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Fluoridation of Public Water Systems:  
Valid Exercise of State Police Power or Constitutional Violation?

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## **I. Introduction**

The United States Supreme Court has never decided whether a state, in the proper exercise of its police power, can mandate prophylactic medication for a noncontagious disease when such disease is treatable by reasonable, less intrusive means. More specifically, the Supreme Court has never decided whether fluoridation of public water systems is a valid exercise of state police power or a constitutional violation. It is the scope of state police power and governmental involvement with the noncontagious disease of dental caries that will be explored in this Comment.

Police power is the implied constitutional authority allowing states to make laws concerning the health, safety, welfare and morals of its citizens.<sup>1</sup> States exercise their police power when they require that students be medicated against contagious diseases, such as measles, mumps and rubella, by way of inoculations prior to attending public schools. This immunization requirement is virtually uncontested by the public because the risk of spreading communicable diseases to other students is widely recognized.<sup>2</sup>

However, states also medicate the public water systems<sup>3</sup> with fluoride in an attempt to retard tooth decay -- a non-contagious disease,<sup>4</sup> also known as dental caries.<sup>5</sup> This state action has been rigorously contested by members of the public because the addition of fluoride to the public water system by municipal providers<sup>6</sup> may have adverse consequences on the health of the general public which outweigh the benefits allegedly prodded in reducing tooth decay in children.<sup>7</sup>

Fears concerning the purity of public water sources have increased dramatically in recent years, due in part to reports of leaking landfills, corroding pipes and crumbling gasoline storage tanks tainting water supplies.<sup>8</sup> These fears pertain not only to contaminants such as lead, nitrates, pesticides, radon and other organic chemicals that inadvertently find their way into public drinking water, but also to chlorine and fluorine, which are purposely added to public water systems.<sup>9</sup> A public survey conducted in the late 1980s indicated that "[n]early 70 percent of Americans are worried about the quality of their drinking water . . . [with] their concern center[ing] on how water looks, tastes or smells."<sup>10</sup>

In 1992, "Americans spent more than \$700 million on inhome filters" and more than \$2 billion on bottled water in efforts to avoid drinking contaminated water.<sup>11</sup> In spite of this, a common misconception is that fluoridated tap water provided by a public water system is completely safe to drink. This assumption is unwarranted because fluoridated tap water has the potential to cause adverse health consequences, including death.<sup>12</sup>

While the general public supports chlorination<sup>13</sup> to ensure that tap water is safer to drink, there is both adamant support and unrelenting opposition to the artificial fluoridation of

drinking water.<sup>14</sup> Public debate on the issue of fluoridation began in the 1950s and continues to date, resulting in an abundance of lawsuits opposing fluoridation of public water systems.

The public support for fluoridation exists mainly because of the misconception that fluoride in drinking water and toothpaste benefits the development and overall health of the teeth of both children and adults. However, even proponents of fluoridation admit that fluoride does not provide any health benefits when ingested by an adult, while the potential exists for causing adverse health problems, such as crippling skeletal fluorosis.<sup>15</sup> Other adverse health problems linked to fluoride include a 690% increase in bone cancer in of young males,<sup>16</sup> a doubling of hip fractures for both older men and women,<sup>17</sup> and infertility in women.<sup>18</sup>

Some opponents of fluoridation are of the opinion that there is no correlation between the level of fluoride in water and dental caries.<sup>19</sup> As a matter of fact, the federal government has conceded that the purported benefit of fluoridation is limited, as it applies only to developing enamel in the teeth of children up to the age of nine.<sup>20</sup> The problem with health laws specifically targeted at children is that children constitute only a minority of the general public because "[t]he most recent year in which a majority of families included at least one child among their members was 1982.... [C]hildren are defined as the householder's own children who are under the age of 18, have never been married, and are still living at home.<sup>21</sup> It logically follows that persons under the age of eighteen comprise less than 50% of the U.S. population.

Therefore, state laws authorizing municipal fluoridation of water do not benefit the majority of the public, and thus do not promote the health, safety, and welfare of Americans, the majority of whom are adults.

Fluoridation of public water systems has been attacked in the courts on various constitutional grounds, but has always been upheld as a valid exercise of state police power.<sup>22</sup> This result stems from the application of the "rational basis" test of judicial review to fluoridation laws by all of the appellate courts. The rational basis test is the least demanding form of judicial review, providing broad deference to the legislature. It merely requires that the goals sought be legitimate, and that the means chosen by the legislature be rationally related to the achievement of those goals, so as not to violate the Due Process Clause.<sup>23</sup> To pass constitutional muster under the rational basis test, legislation cannot be arbitrary and must have a reasonable purpose which "bears a rational relationship to a [permissible] state objective."<sup>24</sup>

There is a rebuttable presumption that all legislation is constitutional, and "those challenging a statute must prove unconstitutionality beyond a reasonable doubt."<sup>25</sup> Because of this presumption of validity, courts will generally apply the easily-satisfied rational basis test to a challenged law, unless given a reason to justify a higher standard of review. A constitutional challenge to legislation is one such reason for performing a more demanding judicial review, because the rational basis test does not apply if the statute "interferes with the free exercise of some fundamental personal right or liberty."<sup>26</sup>

The rational basis test is properly applied to legislation dealing with public health protection, such as the prevention or spread of contagious or communicable diseases.<sup>27</sup> However, fluoridation of public water systems cannot logically rise to the level of a public health protection measure, as it is merely an attempt to prevent the disease of tooth decay, which is neither contagious nor communicable. Thus, adding prophylactic medication (fluoride) to drinking water exceeds the scope of state police power, and courts should apply the highest standard of judicial review, called "strict scrutiny" to the legislation authorizing fluoridation.

Strict scrutiny is the highest standard of judicial review that courts use to determine if a law deprived, infringed, or interfered with a fundamental constitutional right or liberty.<sup>28</sup> To pass this test, the legislation must be narrowly tailored and necessary to achieve a legitimate, compelling state interest.<sup>29</sup> It is first necessary to understand what constitutes a "fundamental constitutional right" in order to know when a strict scrutiny review is required. The United States Supreme Court has recently held that "[t]he forcible injection of medication into a nonconsenting person's body represents a substantial interference with that person's liberty,"<sup>30</sup> which involves a fundamental constitutional right.

This Comment shows why, under strict scrutiny review, state laws authorizing fluoridation of public water systems should be struck down as unconstitutional since they impinge a fundamental constitutional right, the means of accomplishing fluoridation is not narrowly tailored, and there is no compelling government interest involved.<sup>31</sup> To fully understand the detrimental effects of fluoride on the human body, one must be familiar with its chemical properties and how it has become regulated by the federal government. To accomplish this goal, Part I of this Comment examines the adverse health effects caused by fluoride ingestion and how fluoride has come to be labeled as a contaminant, poison, and most importantly, as a drug for treating a noncontagious disease.

Part II traces the regulatory attempts aimed at ensuring the provision of safe drinking water by municipalities, and explains the role of the Environmental Protection Agency in establishing contaminant levels for fluoride under the Safe Drinking Water Act. Part III examines the legal challenges to fluoridation of public water systems, noting that courts have upheld that it is a valid exercise of state police power. Part IV addresses the exercise of state police power as a basis for enacting fluoridation laws.

Further, Part IV analyzes the constitutional protection afforded to an individual in the context of fluoridation laws. Finally, Part V concludes that courts have used the wrong standard in their judicial review of statutes authorizing fluoridation, and that fluoridation laws will not pass constitutional muster under a strict scrutiny standard of review. This is because fluoridation statutes violate the constitutionally protected liberty interest to be free from unwanted medical treatment recognized by the U.S. Supreme Court in the 1990 cases, *Cruzan v. Director, Missouri Dept of Health*<sup>32</sup> and *Washington v. Harper*.<sup>33</sup> These two decisions have not yet been relied upon by a lower court in the constitutional analysis of fluoridation laws.

Fluoridating public water in an attempt to target children whose permanent teeth are still developing is like using a shotgun to shoot an apple off someone's head; sure, you hit the apple, but the side effects are undesirable.

