#">Full Report</a>

		from randomized trials... In the case of fluoridation, people should be aware of the limitations of evidence about its potential harms and that <b>it would be almost impossible to detect small but important risks (especially for chronic conditions) after introducing fluoridation...</b> "	
2007	Fluoridation	Limeback H, Thiessen K, Isaacson R, Hirzy W. 2007. The EPA MCLG for fluoride in drinking water: new recommendations.  <b>"Our results indicated that in all calculations the new MCLG for fluoride in drinking water should be at most one tenth (0.4 mg/L) of the current MCLG of 4 mg/L, suggesting that the practice of fluoridation should be re-evaluated."</b>	Society of Toxicology 46th Annual Meeting, Charlotte, North Carolina, March 25-29.
2007	Free Radicals	Shanthakumari D, et al. 2007. Effect of fluoride intoxication on the levels of <b>intestinal antioxidants studied in rats</b> .	Methods Find Exp Clin Pharmacol. 29(2):93-9. <a href="#">Abstract</a>
2005	Free Radicals	Krechniak J, Inkielewicz I. 2005. Correlations between fluoride concentrations and free radical parameters in <b>soft tissues of rats</b> .	Fluoride 38(4):293-6. Nov. <a href="#">Full Report</a>
2011	Genotoxicity	Podder S, et al. 2011. Reduction in fluoride-induced genotoxicity in <b>mouse bone marrow cells</b> after substituting high fluoride-containing water with safe drinking water.	J Appl Toxicol. 2011 Mar 5. doi: 10.1002/jat.1644. <a href="#">Abstract</a>
2010	Genotoxicity	Podder S, et al. 2010. Fluoride-induced genotoxicity in <b>mouse bone marrow cells</b> : effect of buthionine sulfoximine and N-acetyl-l-cysteine.	J Appl Toxicol. 2010 Dec 10. doi: 10.1002/jat.1605. [Epub ahead of print] <a href="#">Abstract</a>
2008	Genotoxicity	Podder S, et al. 2008. Differential <i>in vivo</i> genotoxic effects of lower and higher concentrations of fluoride in <b>mouse bone marrow cells</b> .	Fluoride 41(4):301-7. Oct-Dec. <a href="#">Full Report</a>
2008	Genotoxicity	<b>Podder S, et al. 2008. <i>In vivo</i> suppression by fluoride of chromosome aberrations induced by mitomycin-C in mouse bone marrow cells.</b>	<b>Fluoride 41(1):40-3. Jan-March.</b>
2005	Genotoxicity	Velazquez-Guardarrama, et al. 2005. Genotoxic evaluation of sodium fluoride and sodium perborate in <b>mouse bone marrow</b>	Bull Environ Contam and Toxicol. 74: 566-72.

		<a href="#">cells.</a>	
2010	Haem Biosynthesis Pathway	<p>Chouhan S, et al. 2010. Fluoride-induced changes in haem biosynthesis pathway, neurological variables and tissue histopathology of rats.</p> <p>"This study intended to determine the effects of various concentrations of fluoride (1, 10, 50 and 100 ppm) in drinking water for a period of 12 weeks on changes in haem biosynthesis pathway, oxidative stress and neurological variables supported by histopathological observations and fluoride in rats...</p> <p><b>Interestingly and most significantly, these changes were more pronounced at lower concentrations of fluoride compared with higher fluoride dose...</b>These changes support our earlier findings regarding the role of decreased ionic mobility of fluoride ion at higher concentrations, leading to less pronounced toxicity."</p>	<p>J Appl Toxicol. 30(1):63-73. Jan.</p> <p><a href="#">Abstract</a></p>
2011	Heart: <a href="#">Study on children</a>	<p>Karademir S, et al. 2011. Effects of fluorosis on QT dispersion, heart rate variability and echocardiographic <b>parameters in children</b> - Original Investigation.</p> <p>"... We found <b>statistically significant low T4 levels, hypocalcemia and hyponatremia</b>, increased QT and QTc interval in children with dental fluorosis. <b>Our results show that fluorosis might increase risk of arrhythmia indirectly</b>, due to its hypocalcemic, hypernatremic, and hypothyroidism effects... <b>Further studies concerning cardiovascular effect of fluorosis in both adults and children are needed.</b>"</p>	<p>Anadolu Kardiyol Derg. 11(2):150-5.</p> <p><a href="#">Full Report</a></p>
2011	Heart	<p>Flora SJ, et al. 2011. <b>Interactive effect of arsenic and fluoride on cardio-respiratory disorders in male rats</b>: possible role of reactive oxygen species.</p>	<p>Biometals. Jan 18. [Epub ahead of print]</p> <p><a href="#">Abstract</a></p>
2010	Heart	<p>Varol E, et al. 2010. Impact of chronic fluorosis on <b>left ventricular diastolic and global functions</b>.</p>	<p>Science of the Total Environment 408(11): 2295-8.</p> <p><a href="#">Abstract</a></p>
2010	Heart	<p>Varol E, et al. 2010. <b>Aortic elasticity</b> is</p>	<p>Biol Trace Elem Res. 133:121-7.</p>