## **I. Health Effects on the Human Body From Fluoride Ingestion**

To understand why most, if not all, states have laws providing for the addition of fluoride to the public water systems and why the public opinion is split as to the benefits and harms of fluoridation, some background information on fluoride is useful. Fluoride is a binary compound,<sup>34</sup> consisting of the element fluorine<sup>35</sup> combined with another element, such as copper, magnesium, iron, sodium, or zinc.<sup>36</sup> Fluorine has been estimated to be the thirteenth most abundant element in the earth's crust and is usually found only in combination with other elements, producing compounds called fluorides.<sup>37</sup>

It is crucial to note that fluorine is not an essential nutrient needed by the human body.<sup>38</sup> Virtually all foods contain trace amounts of fluoride, but the quantity is negligible and not considered for purposes of regulating maximum fluoride levels in drinking water.<sup>39</sup> The use of fluoride for medicinal purposes originated because it was discovered in communities where the water supply naturally contained a small percentage of dissolved fluorides that the tendency toward tooth decay in children was notably reduced.<sup>40</sup> Accordingly, the United States Public Health Service endorsed the artificial fluoridation of public drinking water in 1950.<sup>41</sup> Because the government is now actively involved in preventing tooth decay (a periodontal disease), it is actually practicing medicine, which is defined as "the science and art of . . . preventing disease," and fluoride may be considered a 'medicine' which is defined as "any drug or other substance used in treating disease . . ."<sup>42</sup>

The decision to add fluoride to public water systems sparked controversy because "the fluoride encountered in 'natural' drinking water is calcium fluoride,"<sup>43</sup> but artificial fluoridation is accomplished by using either sodium fluoride,<sup>44</sup> sodium fluorosilicate,<sup>45</sup> or hydrofluorosilicic acid.<sup>46</sup> Sodium fluoride was the first compound used in public water systems to artificially fluoridate public water, which caused an uproar because sodium fluoride is a known poison used commercially as an insecticide, rodenticide, wood preservative and fungicide, in ceramics production, and in light metal production.<sup>47</sup> The federal government recognizes the toxicity of sodium fluoride because it is regulated as an active ingredient in pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).<sup>48</sup> Pesticides with highly toxic quantities of sodium fluoride in them must have the skull and crossbones symbol as well as the word poison prominently displayed on the container.<sup>49</sup>

The government promoters seeking to add fluoride to the public water systems back in the 1950s held a conference and tried to diffuse this issue by instructing those in attendance not to use the word "artificial" in conjunction with fluoridation and not to tell the public that sodium fluoride is being used because "that is rat poison."<sup>50</sup> Instead, the public should only be told that "fluorides" are added to the water.<sup>51</sup>

This is hardly comforting because in a table of water-borne contaminants, the Environmental Protection Agency (EPA) lists fluoride between cyanide and mercury, two toxic substances that the public would certainly never tolerate to be purposely added to their water supply.<sup>52</sup>

The scientific community is sharply divided as to the detrimental effects of fluoride on the human body.<sup>53</sup> The EPA solicited and received over 400 written public comments and held two full days of public hearings in Washington, D.C. pertaining to the issue of whether fluoride in public drinking water posed adverse health effects.<sup>54</sup> Many professional health organizations and state officials believed that fluoride in drinking water causes no adverse health effects, but other commentators believed that it can cause serious adverse health effects, such as crippling skeletal fluorosis,<sup>55</sup> mutagenicity,<sup>56</sup> and oncogenicity.<sup>57</sup> Dr. John Yiamouyiannis, an expert biochemist witness who has testified in several lawsuits challenging fluoridation statutes, authored a book entitled *Fluoride - The Aging Factor*.<sup>58</sup>

In this book, Dr. Yiamouyiannis describes, among other adverse health effects, how fluoride damages enzymes and interferes with collagen formation in the human body, resulting in premature aging.<sup>59</sup> This book, along with eighty-eight other technical reports and studies, were considered by the EPA in its determination of the Recommended Maximum Contaminant Level (RMCL) for fluoride to be published in the Code of Federal Regulations (CFR).<sup>60</sup> The EPA concluded that there was an inadequate basis to say that fluoride is oncogenic, mutagenic, or results in allergic or idiosyncratic sensitivity.<sup>61</sup> However, the EPA acknowledged that the conclusions of the studies conflicted and that there are ongoing chronic rat and mouse bioassays designed to measure the oncogenic<sup>62</sup> potential of fluoride, which they will reconsider when the results become available.<sup>63</sup>

The EPA did acknowledge that dental fluorosis, a condition manifested by staining and/or pitting of the teeth, can result from ingesting fluoride, but labeled it as a cosmetic effect rather than an adverse health effect within the meaning of the Safe Drinking Water Act.<sup>64</sup> The EPA also concluded that crippling skeletal fluorosis has been thoroughly documented to be associated with the consumption of fluoridated drinking water in the U.S., and accordingly set the RMCL to protect against this adverse health effect.<sup>65</sup> In response to public comments opposing fluoridation, the EPA emphasized that the Safe Drinking Water Act "prohibits [the] EPA from requiring the addition of any substance for preventative health care purposes unrelated to [the] contamination of drinking water," and that just because it issued final regulations does not mean that it endorses the fluoridation of public water systems.<sup>66</sup>

The federal government also regulates the ingestion of fluoride by humans in the Food, Drug, and Cosmetic Act, chapter 1, subchapter D, part 355 Anticaries Drug Products for Over-the-Counter Human Use,<sup>67</sup> and also in chapter 1, subchapter B, part 165 Beverages.<sup>68</sup> Fluoride used in a toothpaste, dentifrice, mouthwash, gel, or rinse is considered to be an anticaries drug, which is "[a] drug that aids in the prevention and prophylactic treatment of dental cavities (decay, caries)."<sup>69</sup> Three sources of fluoride are

used for topical application in the mouth: sodium fluoride,<sup>70</sup> sodium monofluorophosphate,<sup>71</sup> and stannous fluoride.<sup>72</sup> While the maximum permissible fluoride concentration in water is 4mg/ L, it is much higher in topical applications, depending on its form. For example, dentifrices<sup>73</sup> contain a theoretical total fluorine concentration of 850 to 1150 parts per million (ppm)<sup>74</sup> in a paste dosage form.<sup>75</sup> This concentration is aimed at obtaining at least 650 ppm<sup>76</sup> of fluoride ions,<sup>77</sup> whereas treatment rinses<sup>78</sup> target a fluoride ion concentration of 0.01 0.05 percent in an aqueous solution.<sup>79</sup>

The government has recognized the adverse health effects that may result from swallowing either fluoridated toothpaste or mouth rinse, and requires that warning labels be affixed to the anticaries drug products.<sup>80</sup> All fluoride dentifrices (tooth pastes and tooth powders) must be labeled "Warning: Keep out of the reach of children under 6 years of age."<sup>81</sup> The labels for rinse and gel products emphasize the importance of spitting out the solution and not swallowing it.<sup>82</sup> This is because fluoride is very toxic, and at least one child has been killed from swallowing a fluoride jell applied by a dental hygienist.<sup>83</sup> In summary, fluoride is neither a vitamin nor a mineral necessary for human health.<sup>84</sup> Rather, fluorine is a highly reactive element<sup>85</sup> used as a prophylactic drug to help prevent tooth decay in developing permanent teeth.<sup>86</sup> Fluoride provides no benefits to adults, and ingestion of it will only result in the health problems previously mentioned.<sup>87</sup>

## II. Legislative History of Safe Drinking Water

One of the first published cases attempting to ensure the safety of drinking water was *Commonwealth v. Towanda Water-Works*.<sup>88</sup> In Towanda, the Pennsylvania Attorney General alleged that the public water in the borough of Towanda was impure, unwholesome, polluted, unfit for use by the public, and dangerous to their lives and health.<sup>89</sup> The evidence as to the purity of the water was conflicting, but the jury found that the water was wholesome,<sup>90</sup> even though it was not pure.<sup>91</sup> The court took judicial notice that the only possible way to obtain pure water was by distillation.<sup>92</sup> Thus, the court held that the statute requiring "pure" water to be furnished for public consumption was to be construed to mean wholesome water, not pure in the abstract or chemical sense.<sup>93</sup> This case laid the foundation for the first drinking water standard set by the U.S. Public Health Service.

Promulgated in 1914, this standard was designed to protect the public from acute bacterial diseases,<sup>94</sup> and eventually led to the enactment of federal legislation in 1974 known as the Safe Drinking Water Act (SDWA).<sup>95</sup> The Safe Drinking Water Act requires the EPA Administrator to identify waterborne contaminants and publish maximum contaminant levels (enforceable standards) and recommended maximum contaminant levels (nonenforceable health goals) for municipal providers.<sup>96</sup> The SDWA was amended in 1986, changing the Recommended Maximum Contaminant Level (RMCL) terminology to Maximum Contaminant Level Goals (MCLG).<sup>97</sup> The EPA Administrator must promulgate national primary drinking water regulations for contaminants which may have an adverse effect on the health of persons and which are "known or anticipated to occur in public water systems."<sup>98</sup> The EPA issued national primary drinking water regulations for fluoride because it concluded that crippling skeletal fluorosis<sup>99</sup> is an

adverse health effect, and has been thoroughly documented to be associated with consumption of fluoridated drinking water.<sup>100</sup>

The EPA promulgated a Maximum Contaminant Level<sup>101</sup> (MCL) for fluoride in the 1985 National Interim Primary Drinking Water Regulations, pursuant to section 1412 of the Safe Drinking Water Act.<sup>102</sup> This interim MCL varied from 1.4 milligrams per liter (mg/L) to 2.4 mg/L, depending upon the annual average ambient air temperatures.<sup>103</sup> This interim amount was twice the optimum fluoride concentration, and was determined to strike an appropriate balance between the occurrence of dental fluorosis<sup>104</sup> and the prevention of dental caries.<sup>105</sup>

In response to this proposed MCL, the EPA received over 400 written public comments and held two full days of public hearings as to whether fluoride in drinking water posed adverse health consequences.<sup>106</sup> Based upon all the information it received, the EPA set the Recommended Maximum Contaminant Level (RMCL) of fluoride at 4 mg/L,<sup>107</sup> and subsequently set the Maximum Contaminant Level (MCL) at 4 mg/L also.<sup>108</sup> The EPA promulgated an RMCL for fluoride because it agreed with Surgeon Generals Shapiro and Koop that adverse health effects stemming from the ingestion of fluoride include "death, gastrointestinal hemorrhage or irritation, arthralgias, and crippling fluorosis."<sup>109</sup> RMCLs are non-enforceable health goals which are set at levels for which there are "no known or anticipated adverse health effects" and which leave a margin of safety to protect against crippling skeletal fluorosis.<sup>110</sup> The difference between an MCL and an RMCL is that the RMCL is supposed "to be based only on health and safety considerations while an MCL takes feasibility and cost into consideration."<sup>111</sup>

The Administrator must also promulgate the national secondary drinking water regulations, which are designed to protect the public health by controlling contaminants that "may adversely affect the odor or appearance of [drinking] water."<sup>112</sup> These secondary regulations specify the Secondary Maximum Contaminant Levels (SMCLs) which limit those contaminants that "may adversely affect the aesthetic quality of drinking water such as taste, odor, color and appearance ...."<sup>113</sup> Fluoride was not included in the original list of contaminants, but in 1985 the EPA Administrator proposed a SMCL of 2.0 mg/L for fluoride.<sup>114</sup> This limit was eventually approved and incorporated into the Code of Federal Regulations (CFR).<sup>115</sup>

If the EPA's SMCL for fluoride is exceeded, but the MCL is not, the CFRs require that the municipal water provider send the following notice to all paying users, as well as to the state public health officer:

#### Public Notice

Dear User:

The U.S. Environmental Protection Agency requires that we send you this notice on the level of fluoride in your drinking water. The drinking water in your community has a fluoride concentration of [fill in amount] milligrams per liter (mg/L).

Federal regulations require that fluoride, which occurs naturally in your water supply, not exceed a concentration of 4.0 mg/L in drinking water. This is an enforceable standard called a Maximum Contaminant Level (MCL), and it has been established to protect the public health. Exposure to drinking water levels above 4.0 mg/L for many years may result in some cases of crippling skeletal fluorosis, which is a serious bone disorder.

Federal law also requires that we notify you when monitoring indicates that the fluoride in your drinking water exceeds 2.0 mg/L. This is intended to alert families about dental problems that might affect children under nine years of age. The fluoride concentration of your water exceeds this federal guideline.

Fluoride in children's drinking water at levels of approximately 1 mg/L reduces the number of dental cavities. However, some children exposed to levels of fluoride greater than about 2.0 mg/l may develop dental fluorosis. Dental fluorosis, in its moderate and severe forms, is a brown staining and/or pitting of the permanent teeth.

Because dental fluorosis occurs only when developing teeth (before they erupt from the gums) are exposed to elevated fluoride levels, households without children are not expected to be affected by this level of fluoride. Families with children under the age of nine are encouraged to seek other sources of drinking water for their children to avoid the possibility of staining and pitting.

Your water supplier can lower the concentration of fluoride in your water so that you will still receive the benefits of cavity prevention while the possibility of stained and pitted teeth is minimized. Removal of fluoride may increase your water costs. Treatment systems are also commercially available for home use. Information on such systems is available at the address given below. Low fluoride bottled drinking water that would meet all standards is also commercially available.

For further information, contact [Public Water System employee's name, address, and phone number] at your water system<sup>116</sup>

The EPA has published a disclaimer in the national primary drinking water regulation for fluoride stating that: (1) they do not endorse fluoridation, even though they established an RMCL, (2) public water systems are not required to meet the RMCL, (3) states are not required to adopt the RMCL, and (4) fluoridation is a matter for state and local authorities.<sup>117</sup>

The RMCL for fluoride promulgated by the EPA is based upon the presumption that a child will drink 1.4 liters of tap water a day and that an adult will drink 2.0 liters a day.<sup>118</sup> However, the EPA does not admit that suppliers of water<sup>119</sup> frequently violate the RMCL as well as the MCL for fluoride. In fiscal year 1986, 740 Public Water Systems (PWS) were in violation of fluoride levels.<sup>120</sup> Moreover, fluoride was the second most frequently violated contaminant by Significant Non-Compliers (SNCs).<sup>121</sup>

### **III. Legal Challenges Against Public Water System Fluoridation**

The United States Supreme Court has never decided whether a state can compel individuals to ingest fluoride through public drinking water, when fluoride can be administered by other reasonable, less intrusive means. Accordingly, some state courts have limited their constitutional analysis of fluoridation statutes, based on reasoning that since the United States Supreme Court has declined to hear any fluoridation cases, there must not be any substantial constitutional issues.<sup>122</sup> The trial court in *Paduano v. City of New York*<sup>123</sup> held that "[w]hile denials of certiorari do not constitute decisions on the merits, it is clear that the Supreme Court has repeatedly held that no substantial Federal questions are presented by objections to fluoridation."<sup>124</sup> The court assumed, however, that the United States Supreme Court is, in effect, affirming the lower court when it dismisses the appeal.<sup>125</sup> However, this is not true, and courts should be compelled to analyze all constitutional issues in light of the most recent Supreme Court decisions.<sup>126</sup>

### **A. Challenges Based on States' Lack of Authority to Fluoridate Public Water Systems**

The first reported challenge to the addition of fluoride to a public water supply by a state was in *De Aryan v. Butler*.<sup>127</sup> In *De Aryan*, a taxpayer brought suit seeking to enjoin the addition of fluoride to water furnished to San Diego.<sup>128</sup> The basis for the challenge was that the city council exceeded its authority in enacting the fluoridation resolution.<sup>129</sup> The *De Aryan* court found that the State Board of Public Health was part of the Department of Public Health and thus had the "power to formulate policies affecting public health, and to adopt, promulgate, repeal, and amend rules and regulations consistent with law for the protection of the public health."<sup>130</sup> The State Legislature had "delegated to the State Board of Public Health the duty and powers necessary to control and regulate the purity, potability, and wholesomeness of public waters in this state."<sup>131</sup>

The *De Aryan* court further found that the entire police power of the state is vested in the legislature, and is only limited by the State Constitution and other applicable statutes.<sup>132</sup> Furthermore, even though the enforcement of police power may seem harsh at times, it is an indispensable part of state sovereignty and may not be legally limited unless its use is unreasonable and arbitrarily invoked.<sup>133</sup> Accordingly, applying the rational basis test, the *De Aryan* court concluded that the addition of fluoride to the public water system was a valid exercise of police power as long as it was not unreasonable or an abuse of discretion.<sup>134</sup> Although the petitioner taxpayer proffered exhibits, reports, and expert witnesses at the trial, there was no allegation in the petition that the City Council abused its discretion or made an unreasonable decision to endorse fluoridation.<sup>135</sup> Therefore, the District Court of Appeal could not consider the evidence.<sup>136</sup>

A somewhat different challenge against the authority of a city to fluoridate the public water system was made in *Wilson v. City of Mountlake Terrace*.<sup>137</sup> In *Wilson*, the appellants, representing a class of 300 persons in an unincorporated area adjacent to Mountlake Terrace, objected to the introduction of fluoride into their water by the Alderwood Water District.<sup>138</sup> Alderwood was under contract to provide fluoridated water to Mountlake Terrace, and also provided water to the appellants through a common distribution line.<sup>139</sup> The appellants argued that a city cannot exercise its police power

outside its boundaries, and, therefore, Mountlake Terrace was without authority to impose fluoridation on persons living outside the city.<sup>140</sup> The appellants, however, did not claim to be harmed by the fluoridation, and stipulated that fluoridation did not render the water unfit for human consumption according to health department standards.<sup>141</sup> The Supreme Court of Washington agreed with the trial court's finding that "the fluoridation of appellant's water is the incidental, although inevitable, result of the city's exercise of its police power ...."<sup>142</sup> Applying the rational basis test, the court affirmed the judgment for Mountlake Terrace allowing continued fluoridation because of the finding that appellants were not harmed.<sup>143</sup>