		impaired in patients with endemic fluorosis.	<a href="#">Abstract</a>
2010	Heart	Yang E, et al. 2010. Fluoride induces <b>vascular contraction through activation of RhoA/Rho kinase pathway in isolated rat aortas</b> .	Environ Toxicol Pharmacol. 29(3):290-296. May.
2006	Heart	Jeon SB, et al. 2006. A role for <b>Rho kinase in vascular contraction</b> evoked by sodium fluoride.	Biochem Biophys Res Commun. 343(1):27-33. April 28. <a href="#">Abstract</a>
2005	Heart	Cicek E, et al. 2005. Effects of chronic ingestion of sodium fluoride on myocardium in a <b>second generation of rats</b> .	Hum Exp Toxicol. 24(2):79-87. Feb. <a href="#">Abstract</a>
2011	Immune System / Human study	Hernández-Castro B, et al. 2010. <b>Effect of fluoride exposure on different immune parameters in humans</b> .  “Context: T regulatory (Treg) cells play an important role in the modulation of the immune response, and are implicated in the pathogenesis of autoimmune diseases... Conclusion: Our data suggest that F exposure exerts a complex and relevant effect on Treg cells in humans.”	Immunopharmacology and Immunotoxicology, 33(1):169-77. March. <a href="#">Abstract</a>
2011	Insulin	Lupo M, et al. 2011. Effect of fluoridated water on plasma insulin levels and glucose homeostasis in rats with renal deficiency.  “... It is concluded that the consumption of fluoridated water from water supply did not affect plasma glucose levels even in cases of animals with renal disease. However, <b>a resistance to insulin action was demonstrated</b> .”	Biol Trace Elem Res. 140(2):198-207. May. <a href="#">Abstract</a>
2009	Insulin	García-Montalvo EA, et al. 2009. Fluoride exposure <b>impairs glucose tolerance</b> via decreased insulin expression and oxidative stress.	Toxicology 263(2-3):75-83. Sept 19. <a href="#">Abstract</a>
2008	Insulin	Chehoud KA, et al. 2008. Effects of fluoride intake on <b>insulin sensitivity and insulin signal transduction</b> .	Fluoride 41(4):270-5. Oct-Dec. <a href="#">Full Article</a>
2008	Insulin	Menoyo I, et al. 2008. Fluoride- <b>induced resistance to insulin in the rat</b> .	Fluoride 41(4):260–9. Oct-Dec. <a href="#">Full Article</a>
2005	Insulin	Menoyo I et al. 2005. Effect of fluoride on the	Arzneimittelforschung

		<b>secretion of insulin in the rat.</b>	55:455-60. <a href="#">Abstract</a>
2011	Iodine	Ge Y, et al. 2011. <b>Proteomic Analysis of Brain Proteins of Rats Exposed to High Fluoride and Low Iodine.</b>	Archives of Toxicology Arch Jan;85(1):27-33. <a href="#">Abstract</a>
2009	Iodine	Wang J, et al. 2009. Chapter 67 - DNA Damage in Brain and Thyroid Gland Cells <b>due to High Fluoride and Low Iodine.</b>	Comprehensive Handbook of Iodine, Pages 643-649. Edited by: Victor R. Preedy, Gerard N. Burrow and Ronald Watson. ISBN: 978-0-12-374135-6. Elsevier Inc.
2008	Iodine	Ren D, et al. 2008. A Study of <b>the Intellectual Ability of 8–14 Year-Old Children</b> in High Fluoride, <b>Low Iodine Areas.</b>	Fluoride 41(4):319–20. <a href="#">Full Report</a>
2007	Iodine	Voronych-Semchenko NM. 2007. Characteristics of hypothyroidism correction and lipid metabolism disorder in iodine deficiency.  “... It has been revealed that hypothyrosis has negative influence on lipid metabolism indexes. "Iodid- 100" usage stabilized hormonal and lipid status. <b>Excessive intake of chlorine and fluorine ions by the organism decreased the effectiveness of iodine containing drugs.</b> ”	Fiziol Zh. 53(3):38-42. [Article in Ukrainian] <a href="#">Abstract</a>
2006	Iodine	Ge Y, et al. 2006. Apoptosis in <b>brain cells of offspring rats</b> exposed to <b>high fluoride and low iodine.</b>	Fluoride 39(3);173-8. July-Sept. <a href="#">Full Report</a>
2005	Iodine	Ge Y, et al. 2005. Comet assay of <b>DNA damage in brain cells of adult rats</b> exposed to high <b>fluoride and low iodine.</b>	Fluoride 38(3):209-14. <a href="#">Full Report</a>
2005	Iodine	Ge Y, et al. 2005. DNA damage in <b>thyroid gland cells of rats</b> exposed to long-term intake of <b>high fluoride and low iodine.</b>	Fluoride 38(4):318–23. November. <a href="#">Full Report</a>
2005	Iodine	Gas'kov Alu, et al. 2005. [The specific features of the development of <b>iodine deficiencies in children living under environmental pollution with fluorine compounds</b> ]	Gig Sanit. Nov-Dec;(6):53-5. <a href="#">Full Article - English Translation</a>
2011	Kidney	Yang K and Liang X. 2011. Fluoride in Drinking	Encyclopedia of Environmental Health