## **B. Scope of Police Power Exceeded by the States**

In 1954, one year after the De Aryan challenge, residents of Tulsa sought to enjoin enforcement of an ordinance authorizing fluoridation of the city water supply, alleging that it constituted an unwarranted exercise of state police power.<sup>144</sup> These plaintiffs, in *Dowell v. City of Tulsa*, argued that Oklahoma had "never . . . attempt[ed] to regulate or control any disease except those that are 'contagious, infectious, or dangerous'"<sup>145</sup> The *Dowell* court, however, did not believe that the Oklahoma Legislature "intended to restrict its enactment of measures designed to promote the public health and welfare to those designed to prevent the spread of [such] diseases."<sup>146</sup> The court found support for its position by noting the many statutes regulating food, lodging, and other subjects "that have no direct connection with or relation to [such] diseases."<sup>147</sup> Thus, using the rational basis test, the court upheld the fluoridation statute as a valid exercise of state police power "relating to eugenics and the maintenance of a healthy, normal, and socially sound populace."<sup>148</sup>

That same year, the appellant in *McGurren v. City of Fargo*<sup>149</sup> challenged the police power of the state, alleging that an implied contract exists between the public water system supplier and the consumer.<sup>150</sup> The rationale was that the city furnished and sold water in a proprietary capacity, and since the appellant had performed his contractual requirements by making the necessary service arrangements and paying the city for the water, then the city was mutually obliged to furnish water that was as reasonably pure and wholesome as possible.<sup>151</sup> The appellant further argued that the city breached the implied contract by adding fluoride to the water because the water was no longer free from any contamination, rendering the water "unfit for domestic use and unsafe and dangerous to individuals."<sup>152</sup> The appellant then argued that this breach endangered the health of the community, thereby exceeding the police power, which is intended to protect the public's health.<sup>153</sup> Accordingly, the *McGurren* court felt that an injunction preventing the addition of fluoride to the public water supply was proper and overruled the appellee's demurrer,<sup>154</sup> remanding the case to the district court to allow the City of Fargo answer the complaint.<sup>155</sup>

## **C. Constitutional Challenges**

The constitutional challenges brought against the fluoridation of public water systems have covered the entire spectrum of colorable arguments. These arguments include First

Amendment freedom of religion, Fourteenth Amendment denial of liberty, abridgement of privileges and immunities, and denial of equal protection, and finally, Ninth Amendment invasion of personal privacy.

## **1. Fourteenth Amendment Challenges**

The Fourteenth Amendment to the United States Constitution provides, in pertinent part, that

no State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.<sup>156</sup>

Challenges to public water system fluoridation statutes typically include allegations of: (1) deprivation of personal liberty; (2) abridgement of one's privileges and immunities; or (3) denial of equal protection of the law.

### **(a) Deprivation of Personal Liberty**

Two years after a federal court in California rendered the decision in *De Aryan*,<sup>157</sup> the seminal case of *Kraus v. City of Cleveland*<sup>158</sup> was decided in Ohio Supreme Court. The plaintiff in *Kraus* attacked legislation authorizing fluoridation of the public water supply as an infringement of fundamental liberties.<sup>159</sup> Urging that every individual has a personal liberty right "to protect his health as he deems best to insure a long and happy life," the plaintiff argued that fluoridation of the city water supply deprives him of this right in violation of the Fourteenth Amendment.<sup>160</sup> The *Kraus* court recognized this personal liberty right, but noted that it is not absolute because it is subject to limits stemming from the police powers of the state.<sup>161</sup> The plaintiff argued, however, that individual rights are subordinate to state police powers only when there is an overriding public purpose, such as a present danger, necessity, or emergency, and suggested that no such purpose existed to justify fluoridation of the water supply.<sup>162</sup> The *Kraus* court then examined the scope of the police power under Ohio law and found that if it satisfied the following four prongs, it was a valid exercise of police power: (1) it must be reasonable and necessary to achieve the legislature's objectives; (2) it must not violate the U.S. Constitution; (3) it must not be in direct conflict with any provision of the State Constitution; and (4) it must not be used in an arbitrary and oppressive manner.<sup>163</sup>

The public health measure at issue in *Kraus* pertained to the prevention of dental caries by increasing resistance in children to tooth decay, which the court felt was a "serious and widespread disease."<sup>164</sup> Accordingly, the *Kraus* court found that "any reasonable measure designed to decrease or retard the incidence of dental caries is in the interest and welfare of the public," and that this exercise of police power was not arbitrary or oppressive.<sup>165</sup> Thus, although the *Kraus* court did not disagree that fluoridation is an invasion of a person's constitutional right to protect his health as he deems best, it applied

the rational basis test and held that this right must yield to police power exercised to prevent caries in Children.<sup>166</sup>

### **(b) Abridgment of Privileges and Immunities**

In *Teeter v. Municipal City of La Porte*,<sup>167</sup> an action was brought to enjoin fluoridation of the municipal water supply, based on allegations that the local ordinance abridged the Privileges and Immunities Clause<sup>168</sup> of the Fourteenth Amendment.<sup>169</sup> The appellants argued that fluoridation of the public water system was "an enforced method of taking drugs and giving [the] same to their children . . . [and that] each individual should have the right to determine what to drink and eat without dictation from others ...." <sup>170</sup> The court determined, however, that it was "not necessary to decide the constitutional issues at this stage of the proceeding" and merely indicated that it was not "in a position to hold conclusively as a matter of law [that] fluoridation will not have cumulative toxic effects."<sup>171</sup> Thus, the *Teeter* decision did not advance the legal analysis of constitutional issues raised by forced fluoridation.

Almost ten years after *Teeter*, plaintiffs in *Paduano v. City of New York*<sup>172</sup> sought to enjoin the proposed fluoridation of the public water system arguing that, among other things, it violated the Privileges and Immunities Clause of the Fourteenth Amendment to the U.S. Constitution as well as Article I, Section 1 of the New York State Constitution.<sup>173</sup> The *Paduano* court held that fluoridation of the water supply "may be the only practical method of insuring the administration of this drug to the very young," and is probably the most efficient and cheapest method of doing so.<sup>174</sup> The court also held that "[i]t is not shocking to realize that the State, acting in the interest of children, too young to be sui juris,<sup>175</sup> may intervene in the parental area."<sup>176</sup> The plaintiffs' motion for an injunction was denied because the *Paduano* court felt bound by the principles of stare decisis<sup>177</sup> to follow other cases, where the Supreme Court has denied certiorari to all fluoridation challenges.<sup>178</sup>

### **(c) Denial of Equal Protection of the Laws**

It is undisputed even by the proponents of fluoridation that any benefit provided by fluoridation affects only tooth enamel that is still developing in children. Therefore, challenges have been made alleging that fluoridation of public water systems violates the Equal Protection Clause of the Fourteenth Amendment<sup>179</sup> because it affects only a limited class, namely, children.<sup>180</sup> These challenges have been dismissed because the United States Supreme Court has held that police power may be applied to a reasonable classification, and that just because the class is not all-embracing does not mean the legislation violates the Equal Protection Clause.<sup>181</sup> Several courts have held that fluoridation does not affect only a limited class because "[c]hildren of today are adult citizens of tomorrow"<sup>182</sup> and "it is apparent that children become adults."<sup>183</sup> Thus, the characterization of fluoridation laws as "class legislation" has passed the rational basis test applied by the courts.

## **2. First Amendment Right to Freedom of Religion**

Another constitutional challenge asserted against fluoridation is based upon religious beliefs held by many citizens which forbid them to take medication for the prevention or treatment of any disease. The First Amendment to the United States Constitution provides, in pertinent part, that "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof."<sup>184</sup> Thus, many cases have been brought, based on the theory that fluoridation violates the First Amendment right to freedom of religion.<sup>185</sup>

A First Amendment challenge was raised in *Kraus v. City of Cleveland*,<sup>186</sup> where the plaintiff contended that fluoridation of the public water system "compels people to take a form of medication contrary to their religious beliefs" in violation of the First Amendment.<sup>187</sup> The *Kraus* court noted that the United States Supreme Court has held that "freedom of religion has a dual aspect, freedom to believe, and freedom to act exercising such beliefs. The first is an absolute right, [but] the second is not," and therefore may be regulated in order to protect society.<sup>188</sup> Accordingly, the *Kraus* court held that the constitutional guaranty to freedom of religion must yield to regulations imposed "in the interests of the public welfare."<sup>189</sup>

### **3. Ninth Amendment Implied Right of Personal Privacy**

In addition to the explicit constitutional rights protected by the First and Fourteenth Amendments, the Ninth Amendment provides that "[t]he enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people."<sup>190</sup> This amendment was enacted so as to ensure that the government cannot violate fundamental rights of the public merely because those rights were not explicitly protected by the Constitution. Under the auspices of the Ninth Amendment, the City of Brainerd, Minnesota alleged that people have a prerogative to refuse fluoridation which is derived from the implicit constitutional right of privacy.<sup>191</sup> While there is no explicit mention of the right of privacy in the Constitution, the United States Supreme Court has held that "the right of privacy protects an individual's right 'to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person,'" such as the decision whether or not to terminate pregnancy.<sup>192</sup>