		<p>Water: Effect on Liver and Kidney Function.</p> <p>“Abstract. ... high level of fluoride in drinking water is harmful to the living system. Chronic fluoride intoxication causes damages to osseous tissue (teeth and bone) and soft tissues (liver, kidney, brain, etc.). <b>Liver and kidney are the target organs markedly attacked by excessive amount of fluoride. High doses of fluoride intake lead to changes of structure, function, and metabolism in liver and kidney.</b>”</p>	(Editor-in-Chief: Jerome O. Nriagu, Elsevier B.V.), Pages 769-775.
2011	Kidney	<p>Chattopadhyay A, et al. 2011. Fluoride-induced histopathology and synthesis of stress protein in liver and kidney of mice.</p> <p>"Selective low (15 mg sodium fluoride (NaF)/L) and relatively high (150 mg NaF/L) doses of in vivo fluoride (F) treatment to Swiss albino mice through drinking water elicited organ-specific toxicological response. <b>All the F-exposed groups showed severe alterations in both liver and kidney architectures</b>"</p>	<p>Arch Toxicol. 85(4):327-35. April.</p> <p><a href="#">Abstract</a></p>
2011	Kidney	<p>Chandrajith R, et al. 2011. Dose-dependent Na and Ca in fluoride-rich drinking water--another major cause of <b>chronic renal failure</b> in tropical arid regions.</p>	<p>Sci Total Environ. 409(4):671-5. Jan 15.</p> <p><a href="#">Abstract</a></p>
2010	Kidney	<p>Itai K, et al. 2010. Serum ionic fluoride concentrations are related to renal function and menopause status but not to age in a Japanese general population.</p> <p><b>“Conclusion: SIF [ Serum ionic fluoride] concentrations in middle-aged healthy subjects were increased with an age-related degeneration in renal function. SIF concentrations in post-menopausal women arise from the increased fluoride release from bone after menopause. Age is not related to SIF concentrations.”</b></p>	<p>Clinica Chimica Acta 411: 263–266.</p> <p><a href="#">Abstract</a></p>
2010	Kidney	<p>Błaszczuk I, et al. 2011. Influence of methionine upon the activity of antioxidative enzymes in the kidney of rats exposed to sodium fluoride.</p> <p>“... Among the factors inducing intensified free</p>	<p>Biol Trace Elem Res. 33(1):60-70. Jan.</p> <p><a href="#">Abstract</a></p>

		radical processes, fluoride ions are listed, among others. <b>One of the organs most exposed to the toxic activity of fluorides is the kidney...</b> The studies carried out confirmed the disadvantageous effect of NaF upon the antioxidative system in rats (decrease in activity of antioxidative enzymes)."	
2010	Kidney	Al Omireeni, et al. 2010. Biochemical and histological studies on the effect of sodium fluoride on rat kidney collagen.  "Abstract: The present study was carried out to study the effect of acute doses of sodium fluoride on the collagen content of the rat kidneys. Five groups of rats were studied: (i) control rats and (ii) rats divided into four subgroups according to the dose of NaF. Results showed that higher doses of sodium fluoride 10, 20 and 30 mg of NaF/kg body weight <b>caused a significant decrease in the collagen content of the kidneys when compared to the control rats.</b> Electron microscope studies supported these results and showed the sodium fluoride doses 10, 20 and 30 mg of NaF/kg body weight <b>caused disruption of ordered collagen fibrils of the rat kidneys.</b> "	J of Saudi Chemical Society. 14(4):413-416. <a href="#">Full Report</a>
2009	Kidney	Kobayashi CAN, et al. 2009. <b>Proteomic analysis of kidney in rats</b> chronically exposed to fluoride.	Chem Biol Interact. 180(2):305-11. July 15. <a href="#">Abstract</a>
2008	Kidney	Jia L, et al. 2008. <b>DNA damage</b> induced by fluoride in <b>rat kidney cells.</b>	Fluoride 41(4):297-300. Oct-Dec. <a href="#">Full Report</a>
2008	Kidney	Tang Q, et al. 2008. In vitro hormesis effects of sodium fluoride on kidney cells of <b>three-day old male rats.</b>	Fluoride 41(4):292-6. Oct-Dec. <a href="#">Full Article</a>
2007	Kidney	Xiong X, et al. 2007. Dose–effect relationship between drinking water fluoride levels and <b>damage to liver and kidney functions in children.</b>  "... <b>our results suggest that drinking water fluoride levels over 2.0 mg/L can cause damage to liver and kidney functions in children and that the dental fluorosis was independent of damage to the liver but not</b>	Environ Res. 103(1):112-6. Jan. <a href="#">Abstract</a>

		<b>the kidney."</b>	
2007	Kidney	Xu H, et al. 2007. Effects of fluoride on the intracellular free Ca <sup>2+</sup> and Ca <sup>2+</sup> -ATPase of kidney.  "To sum up, the effect of fluoride on Ca <sup>2+</sup> -ATPase is a similar to a dose-effect relationship phenomenon characterized by low-dose stimulation and high-dose inhibition, <b>and the increase of [Ca<sup>2+</sup>]<sub>i</sub> probably plays a key role on the mechanism of renal injury in fluorosis."</b>	Biol Trace Elem Res. 116(3):279-88. June. <a href="#">Abstract</a>
2006	Kidney	Bober J, et al. 2006. Fluoride <b>aggravation of oxidative stress in patients with chronic renal failure.</b>	Fluoride 39(4):302–9. Oct-Dec. <a href="#">Full Article</a>
2006	Kidney	Bansal R, Tiwari SC. 2006. Back pain in <b>chronic renal failure.</b>  "...Definitive diagnosis was reached with estimation of <b>fluoride levels in blood and urine, which were 0.291 mg/l and 0.962 mg/l</b> (15.3 and 50.6 μmol/l), respectively. <b>Her drinking water source</b> , ground water from a tubewell, was found to contain <b>3.910 mg/l</b> (205.9 μmol/l) of fluoride."	Nephrology Dialysis Transplantation 21:2331-2. <a href="#">Full Article</a>
2006	Kidney	Harinarayan CV, et al. 2006. Fluorotoxic metabolic bone disease: an <b>osteo-renal syndrome</b> caused by excess fluoride ingestion in the tropics.	Bone 39(4):907-14. <a href="#">Abstract</a>
2006	Kidney	Ayoob S, Gupta AK. 2006. Fluoride in drinking water: a review on the status and <b>stress effects.</b>	Critical Reviews in Environmental Science and Technology 36:433–87.
2006	Kidney	Zhan XA, et al. Toxic effects of fluoride on kidney function and histological structure in <b>young pigs.</b>	Fluoride 39(1):22–6. Jan-Mar. <a href="#">Full Report</a>
2005	Kidney	Liu JL, et al. 2005. [The dose-effect relationship of water fluoride levels and <b>renal damage in children</b> ]  "CONCLUSION: <b>Over 2.0 mg/L fluoride in drinking water can cause renal damage in children, and the damage degree increases with the drinking water fluoride content.</b> Renal damage degree is not related to	Wei Sheng Yan Jiu. 34(3):287-8. May. [Article in Chinese]. Abstract