The Brainerd court recognized that while the United States Supreme Court has never ruled on the issue, "the right of personal privacy could also extend to protect an individual's decision regarding what he will or will not ingest into his body."<sup>193</sup> The Supreme Court, however, has held that "the constitution does not protect an individual 'against all intrusions' but only 'against intrusions which are not justified in the circumstances, or which are made in an improper manner'."<sup>194</sup> The Brainerd court found that while forced fluoridation does infringe upon an individual's freedom, such infringement cannot be given substantial weight if there are no significant adverse consequences to the individual.<sup>195</sup> If any weight were given to this infringement, the court felt that people could interfere with governmental enactment of similar public health measures, such as chlorinating the water.<sup>196</sup> Accordingly, the Brainerd court held "that fluoridation is a justified intrusion into an individual's bodily integrity."<sup>197</sup>

The most recent reported challenge to fluoridation is the 1994 case *Safe Water Association, Inc. v. City of Fond Du Lac*.<sup>198</sup> In *Safe Water*, the appellant asserted, *inter alia*, that the city's adoption of an fluoridation ordinance violated the constitutional right to privacy.<sup>199</sup> Plaintiffs had to first overcome the hurdle presented by *Froncek v. City of Milwaukee*,<sup>200</sup> a 1955 Wisconsin Supreme Court decision upholding fluoridation. In order to dispose of its adverse impact, *Safe Water* pointed out that the precedential weight of this decision was sufficiently limited by the more recent decisions of the United States Supreme Court in *Griswold v. Connecticut*<sup>201</sup> and *Roe v. Wade*,<sup>202</sup> which drastically enlarged the scope of the right to privacy.<sup>203</sup> The *Safe Water* Court noted that the U.S. Supreme Court recognized the implicit guarantee of "zones of privacy" in *Carey v. Population Services, Int'l.*,<sup>204</sup> but that this right of privacy is narrow and is subject to some limitations.<sup>205</sup> The court then granted summary judgment against *Safe Water Association*, reasoning that it failed to see any relationship between cases concerning the freedom to make reproductive choices and the issue of the right to be free from fluoridated water.<sup>206</sup>

#### **IV. Analysis**

A proper analysis of the statutes authorizing the fluoridation of public water systems must begin with a review of the limitations on state police power. Laws relating to "minimum wages for women and minors, maximum hours for women and minors, . . . control of venereal disease, blood tests for marriage licenses, sterilization, pasteurization of milk, chlorination of water, and vaccination have all been held valid as based on police power exercised in regard to public health."<sup>207</sup> However, the United States Supreme Court has never decided whether fluoridation of public water involves constitutional issues, and thus the lower courts must make their own determination if fluoridation is a valid exercise of state police power or a constitutional violation.<sup>208</sup>

##### **A. Lack of Authority Challenges**

The first category of challenges to fluoridation of public water systems involves the lack of authority for states to require fluoridation of public water systems.<sup>209</sup> The first reported challenge to fluoridation was *De Aryan v. Butler*,<sup>210</sup> where the issue was whether the city council of San Diego and the State Board of Health had the authority to require that fluorides be added to the public water supply.<sup>211</sup> The District Court of Appeal held that the State Board of Health was delegated the police power "necessary to control and regulate the purity, potability and wholesomeness of public waters in the state."<sup>212</sup> Because there was no allegation that the city council of San Diego abused its discretion or acted unreasonably in enacting the fluoridation statute, the *De Aryan* court correctly concluded that the statute was a valid exercise of police power.<sup>213</sup>

In the case *Wilson v. City of Mountlake Terrace*,<sup>214</sup> plaintiffs challenged the authority of the city to fluoridate their water, arguing that they lived outside the city limits and, therefore, are not citizens, residents, nor taxpayers of the city.<sup>215</sup> The Supreme Court of Washington correctly concluded that the valid exercise of police power may not be challenged by someone experiencing an incidental effect, if such individual does not allege that any harm resulted therefrom.<sup>216</sup> The challenges to fluoridation in these two

cases did not involve constitutional issues, and, therefore, the rational basis test was properly employed as the basis for judicial review.

## **B. Scope of Police Power Exceeded Challenges**

The second category of legal challenges to fluoridation of public water systems involves allegations that the state exceeded the scope of their police powers.<sup>217</sup> The appellant in *Dowell v. City of Tulsa*<sup>218</sup> contended that police power was limited to the regulation of contagious, infectious, or dangerous diseases, but the court felt this distinction was immaterial, ridiculous, and of no consequence to the promotion of public health.<sup>219</sup> In the case *McGurren v. City of Fargo*,<sup>220</sup> the appellant convinced the court that he had a breach of contract issue, which was then remanded to the lower court for resolution.<sup>221</sup> The *Dowell* court properly used the rational basis test to find that the state did not exceed the scope of its police power, because the appellant failed to sufficiently identify a fundamental constitutional right which was infringed. The *McGurren* court never reached the constitutional issues raised, and thus did not further the constitutional analysis of fluoridation laws.

## **C. Constitutional Challenges**

The third category of legal challenges to fluoridation of public water systems involves allegations that the state deprived an individual of their personal liberty, abridged their privileges and immunities, or denied them equal protection of the law in contravention of the Fourteenth Amendment to the United States Constitution.<sup>222</sup>

### **1. Deprivation of Personal Liberty Challenges**

The problem in making a challenge that fluoridation of public water systems deprives a person of personal liberty is that this constitutional right is not absolute; the Constitution provides that no state may deprive a person of liberty without due process of law.<sup>223</sup> "Liberty" may be subdivided "into three headings involving governmental restraints on (1) physical freedom, (2) the exercise of fundamental constitutional rights, and (3) other forms of freedom of choice or action."<sup>224</sup> The liberty guaranteed and protected by the Fourteenth Amendment includes the freedom to marry, establish a home, bring up children, live and work where one chooses, get a job, acquire useful knowledge, use and enjoy one's faculties, freedom from unauthorized physical restraint, and those privileges "essential to the orderly pursuit of happiness by free people."<sup>225</sup>

A state may enact legislation and deprive citizens of that state of any of these rights, but the citizens must first be afforded due process of law.<sup>226</sup> Due process is a course of legal proceedings according to the rules and principles which have been established in our legal system for the protection and enforcement of private rights.<sup>227</sup> "Substantive" due process provides protection from arbitrary and unreasonable actions, while "procedural" due process requires that a party whose rights are to be affected be given notice and an opportunity to be heard before a court or other appropriate decision-making body.<sup>228</sup>

The appellant in *Kraus v. City of Cleveland*<sup>229</sup> alleged that he was deprived of his liberty to protect his health as he deems best, but did not claim that he was denied due process.<sup>230</sup> The Kraus trial court had applied the rational basis test to the fluoridation statute and found it to be a valid exercise of police power, which was affirmed by the Supreme Court of Ohio.<sup>231</sup> The problem in this and every other case is that the rational basis test does not apply if the statute being analyzed interferes with a fundamental right.<sup>232</sup> This is where the ambiguity arises, because the "law" is constantly changing, and what is unconstitutional today may be legal tomorrow.<sup>233</sup> Therefore, modern courts should reanalyze the limitations on personal liberty in light of recent Supreme Court cases. When it is finally decided that fluoridation of the public water systems impinges on a fundamental right, the rational basis test will be inappropriate, and strict judicial scrutiny by the courts will be required.

## **2. Abridgement of Privileges and Immunities Challenges**

The problem in making a challenge that fluoridation of public water systems abridges a person's privileges and immunities is that the purpose of this clause is to protect "those rights peculiar to being a citizen of the federal government; it does not protect those rights which relate only to state citizenship."<sup>234</sup> The privileges and immunities challenges made in *Teeter v. Municipal City of La Porte*<sup>235</sup> and *Paduano v. City of New York*<sup>236</sup> have nothing to do with citizenship privileges in different states and thus are unfounded in the Constitution.<sup>237</sup> Accordingly, these cases were properly decided using the rational basis test of judicial review.