		whether the children suffered from dental fluorosis and mainly due to water fluoride concentration.”	
2005	Kidney	Grucka-Mamczar E, et al. 2005. Disturbances of <b>kidney function in rats with fluoride-induced hyperglycemia</b> after acute poisoning by sodium fluoride.	Fluoride 38(1):48–51. <a href="#">Full Report</a>
2005	Kidney	Xu H, et al. 2005. <b>Proteomic analysis</b> of kidney in fluoride-treated <b>rat</b> .	Toxicol Lett. 60(1):69-75. Dec 30. <a href="#">Abstract</a>
2010	Lipid Peroxidation	Chauhan SS, et al. 2010. Modulation of lipid peroxidation and antioxidant defense systems in rat intestine by subchronic fluoride and ethanol administration.  “ <b>These findings suggest that fluoride and ethanol exposure induces considerable changes in lipid peroxidation, antioxidant defense, and morphology of rat intestine, which may affect its functions.</b> ”	Alcohol, [Epub ahead of print] <a href="#">Abstract</a>
2007	Lipid Peroxidation	Kalyanalakshmi P, et al. 2007. Oxidative stress in <b>males with skeletal fluorosis</b> in Andhra Pradesh, India.	Fluoride 40(1):42–5. <a href="#">Full Report</a>
2007	Lipid Peroxidation	Oncu M, et al. 2007. Effect of long-term fluoride exposure on lipid peroxidation and histology of <b>testes in first- and second-generation rats</b> .	Biol Trace Elem Res. 118(3):260-8. Sept. <a href="#">Abstract</a>
2006	Lipid Peroxidation	Oncu M, et al. 2006. Effect of chronic fluorosis on lipid peroxidation and histology of <b>lung tissues in first and second generation rats</b> .	Toxicol Ind Health. 22(9):375-80. Oct. <a href="#">Abstract</a>
2005	Lipid Peroxidation	Bouaziz H, et al. 2005. Toxic effects of fluoride by maternal ingestion on <b>kidney function of adult mice and their suckling pups</b> .  “Lipid peroxidation increased in the treated mice, as revealed by high kidney malondialdehyde levels, while plasma and urinary uric acid levels showed a significant decline.”	Fluoride 38(1):23–31. <a href="#">Full Report</a>
2004	Lipid Peroxidation	Karaoz E, et al. 2004. Effect of chronic fluorosis on lipid peroxidation and histology of <b>kidney tissues in first- and second-generation rats</b> .	Biol Trace Elem Res. 102(1-3):199-208. Winter. <a href="#">Abstract</a>

2011	Liver	<p>Yang K and Liang X. 2011. Fluoride in Drinking Water: Effect on Liver and Kidney Function.</p> <p>"Abstract. ... high level of fluoride in drinking water is harmful to the living system. Chronic fluoride intoxication causes damages to osseous tissue (teeth and bone) and soft tissues (liver, kidney, brain, etc.). <b>Liver and kidney are the target organs markedly attacked by excessive amount of fluoride. High doses of fluoride intake lead to changes of structure, function, and metabolism in liver and kidney.</b>"</p>	<p>Encyclopedia of Environmental Health (Editor-in-Chief: Jerome O. Nriagu. Elsevier B.V.), Pages 769-775.</p>
2011	Liver	<p>Chattopadhyay A, et al. 2011. Fluoride-induced histopathology and synthesis of stress protein in liver and kidney of mice.</p> <p>"Selective low (15 mg sodium fluoride (NaF)/L) and relatively high (150 mg NaF/L) doses of in vivo fluoride (F) treatment to Swiss albino mice through drinking water elicited organ-specific toxicological response. <b>All the F-exposed groups showed severe alterations in both liver and kidney architectures</b>"</p>	<p>Arch Toxicol. 85(4):327-35. April. <a href="#">Abstract</a></p>
2010	Liver	<p>Iano FG, et al. 2010. Chronic Toxicity of Fluoride in the Liver Antioxidant Defense.</p> <p>"... The enzyme CAT was significantly reduced and SOD significantly increased, respectively, in the 15 ppm F group when compared to control and 5 ppm F group. In summary, clear changes in the antioxidant parameters in relation with the level of administered F was observed. <b>These results show that chronic F administration alters the antioxidant systems of rats.</b>"</p>	<p>Free Radical Biology and Medicine 49(Suppl 1):S221. July.</p>
2009	Liver	<p>Birkner E, et al. 2009. The Influence of rich-in-cholesterol diet and fluoride ions contained in potable water upon the concentration of malondialdehyde and the activity of selected antioxidative enzymes in <b>rabbit liver</b>.</p>	<p>Biol Trace Elem Res. 129(1-3):137-42. Summer. <a href="#">Abstract</a></p>
2007	Liver	<p>Xiong X, et al. 2007. Dose-effect relationship between drinking water fluoride levels and <b>damage to liver and kidney functions in</b></p>	<p>Environ Res. 103(1):112-6. Jan. <a href="#">Abstract</a></p>

		<b>children.</b>	
2007	Liver	<p>Grucka-Mamczar E, et al. 2007. Influence of extended exposure to sodium fluoride and caffeine on the activity of carbohydrate metabolism enzymes in <b>rat blood serum and liver.</b></p> <p>"... <b>Glycolysis in extra-hepatic tissues (serum), under the influence of F, was slightly inhibited; however, it was markedly intensified by caffeine.</b> Overall, a more profound influence by caffeine on carbohydrate enzyme activity was observed in blood serum (extra-hepatic tissues) than in the liver."</p>	<p>Fluoride 40(1)62–66. Jan-March.  <a href="#">Full Report</a></p>
2005	Liver	<p>Guo X, et al. 2005. [Effect of fluoride on activities of <b>enzyme and ultrastructure in primary cultured rat hepatocytes</b>]</p>	<p>Wei Sheng Yan Jiu. 34(1):35-7. January. [Article in Chinese]  <a href="#">Abstract</a></p>
2009	Lung	<p>Ridley W, Matsuoka M. 2009. Fluoride-induced cyclooxygenase-2 expression and prostaglandin E(2) production in A549 <b>human pulmonary epithelial cells.</b></p>	<p>Toxicol Lett. 188(3):180-5. Aug10.  <a href="#">Abstract</a></p>
2008	Lung	<p>Refsnes M, et al. 2008. Fluoride-induced IL-8 release in <b>human epithelial lung cells:</b> relationship to EGF-receptor-, SRC- and MAP-kinase activation.</p>	<p>Toxicol Appl Pharmacol. 227(1):56-67. Feb 15.  <a href="#">Abstract</a></p>
2006	Lung	<p>Oncu M, et al. 2006. Effect of chronic fluorosis on lipid peroxidation and histology of <b>lung tissues in first and second generation rats.</b></p>	<p>Toxicol Ind Health. 22(9):375-80. Oct.  <a href="#">Abstract</a></p>
2003	Lung	<p>Aydin G, et al. 2003. Histopathological and biochemical changes in lung tissues of rats following administration of fluoride over several generations.</p> <p>"... This multigenerational evaluation of the long-term effect of different doses of fluoride intake through drinking water on lung damage shows that the lung tissues were damaged, there was <b>emphysema and inflammation of lung parenchyma associated with loss of alveolar architecture and the degree of lung damage seemed to correlate with the increased dosage of fluoride.</b> A similar relationship was observed between the degree of lung damage, body and lung weight and</p>	<p>J Appl Toxicol. 23(6):437-46. Nov-Dec.  <a href="#">Abstract</a></p>

		serum fluoride levels according to the fluoride dose."	
2010	Muscle	<p>Shashi A, et al. 2010. Histochemical pattern of gastrocnemius muscle in fluoride toxicity syndrome.</p> <p>"Conclusions: The findings of present study demonstrate that certain concentrations of fluoride can induce muscle lesions and damage DNA, RNA, and protein in muscle cells and <b>excessive intake and accumulation of fluoride is therefore a serious risk factor for muscular abnormalities in fluorosis.</b>"</p>	Asian Pacific Journal of Tropical Medicine 3(2):136-140. Feb.
2011	Oxidative Stress	<p>Madusudanan Rao S, et al. 2011. Morphometry of buccal mucosal cells in fluorosis - a new paradigm.</p> <p>"Conclusions: <b>Fluorosis induces oxidative stress, DNA damage and apoptosis</b> which can be the reasons for the increase in the nuclear size and decrease in the cell size."</p>	Hum Exp Toxicol. Mar 15. [Epub ahead of print] <a href="#">Abstract</a>
2010	Oxidative Stress	<p>Liu H, et al. 2010. Fluoride-Induced Oxidative Stress in Three-Dimensional Culture of <b>OS732 Cells and Rats.</b></p> <p>"The study provided insight into the mechanism of skeletal fluorosis. Also, this study distinguished itself by identifying <b>oxidative stress as a potential modulator of osteogenesis in skeletal fluorosis.</b>"</p>	Biol Trace Elem Res. Oct 23. [Epub ahead of print] <a href="#">Abstract</a>
2010	Oxidative Stress	<p>Basha PM, et al. 2010. Evaluation of Fluoride-Induced Oxidative Stress in Rat Brain: A Multigeneration Study.</p> <p>"<b>Results of this study can be taken as an index of neurotoxicity in rats exposed to water fluoridation over several generations.</b>"</p>	Biol Trace Elem Res. Jul 24. [Epub ahead of print] <a href="#">Abstract</a>
2010	Oxidative Stress	<p>Kaoud H and Kalifa B. 2010. Effect of Fluoride, Cadmium and Arsenic Intoxication on <b>Brain and Learning-Memory Ability in Rats.</b></p> <p>"... These results suggest that learning-memory ability and brain function in rats are affected by HiF, HiCd and HiAs and that <b>oxidative stress in the brain may be one of the causes of this</b></p>	Toxicology Letters 196, suppl. 1 (2010): S53 (abstract from the XII International Congress of Toxicology).