## **3. Denial of Equal Protection of the Laws Challenges**

The last Fourteenth Amendment challenge to statutes authorizing the fluoridation of public water systems is that they violate equal protection of the laws.<sup>238</sup> In *Chapman v. City of Shreveport*,<sup>239</sup> the appellees argued that it was unreasonable to fluoridate the water when it affected only a limited class.<sup>240</sup> This argument, however, goes towards proving that fluoridation statutes are not narrowly tailored, not that they have been denied equal protection of the laws. Equal protection of the laws requires that individuals be treated in a similar manner.<sup>241</sup> No claim was made in *Chapman* that the appellee was not receiving the same protection being provided to other persons in similar circumstances; instead, he was trying to remove himself from the prophylactic medication being provided to children through fluoridated water.<sup>242</sup>

The Supreme Court of Louisiana stated that the exercise of police power is not objectionable solely because it does not apply to all classes, and held that the legislature is allowed to subject adults to fluoridation because the statute was not arbitrary, oppressive, or unreasonable.<sup>243</sup> This holding unduly expands the purpose of police power, which is supposed to promote the general welfare of the majority of the public. American households are composed mainly of adults, not children, and thus, fluoridating public water systems is an overbroad use of police power which can cause adverse health effects for the majority of the public.<sup>244</sup>

There are many reasonable alternatives available to parents who want their children to receive fluoride treatment, such as topical gels, mouth rinses, children's toothpaste, fluoride tablets, and drops.<sup>245</sup> A study found that "fluoride administered in tablet form or in vitamin preparations was more than twice as effective as fluoridated water in preventing cavities."<sup>246</sup> Children ages 7 to 12 had no tooth decay in 54% of those who took fluoride tablets or drops since infancy, while only 23.9% of adults with lifetime exposure to fluoridated water were cavity-free.<sup>247</sup> An additional argument supporting fluoride supplementation from sources other than public water systems is that fluoride tablets or drops can be administered in exact doses, but the amount of fluoride ingested from drinking tap water cannot be controlled.<sup>248</sup> These tablets or drops can then be discontinued after the permanent teeth have finished developing around age 10-12, or even sooner if deleterious side effects occur.<sup>249</sup>

#### **4. Freedom of Religion Challenges**

In addition to the Fourteenth Amendment challenges, many plaintiffs alleged that the state had violated their First Amendment right to freedom of religion.<sup>250</sup> The appellant in *Kraus v. City of Cleveland*<sup>251</sup> claimed that fluoridation of the water supply compels people to take a form of medication contrary to their religious beliefs in contravention of the First Amendment to the U.S. Constitution and the State Constitution.<sup>252</sup> The United States Supreme Court has ruled on similar challenges, and has held that the freedom to believe is absolute and is a fundamental right, but the freedom to act according to such beliefs is not fundamental and may be regulated under police powers.<sup>253</sup>

The *Kraus* court then tried to distinguish fluoridation from other infringements on freedom of religion.<sup>254</sup> The court recognized that although the City of Cleveland is the sole supplier of public drinking water within that city, there is no absolute duty on the part of the city to supply water.<sup>255</sup> Furthermore, courts have held that citizens opposed to drinking fluoridated water are free to buy non-fluoridated water because there is no direct compulsion to drink tap water.<sup>256</sup> The *Kraus* court recognized that obtaining non-fluoridated water may pose a problem of inconvenience for some and possibly of economics for others, but felt it was not a wholly impossible situation.<sup>257</sup>

The argument that there is no compulsion to drink fluoridated water is without merit. Public water systems were established to serve the public.<sup>258</sup> Since the majority of the public are adults, then fluoridating tap water to provide a drug to a minority of the public (children) defeats the whole purpose of the public water system. Besides the inconvenience and expense of having to buy bottled water, it is virtually impossible to escape eating processed foods that have been prepared using fluoridated water. Therefore, there is a compulsion to ingest fluoridated water, whether it comes from the faucet or from the foods we eat. Although the *Kraus* court felt there was no compulsion to drink fluoridated tap water, the ease at which it reached that conclusion suggests the worthlessness of the achievement. Despite the erroneous conclusion by the *Kraus* court, it correctly applied the rational basis test to the infringement of religion challenge, because the Supreme Court has not recognized the exercise of religion as an absolute constitutional right.<sup>259</sup>

## 5. Right of Privacy Challenges

The very last category of legal challenges to fluoridation of public water systems involves allegations that the state deprived someone of their implied Ninth Amendment constitutional right of personal privacy to be free from unwanted government intrusions.<sup>260</sup> The Minnesota Supreme Court recognized this implicit constitutional right in *Minnesota State Board of Health v. City of Brainerd*,<sup>261</sup> but felt that it only protected against intrusions that were unjustified or made improperly.<sup>262</sup> The Brainerd court felt that if much weight was given to the right of privacy argument, then people could start refusing to let the government make similar intrusions.<sup>263</sup> Other courts have acknowledged the "zone of privacy" espoused by the U.S. Supreme Court in *Carey v. Population Services, Int'l.*,<sup>264</sup> but have held that this zone is narrow and subject to limitations.<sup>265</sup>

Some states, however, have determined that fluoridation of public water systems falls within this zone of privacy. The trial court in *Chapman v. City of Shreveport*<sup>266</sup> concluded that fluoridation of the city water supply was not reasonably related to the public health, and that tooth decay is not a matter of public health.<sup>267</sup> Furthermore, it held that the choice to ingest fluoride is strictly "within the realm of private dental health and hygiene," and that every person should be free to choose his medical treatment for himself and his family.<sup>268</sup>

Along these same lines, the dissent in *Minnesota State Board of Health v. City of Brainerd*<sup>269</sup> realized that although the majority had used a balancing test to weigh the state's intrusion into the citizen's right of privacy, they failed to look at other alternative means that minimized intrusion.<sup>270</sup> Given that Minnesota's purpose was to make publicly-funded fluoride treatment readily available, the dissent felt that the city could have been compelled to provide fluorine tablets or dental applications to whomever wanted treatment, without infringing on the right of privacy of the majority.<sup>271</sup> Justice Yetka concluded by noting that there was not a compelling state interest to fluoridate the water, especially since it could possibly be carcinogenic, and that reasonable alternatives existed, which tipped the balance in favor of an individual's rights.<sup>272</sup>

The dissent in *Kaul v. City of Chehalis*<sup>273</sup> recognized that measures directly affecting the bodily integrity of a person represent the most penetrating exercise of police power.<sup>274</sup> Only the emergency of a present danger justifies quarantine, isolation, or compulsory treatment, and it is doubtful whether compulsory vaccination can be made without such danger.<sup>275</sup> Justice Hill, in his dissent, pointed out that any proposed health regulation must not impair essential rights and principles, and anyone who wants or needs fluorine can get a prescription for topical application, or ingest it by other ways.<sup>276</sup> Additionally, he noted that the United States Supreme Court has held that health regulations must not restrain personal liberty "under conditions essential to the equal enjoyment of the same right by others" or unless there is "pressure of great dangers" to the public's safety.<sup>277</sup>

Justice Hill reiterated the well known fact that "[w]hile dental caries may be termed a 'disease' which is prevalent in the teeth of almost everyone, it is not contagious or

communicable in any way."<sup>278</sup> In addition, "[d]ental caries in no way endangers the public health in the sense that its existence in the teeth of one individual might adversely affect the personal health of any other individual."<sup>279</sup> Furthermore, Justice Hill felt that allowing the state to fluoridate public water systems would open the door to compulsory mass medication or preventative treatment for any disease without regard to a person's right to decide such matters for himself.<sup>280</sup> Justice Hill concluded that the "prevention of dental caries by compulsory treatment of the teeth does not fall within the scope of protection of the public dental health for which the police power may be invoked."<sup>281</sup> He believed that education and persuasion, not compulsion, should be the government's goal if fluorine is actually the key to dental health.<sup>282</sup>

#### **D. Supreme Court Stance on Unwanted Medical Treatment**

In *Cruzan v. Director, Missouri Department of Health*,<sup>283</sup> the United States Supreme Court stated that although many state courts have analyzed the right to refuse medical treatment under the implied constitutional right of privacy, it "is more properly analyzed in terms of a Fourteenth Amendment liberty interest."<sup>284</sup> In *Cruzan*, the Supreme Court acknowledged that "[t]he principle that a competent person has a constitutionally protected liberty interest in refusing unwanted medical treatment may be inferred from our prior decisions."<sup>285</sup> Additionally, the Supreme Court assumed that the Constitution would grant a person "a constitutionally protected right to refuse lifesaving hydration and nutrition."<sup>286</sup> In a prior case, the Supreme Court held that "[t]he forcible injection of medication into a nonconsenting person's body represents a substantial interference with that person's liberty."<sup>287</sup> However, the court also recognized that while a person has a liberty interest under the Fourteenth Amendment Due Process Clause, whether the person's "constitutional rights have been violated must be determined by balancing his liberty interests against the relevant state interests."<sup>288</sup> This "relevant" state interest, also referred to as a "compelling" state interest,<sup>289</sup> is one which the state is forced or obliged to protect.<sup>290</sup> While all states have a compelling interest to prevent contagious diseases, such as the spread of smallpox in *Jacobson v. Massachusetts*,<sup>291</sup> tooth decay is not contagious, poses no risk of an outbreak, and thus is not a compelling interest such as would require state intervention. Accordingly, courts should apply a strict scrutiny standard of review when balancing a substantial liberty interest against fluoridation, which is, in effect, merely a state-mandated prophylactic measure for a noncontagious disease. A strict scrutiny standard requires that a state have a compelling interest to enact legislation, and that such legislation be narrowly tailored to achieve its purpose so as not to infringe on personal liberty interests protected by the Constitution.<sup>292</sup>

There is clearly no right or compelling interest for the federal government to mandate fluoridation of drinking water because it is known that fluoride is a contaminant which may have an adverse affect on the health of persons.<sup>293</sup> If states were bound by the Safe Water Drinking Act, then they would be prohibited from requiring fluoridation of the public water systems, despite their police power. This state police power is supposed to be used to promote the general health and welfare of the public, and should not be used as authority to purposely add contaminants into public drinking water. While reasonable minds may differ about whether the state's interest in health encompasses non-contagious

diseases and whether this interest is compelling, fluoridation of public water systems does not pass constitutional muster because it fails the second prong of the strict scrutiny test: it is not narrowly tailored to achieve the legislature's purpose, and reasonable alternatives exist.