		<b>damage."</b>	
2009	Oxidative Stress	García-Montalvo EA, et al. 2009. Fluoride exposure <b>impairs glucose tolerance</b> via decreased insulin expression and oxidative stress.	Toxicology 263(2-3):75-83. Sept 19. <a href="#">Abstract</a>
2008	Oxidative Stress	Chouhan S, Flora SJ. 2008. Effects of fluoride on the <b>tissue oxidative stress and apoptosis in rats</b> : biochemical assays supported by IR spectroscopy data.	Toxicology 254(1-2):61-7. Dec 5. <a href="#">Abstract</a>
2008	Oxidative Stress	Izquierdo-Vega JA, et al. 2008. Decreased in vitro <b>fertility in male rats</b> exposed to fluoride-induced oxidative stress damage and mitochondrial transmembrane potential loss.	Toxicol Appl Pharmacol. 230(3):352-7. Aug 1. <a href="#">Abstract</a>
2008	Oxidative Stress	Gao Q, Liu Y-J, Guan Z-Z. 2008. Oxidative stress might be a mechanism connected with the decreased alpha 7 nicotinic receptor influenced by high-concentration of fluoride in SH-SY5Y <b>neuroblastoma cells</b> . Corrigendum: "the concentrations of fluoride should have been given as mM, instead of IM."	Toxicol In Vitro. 22(4):837-43. June. <a href="#">Abstract</a>
2008	Oxidative Stress	Xu H, et al. 2008. Role of oxidative stress in <b>osteoblasts</b> exposed to sodium fluoride.	Biol Trace Elem Res. 123(1-3):109-15. <a href="#">Abstract</a>
2008	Oxidative Stress	Inkielewicz I, Czarnowska W. 2008. Oxidative stress parameters in <b>rats</b> exposed to fluoride and aspirin.	Fluoride 41(1):76–82. Jan-March. <a href="#">Full Report</a>
2007	Oxidative Stress	Jin XQ, et al. 2007. Fluoride-induced oxidative stress of <b>osteoblasts</b> and protective effects of baicalein against fluoride toxicity.	Biol Trace Elem Res. 116(1):81-9. April. <a href="#">Abstract</a>
2007	Oxidative Stress	Jin XQ, et al. 2007. Fluoride-induced oxidative stress of <b>osteoblasts</b> and protective effects of baicalein against fluoride toxicity.	Biol Trace Elem Res. 116(1):81-90. April. <a href="#">Abstract</a>
2007	Oxidative Stress	Bouaziz H, et al. 2007. Oxidative stress induced by fluoride in <b>adult mice and their suckling pups</b> .	Exp Toxicol Patho. 58(5):339-49. April 26. <a href="#">Abstract</a>
2006	Oxidative Stress	Sarkar S, et al. 2006. Fluoride-induced immunotoxicity in <b>adult male albino rat</b> : a correlative approach to oxidative stress.	J Immunotoxicol. Jul 1;3(2):49-55. <a href="#">Abstract</a>
2009	Pancreas	Ito M, Nakagawa H, Okada T, Miyazaki S,	Arch Toxicol. 83(2):151- 9.

		Matsuo S. 2009. ER-stress caused by accumulated intracisternal granules activates autophagy through a different signal pathway from unfolded protein response in <b>exocrine pancreas cells of rats</b> exposed to fluoride.	February. <a href="#">Abstract</a>
2011	Reproductive	Sun Z, et al. 2011. Fluoride-induced apoptosis and gene expression profiling in <b>mice sperm in vivo</b> .	Arch Toxicol. 2011 Feb 22. [Epub ahead of print] <a href="#">Abstract</a>
2010	Reproductive	Kumar N, et al. 2010. Effect of duration of fluoride exposure on the reproductive system in male rabbits.  "CONCLUSION: The present study demonstrates that fluoride <b>hampers the reproductive functions of male rabbits</b> and is proportional to the duration of fluoride exposure."	J Hum Reprod Sci. 3(3):148-52. Sept. <a href="#">Full Article</a>
2010	Reproductive	Hao P, et al. 2010. [Effect of fluoride on <b>human hypothalamus-hypophysis-testis axis hormones</b> ].	Wei Sheng Yan Jiu. 39(1):53-5. Jan. [Article in Chinese] <a href="#">Abstract</a>
2008	Reproductive	Izquierdo-Vega JA, et al. 2008. Decreased in vitro <b>fertility in male rats</b> exposed to fluoride-induced oxidative stress damage and mitochondrial transmembrane potential loss.	Toxicol Appl Pharmacol. 230(3):352-7. Aug 1. <a href="#">Abstract</a>
2008	Reproductive	Liu H, et al. 2008. Changes caused by fluoride and lead in energy metabolic enzyme activities in the reproductive system of <b>male offspring rats</b> .	Fluoride 41(3):184-91. July-Sept. <a href="#">Full Article</a>
2008	Reproductive	Dvorakova-Hortova K, et al. 2008. The influence of fluorides on <b>mouse sperm</b> capacitation.	Anim Reprod Sci. 108(1-2):157-70. Oct. <a href="#">Abstract</a>
2008	Reproductive	Huang C, et al. 2008. Effects of sodium fluoride on androgen receptor expression in <b>male mice</b> .	Fluoride 41(1):10-7. Jan-March. <a href="#">Full Article</a>
2007	Reproductive	Huang C, et al. 2007. Toxic effects of sodium fluoride on <b>reproductive function in male mice</b> .	Fluoride 40(3):162-8. July-Sept. <a href="#">Full Report</a>
2007	Reproductive	Gupta RS, et al. 2007. The toxic effects of sodium fluoride on the reproductive system of	Toxicol Ind Health. 23(9):507-13. Oct. <a href="#">Abstract</a>

		<b>male rats.</b>	
2007	Reproductive	Jiang Q, Song XK, Cui QH, Chen LJ. 2007. [Effect of fluoride on expression of telomerase reverse transcriptase expression and proliferating cell nuclear antigen in <b>germ cells of rats' testes</b> ]	Zhonghua Lao Dong Wei Sheng Zhi Ye Bing Za Zhi. 25(2):96-9. Feb. [Article in Chinese] <a href="#">Abstract</a>
2007	Reproductive	Reddy PS, et al. 2007. Suppression of <b>male reproduction in rats</b> after exposure to sodium fluoride during early stages of development.	Naturwissenschaften 94(7):607-11. July. <a href="#">Abstract</a>
2007	Reproductive	Oncu M, et al. 2007. Effect of long-term fluoride exposure on lipid peroxidation and histology of <b>testes in first- and second-generation rats.</b>	Biol Trace Elem Res. 118(3):260-8. Sept. <a href="#">Abstract</a>
2006	Reproductive	Bataineh HN, Nusierb MK. 2006. Impact of 12-week ingestion of sodium fluoride on <b>aggression, sexual behavior, and fertility in adult male rats.</b>	Fluoride 39(4):293-301. Oct-Dec. <a href="#">Full Report</a>
2006	Reproductive	Li Y, Zhu JY, et al. 2006. [Research in the relation between telomerase reverse transcriptase expression in <b>spermatogenic cells</b> and serum levels of estradiol <b>of fluorotic rats.</b> ]	Wei Sheng Yan Jiu. 2006 35(5):546-8. Sept. [Article in Chinese] <a href="#">Abstract</a>
2006	Reproductive	Wan S, et al. 2006. Fluoride-induced changes in the expression of epidermal growth factor and its receptor in testicular tissues of <b>young male rats.</b>	Fluoride 39(2):121-5. April-June. <a href="#">Full Article</a>
2006	Reproductive	Wan SX, et al. 2006. Effects of high fluoride on sperm quality and testicular histology in <b>male rats.</b>	Fluoride 39(1):17-21. Jan-March. <a href="#">Full Article</a>
2006	Reproductive	Sarkar S, et al. 2006. Management of fluoride induced <b>testicular disorders</b> by calcium and vitamin-E co-administration in the albino <b>rat.</b>	Reprod Toxicol. 22(4):606-12. Nov. <a href="#">Abstract</a>
2006	Reproductive	Zhang J, et al. 2006. Effects of sodium fluoride and sulfur dioxide on <b>sperm motility and serum testosterone in male rats.</b>	Fluoride 39(2):126-31. April-June. <a href="#">Full Article</a>
2006	Reproductive	Zhang J, et al. 2006. Changes in <b>testes protein and metabolic enzyme activities in rats</b> induced by sodium fluoride and sulfur dioxide.	Fluoride 39(3):179-84. July-Sept. <a href="#">Full Article</a>

2005	Reproductive	Pushpalatha T, et al. 2005. Exposure to high fluoride concentration in drinking water will affect <b>spermatogenesis and steroidogenesis in male albino rats</b> .	Biometals. 18(3):207-12. June. <a href="#">Abstract</a>
2010	Skeletal fluorosis	Choubisa SL, et al. 2010. Osteo-dental fluorosis in relation to age and sex in tribal districts of Rajasthan, India.  “... Out of 11205 individuals of Dungarpur and 7416 of Udaipur districts, 8090 (72.1%) and 2914 (39.2%) exhibited evidence of dental fluorosis respectively... <b>Regarding the incidence of skeletal fluorosis, 21 years of age revealed 27.6% in Dungarpur and 12.0% in Udaipur</b> . Whereas 44 years showed maximum incidence of skeletal fluorosis, its minimum incidence was found in the age group of 21-28 years. Severity of fluorosis could be associated with the advancing of age and F concentration. Moreover, <b>males showed relatively a higher incidence of dental and skeletal fluorosis compared to their counterparts...</b> ”	J Environ Sci Eng. 52(3):199-204. July. <a href="#">Abstract</a>
2010	Skeletal fluorosis	Joshi S, et al. 2010. Skeletal fluorosis <b>due to excessive tea and toothpaste consumption</b> .	Osteoporos Int. Oct 9. [Epub ahead of print] <a href="#">Abstract</a>
2010	Skeletal fluorosis	Liu H, et al. 2010. Fluoride-Induced Oxidative Stress in Three-Dimensional Culture of <b>OS732 Cells and Rats</b> .  "The study provided insight into the mechanism of skeletal fluorosis. Also, this study distinguished itself by identifying <b>oxidative stress as a potential modulator of osteogenesis in skeletal fluorosis.</b> "	Biol Trace Elem Res. Oct 23. [Epub ahead of print] <a href="#">Abstract</a>
2008	Skeletal fluorosis	Buchancová J, et al. 2008. Skeletal fluorosis from the point of view of an occupational exposure to fluorides in former Czechoslovakia.  "... The authors demonstrate cases of <b>occupational skeletal fluorosis</b> (currently rare in Europe) <b>in 14 metallurgists which were all disclosed in [aluminum] foundry workers</b> in Žiar nad Hronom as to the year 2005. The occupational disease was diagnosed after 17.7 ± 7.67 years (x±SD) of exposure in the foundry.	Interdiscip Toxicol. Sep;1(2):193-7. <a href="#">Full Report</a>