## V. Conclusion


It is incumbent upon the United States Supreme Court to grant certiorari to the next fluoridation challenge brought based upon a due process violation of an individual's liberty interest. Whereas the Supreme Court has yet to resolve the issue of whether fluoridation invades a constitutionally protected interest when the state mandates the ingestion of a prophylactic drug to prevent a noncontagious disease, the Court has held, however, that a state may exercise its police power to protect the public from the spread of contagious disease. This distinction between contagious and noncontagious disease is critical because it determines the extent of the state interest when balancing the right of an individual to be free from compulsory medication against the state interest in attempting to prevent tooth decay by fluoridating public water systems.

The holding in *Washington v. Harper*<sup>294</sup> reflects the modern Supreme Court position, whereby "[t]he forcible injection of medication into a nonconsenting person's body represents a substantial interference with that person's liberty."<sup>295</sup> However, this holding is qualified by the caveat that whether this constitutionally protected liberty interest has been violated "must be determined by balancing that liberty interest against the relevant state interests."<sup>296</sup> The balancing is accomplished by subjecting fluoridation statutes to a strict scrutiny review in order to determine if they pass constitutional muster.

Because there is no compelling state interest to mandate prophylactic drugs for a noncontagious disease, the means of accomplishing the legislature's goals is not narrowly tailored, and reasonable alternatives exist, fluoridation statutes will fail the strict scrutiny test. Pursuant to the holdings in *Harper* and *Cruzan*, it is reasonably certain that fluoridation of public water systems will eventually be deemed a substantial invasion of personal liberty in violation of the Constitution of the United States of America.

Fluoridating public water in an attempt to target children whose permanent teeth are still developing is like using a shotgun to shoot an apple off someone's head; sure, you hit the apple, but the side effects are undesirable.

## References

1. The Tenth Amendment, considered to be the source of state police power, provides that "[t]he powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people." U.S. CONST. amend. X. See *infra* note 22. 
2. See generally Michael S. Morgenstern
105. See National Primary Drinking Water Regulations, Fluoride, 50 Fed. Reg. 47,142, 47,143 (codified at 40 C.F.R. § 141.51).
106. See *id.* at 47,145.
107. See *id.* at 47,143.
108. See 40 C.F.R. § 141.62 (1996).
109. National Primary Drinking Water Regulations; Fluoride, 50 Fed. Reg. 47,142, 47,143 (codified at 40 C.F.R. § 141.51)

- The Role of the Federal Government in Protecting Citizens from Communicable Diseases, 47 U. CIN. L. REV. 537 (1978).
3. "The term 'public water system' means a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen service connections or regularly serves at least twenty-five individuals." Public Health Service (Safe Drinking Water) Act § 1401(4), 42 U.S.C. § 300f(4) (1994), as amended by Act of Aug. 6, 1996, Pub. L. No. 104-128, 1996 U.S.C.C.A.N. (110 Stat.) 1613, 1616 (1996) [hereinafter Safe Drinking Water Act].
  4. A disease is a "destructive process in the body, with a specific cause and characteristic symptoms. WEBSTER'S NEW UNIVERSAL UNABRIDGED DICTIONARY 523 (2d ed. 1983). Furthermore, tooth decay, technically called dental caries, is the destruction or necrosis of teeth. See DORLAND'S ILLUSTRATED MEDICAL DICTIONARY 250 (27th ed. 1988). Therefore, since tooth decay is a destructive process in the body, it is a disease. See also infra note 5.
  5. Dental caries is "[a] disease of calcified tissues of teeth characterized by demineralization of the inorganic portion and destruction of the organic matrix." 21 C.F.R. § 355.3(d) (1996).<sup>▲</sup>
  6. Municipal providers include "a city, town, or other public body created by or pursuant to State law, or an Indian Tribe." Safe Drinking Water Act § 1401(10), 42 U.S.C. § 300f(10) (defining "municipality").
  7. Fluoridation is an issue which has caused great controversy since the 1950s. Abundant opposition still exists today, as can be evidenced by surfing the Internet. See, e.g., Preventative Dental Health Association, The Dangers of Fluoridation (last modified Dec. 15, 1995) ; Gerard F. Judd, Ph.D & Chemist, Keep Your Teeth, We Now Know How!! Fluoridation Not the Answer (visited May 10, 1997) ; Michael Schachter, M.D., P.A., The Dangers of Fluoride and Fluoridation (visited May 10, 1997) ; Health Action Network Society, Is Fluoride Good For You? (visited May 10, 1997). Fluoride (emphasis added).
110. *Id.* at 47,142. <sup>▲</sup>
  111. *Id.* at 47,155.
  112. See Safe Drinking Water Act §§ 1401(2), 1412(c), 42 U.S.C. §§ 300f(2) 300g-1(c).
  113. National Secondary Drinking Water Regulations, 44 Fed. Reg. 42,195 (1979) (codified at 40 C.F.R. § 143.3).
  114. See National Primary Drinking Water Regulations, Fluoride, 50 Fed. Reg. 47,156 (1985).
  115. See 40 C.F.R. §143.3 (1996).
  116. *Id.* § 143.5. Despite the requirement for this notice, the EPA "has been criticized for failure to enforce required water quality standards and for not reporting to the public the failure of municipal water companies to meet standards." A. DAN TARLOCK ET AL., WATER RESOURCE MANAGEMENT 16 (4th ed. 1993).
  117. See National Primary Drinking Water Regulations; Fluoride, 50 Fed. Reg. 47,142, 47,153 (codified at 40 C.F.R. § 141.51).
  118. See *id.* at 47,145. If an adult drinks more than two liters of water per day, it logically follows that they are ingesting more fluoride than is calculated to be safe by the EPA.
  119. "The term 'supplier of water' means any person who owns or operates a public water system." Safe Drinking Water Act § 1401(5), 42 U.S.C. § 300f(5).
  120. See EDWARD J. CALABRESE ET AL., SAFE DRINKING WATER ACT 112 tbl. 5.<sup>▲</sup>
  121. See *id.* at 108. SNCs "are those systems which have the most serious and more frequent violations." *Id.* at 106.
  122. Cases that the Supreme Court has declined to hear include: *Birnel v. Town of Fircrest*, 335 P.2d 819 (Wash. 1959), appeal dismissed, 361 U.S. 10 (1959), reh'g. denied, 361 U.S. 904 (1959); *Chapman v. City of Shreveport*, 74 So. 2d 142 (La. 1954), appeal dismissed, 348 U.S. 892 (1954), *City of Canton v. Whitman*, 337 N.E.2d 766 (Ohio 1975), appeal dismissed, 425 U.S. 956 (1976); *De Aryan v. Butler*, 260 P.2d 98 (D. Cal. 1953), cert. denied, 347 U.S. 1012 (1954); *Dowell v. City of Tulsa*, 273 P.2d 859 (Okla. 1954), cert. denied, 348 U.S. 912 (1955); *Kraus v. City of Cleveland*, 116 N.E.2d 779 (Ohio Com. Pl. 1953), aff'd, 127 N.E.2d 609 (Ohio 1955), appeal dismissed, 351 U.S. 935 (1956); *Minnesota State Bd. of Health v. City of Brainerd*, 241 N.W.2d 624