		The authors describe the clinical conditions, haematological and biochemical tests (decreased level of ionising calcium was found in serum). The content of fluorides in urine was increased (254.4±130.95 µmol/l). The average age of patients at the time of recognition of the professional etiology of the disease was 57.93±7.95 years..."	
2008	Skeletal Fluorosis	Srikanth R, et al. 2008. <b>Endemic fluorosis</b> in five villages of the Palamau district, Jharkhnd, India.  "A level of 2.5 mg F/L was found to be a critical threshold for manifestations of crippling skeletal fluorosis."	Fluoride 41(3):206-11. July-Sept. <a href="#">Full Article</a>
2008	Skeletal Fluorosis	Shashi A, et al. 2008. Incidence of skeletal deformities <b>in endemic fluorosis</b> .	Trop Doct. 38(4):231-3. Oct. <a href="#">Abstract</a>
2008	Skeletal Fluorosis	Younes M, et al. 2008. [ <b>Cervical myelopathy revealing bone fluorosis</b> ].	Rev Neurol (Paris) 164(2):185-8. Feb. <a href="#">Abstract</a>
2007	Skeletal Fluorosis	Li W, et al. 2007. Quantification of rib COL1A2 gene expression in healthy and <b>fluorosed Inner Mongolia cashmere goats</b> .	Fluoride 40(1):13-8. Jan-March. <a href="#">Full Article</a>
2007	Skeletal Fluorosis	Gupta RC, et al. 2007. Skeletal fluorosis <b>mimicking seronegative arthritis</b> .	Scandinavian Journal of Rheumatology, 36:2:154-5.
2005	Skeletal Fluorosis	Heikens A, et al. 2005. The impact of the hyperacid Ijen Crater Lake: <b>risks of excess fluoride</b> to human health.  "Based on the total daily intake, the lowest F concentration in drinking water that poses a risk of developing fluorosis is approximately 0.5 mg/l for dental fluorosis and 1.1 mg/l for skeletal fluorosis."	Sci Total Environ. 346(1-3):56-69. June 15. <a href="#">Abstract</a>
2005	Skeletal Fluorosis	Bharati P, et al. 2005. <b>Clinical symptoms of dental and skeletal fluorosis</b> in Gadag and Bagalkot Districts of Karnataka.	J. Hum. Ecol., 18(2):105-7.
2005	Teratogen	Krupanidhi S, Cherry KN. 2005. <b>Teratogenicity</b> due to fluoride.	FASEB J. 19(4):A58. March.
2008	Teratogen	Wu N, et al. 2008. <b>Behavioral teratology</b> in	Fluoride 41(2):129-33.

		rats exposed to fluoride.  “...differences in motor coordination, auditory reaction, pain sensitivity, and other cognitive responses, some statistically significant, varying with time and F exposure, were noted, especially among the pups in the 25 mg/L group. Brain slices in the 25 mg/L group also showed a <b>significantly lower average cerebral cortex thickness than in the control group</b> (10.97 $\mu$ m vs. 11.70 $\mu$ m).]”	April-June. <a href="#">Full Article</a>
2011	Thyroid	Karademir S, et al. 2011. Effects of fluorosis on QT dispersion, heart rate variability and echocardiographic <b>parameters in children</b> - Original Investigation.  “... We found <b>statistically significant low T4 levels, hypocalcemia and hyponatremia</b> , increased QT and QTc interval in children with dental fluorosis. Our results show that fluorosis might increase risk of arrhythmia indirectly, due to its hypocalcemic, hypernatremic, and hypothyroidism effects... Further studies concerning cardiovascular effect of fluorosis in both adults and children are needed.”	Anadolu Kardiyol Derg. 11(2):150-5. <a href="#">Full Report</a>
2010	Thyroid / Parathyroid	Koroglu BK, et al. 2010. Serum Parathyroid Hormone Levels in Chronic Endemic Fluorosis.  "The results of our study demonstrate that serum <b>PTH levels are increased in patients with endemic fluorosis. Fluoride, by interfering calcium balance, may be the cause of secondary hyperparathyroidism.</b> "	Biol Trace Elem Res. Sep 14. [Epub ahead of print] <a href="#">Abstract</a>
2009	Thyroid	Wang H, et al. 2009. <b>Fluoride-induced thyroid dysfunction in rats</b> : roles of dietary protein and calcium level.	Toxicol Ind Health. 25(1):49-57. Feb. <a href="#">Abstract</a>
2009	Thyroid	Zhan X, et al. 2006. Effects of fluoride on growth and <b>thyroid function in young pigs</b> .	Fluoride 39(2):95–100. April-June. <a href="#">Full Article</a>
2009	Thyroid	Wang J, et al. 2009. Chapter 67 - DNA Damage in Brain and Thyroid Gland Cells <b>due to High Fluoride and Low Iodine</b> .	Comprehensive Handbook of Iodine, Pages 643-649. Edited by: Victor R. Preedy, Gerard N. Burrow and Ronald Watson. ISBN: 978-0-12-374135-6. Elsevier

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2008	Thyroid / Parathyroid	Sharifian A, et al. 2008. Serum calcium and parathyroid hormone levels in <b>aluminum potroom workers</b> exposed to fluoride emissions.	Fluoride 41(4):314- 6. Oct-Dec. <a href="#">Full Article</a>
2005	Thyroid	Bouaziz H, et al. 2005. Fluoride-induced thyroid proliferative changes and their reversal in <b>female mice and their pups</b> .	Fluoride 38(3):185–92. <a href="#">Full Article</a>
2005	Thyroid	Gas'kov Alu, et al. 2005. [The specific features of the development of <b>iodine deficiencies in children living under environmental pollution with fluorine compounds</b> ]	Gig Sanit. Nov-Dec;(6):53-5. <a href="#">Full Article - English Translation</a>
2005	Thyroid	Ge Y, et al. 2005. <b>DNA damage in thyroid gland cells of rats</b> exposed to long-term intake of high fluoride and low iodine.	Fluoride 38(4):318–23. Nov. <a href="#">Full Article</a>
2005	Thyroid	Ruiz-Payan A, et al. 2005. Chronic effects of fluoride on growth, blood chemistry, and <b>thyroid hormones in adolescents</b> residing in northern Mexico. Paper presented at the XXVIth Conference of the International Society for Fluoride Research (September 26-29).	Fluoride 38(3):246. <a href="#">Full Article</a> (see Abstract Number 37)

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“There was substantial variation in the estimated amount of fluoride ingestion depending on the children's fluid consumption patterns as well as age, gender, and race/ethnicity. **African-American children ingested significantly more fluoride than White children in bivariate analysis**. This association remained significant after accounting for fluid consumption pattern and other confounding factors in the model.

CONCLUSION: Our results raise concerns that some children are ingesting significantly more fluoride than others depending on sociodemographic factors and fluid consumption patterns. Additional research is

warranted to investigate the variation in the amounts of fluoride ingestion by these factors and its impact on fluorosis prevalence in different population groups.