- Issues (visited May 10, 1997).
8. See BUREAU OF CONSUMER PROTECTION - OFFICE OF CONSUMER/BUSINESS EDUCATION, FEDERAL TRADE COMMISSION, FACTS FOR CONSUMERS: WATER TESTING SCAMS. See also Exclusive Interview with Carol Browner, Administrator of the U.S. Environmental Protection Agency, POPULAR SCIENCE (visited May 10, 1997); Mark D. Uehling, How Safe is Your Water?, POPULAR SCIENCE, Oct. 1996, at 63.
  9. See Fit to Drink?, CONSUMER REPORTS, Jan. 1990, at 30 (pertaining to chlorine, lead, nitrates, pesticides, radon, and other organic chemicals). See also National Primary Drinking Water Regulations, Fluoride, 50 Fed. Reg. 47,142, 47,146 (1985) (codified at 40 C.F.R. § 141.51) (pertaining to fluoride).
  10. Fit to Drink?, CONSUMER REPORTS, Jan. 1990, at 30. See also Is Your Water Safe?, POPULAR SCIENCE (visited May 10, 1997) . ↗
  11. Fran Donegan, Water Treatment Basics, POPULAR MECHANICS, May 1993, at 61.
  12. See, e.g., Smith v. State, 921 P.2d 632 (Alaska 1996). In Smith, excessive fluoride in the public water system caused widespread illness in the town of Hooper Bay, Alaska, and even resulted in the death of one resident. *See id.* at 633.
  13. Only one case has challenged chlorination of the public water supply. See Commonwealth v. Town of Hudson, 52 N.E.2d 566 (Mass. 1943). The town of Hudson, Massachusetts rejected an order by the State Department of Public Health to chlorinate its water supply because they believed it would adulterate their otherwise pure water. *See id.* at 569, 572. The state had ordered chlorination of the water supply during the war to guard against sabotage by enemy agents or sympathizers. *See id.* at 570. The town objected on grounds that its water supply was naturally pure. *See id.* at 572. The Supreme Judicial Court of Massachusetts upheld the order to chlorinate as a valid exercise of state police power to protect against disease-producing organisms. *See id.* at 571, 572.
  14. See e.g. De Arvan v. Butler, 260 P.2d 98 (Minn. 1976), appeal dismissed, 429 U.S. 803 (1976); Paduano v. City of New York, 257 N.Y.S.2d 531 (Sup. Ct. 1965), aff'd, 24 A.D.2d 437 (N.Y.A.D. 1965), aff'd, 218 N.E.2d 339 (N.Y. 1966), cert. denied, 385 U.S. 1026 (1967); Readey v. St. Louis County Water Co., 352 S.W.2d 622 (Mo. 1961), appeal dismissed and cert. denied, 371 U.S. 8 (1962), reh'g denied, 371 U.S. 906 (1962); Safe Water Foundation of Texas v. City of Houston, 661 S.W.2d 190 (Tex. Ct. App. 1983), appeal dismissed, 469 U.S. 801 (1984); Schuringa v. City of Chicago, 198 N.E.2d 326 (Ill. 1964), cert. denied, 379 U.S. 964 (1965).  
123.257 N.Y.S.2d 531 (Sup. Ct. 1965).  
124.Id at 542. The Paduano court recognized that the judiciary did not have power to impose fluoridation on anyone, but if some proof was proffered that fluoridation has harmful side effects and is not in the interests of the community, they might be able to overrule the legislation authorizing it. *See id.*  
125.*See id.* at 538 n.\*. ↗  
126.The Supreme Court has noted "that all a denial of a petition for a writ of certiorari means is that fewer than four members of the Court thought it should be granted." Maryland v. Baltimore Radio Show, 338 U.S. 912, 919 (1950). The Court also stated that they have "rigorously insisted that such a denial carries with it no implication whatever regarding the Court's views on the merits of a case which it has declined to review." *Id.* This has been said again and again, and the Court repeatedly has to reiterate this admonition. *See id.* Therefore, all courts that declined to rule on the constitutional challenges to fluoridation because they interpreted a denial of certiorari as the equivalent to an affirmation of the lower court's decision were wrong! For a detailed analysis of what certiorari denial constitutes, see Peter Linzer, The Meaning of Certiorari Denials, 79 COLUM. L. REV. 1227 (1979).  
127.260 P.2d 98 (D. Cal. 1953).  
128.*See id.* at 99.  
129.*See id.* at 101. See also Young v. Board of Health of Borough of Somerville, 293 A.2d 164 (N.J. 1972); Rogowski v. City of Detroit, 132 N.W.2d 16 (Mich. 1965). An act performed without any authority to do so is known as "ultra vires." An "[u]ltra vires act of [a] municipality is one which is

- (Cal. 1953), cert. denied, 347 U.S. 1012 (1954) (earliest reported court challenge against fluoridation); *Safe Water Association, Inc. v. City of Fond Du Lac*, 516 N.W.2d 13 (Wis. Ct. App. 1994), review dismissed, 520 N.W.2d 91 (Wis. 1994) (most recently reported court challenge against fluoridation) and other cases cited *infra*. In addition to private citizen suits opposing fluoridation, many organizations are also fighting fluoridation. Some of these include: Global Alliance Against Fluoridation [New York, NY], The Anti-Fluoridation Association of Victoria [Melbourne, Australia], Citizens for Safe Drinking Water [San Diego, CA], Safe Water Coalition, Inc. [Orinda, CA], New York State Coalition Opposed to Fluoridation, Inc. [Old Bethpage, NY], New Zealand Pure Water Association Inc. [Bay of Plenty, New Zealand], Support Coalition [Eugene, OR], PA Mandatory Fluoridation Alert [Oakmont, PA], Safe Water Coalition of Washington State [Spokane, WA], and the National Pure Water Association [Wakefield, United Kingdom]. See *Organizations Which Oppose Fluoridation* (visited May 10, 1997). Also, both the Environmental Defense Fund, Inc. and the Natural Resources Defense Council, Inc. (NRDC) have challenged the maximum fluoride levels in water set by the Environmental Protection Agency. See *Environmental Defense Fund, Inc. v. Costle*, 578 F.2d 337 (D.C. Cir. 1978); *Natural Resources Defense Council, Inc. v. Environmental Protection Agency*, 812 F.2d 721 (D.C. Cir. 1987).
15. See generally *National Primary Drinking Water Regulations; Fluoride*, 50 Fed. Reg. 47,142 - 47,155 (codified at 40 C.F.R. § 141.51).▲
  16. See *Preventative Dental Health Association, Adverse Health Effects Linked To Fluoride* (last modified Jan. 11, 1996) (citing Perry D. Cohn, Ph.D., *An Epidemiological Report on Drinking Water Fluoridation and Osteosarcoma in Young Males*, New Jersey Department of Health, Environmental Health Service (Nov. 8, 1992).
  17. *See id.* (citing *Hip Fracture Rates Related to Fluoridated Water* *Journal of the* beyond powers conferred upon it by law. BLACK'S LAW DICTIONARY 1057 (6th ed. 1991).
  - 130.260 P.2d at 101.▲
  - 131.*Id.*
  - 132.*See id.*
  - 133.*See id.* at 101,102.
  - 134.*See id.* at 102.
  - 135.*See De Aryan v. Butler*, 260 P.2d at 99, 103.
  - 136.*See id.* at 102.
  - 137.417 P.2d 632 (1966).
  - 138.*See id.* at 632,633.
  - 139.*See id.*
  - 140.*See id.* at 634.▲
  - 141.*See id.* at 635.
  - 142.417 P.2d at 635.
  - 143.*Wilson v. City of Mountlake Terrace*, 417 P.2d 632 635 (Wash. 1966).
  - 144.*See Dowell v. City of Tulsa*, 273 P.2d 859, 860 (Okla. 1954).
  - 145.*Id.* at 861.
  - 146.*Id.*
  - 147.*Id.*
  - 148.*Id.* at 862 (quoting 11 AM. JUR. Constitutional Law § 271, 1023).
  - 149.66 N.W.2d 207 (N.D. 1954).
  - 150.*See id.* at 209.▲
  - 151.*See id.*
  - 152.*Id.* at 211 (citing 56 AM. JUR. *Waterworks* § 75 at 76, § 79 at 983).
  - 153.*See id.* at 209, 212.
  - 154.A "demurrer" is "[a]n assertion that the complaint does not set forth a cause of action upon which relief can be granted." BLACK'S LAW DICTIONARY 298 (6th ed. 1991).
  - 155.*See* 66 N.W.2d at 212. The decision of the district court on remand is unreported.
  - 156.U.S. CONST. amend. XIV, § 1.
  - 157.260 P.2d 98 (D. Cal. 1953).
  - 158.127 N.E.2d 609 (Ohio 1955), appeal dismissed, 351 U.S. 935 (1956).
  - 159.*See id.* at 610.
  - 160.*Id.* See also *Readey v. St. Louis County Water Co.*, 352 S.W.2d 622 628-32 (Mo. 1961), cert. denied, 371 U.S. 8 (1962).▲
  - 161.*See* 116 N.E.2d at 794.
  - 162.*See id.* at 794-95.
  - 163.*See id.* at 795.
  - 164.*Id.*
  - 165.*Id.* at 795-96.
  - 166.*See* 116 N.E.2d at 794-95.
  - 167.139 N.E.2d 158 (Inc. 1956).
  - 168.The Privileges and Immunities Clause provides that "In no State shall make or

- American Medical Association Vol. 264(4), 500-02 (1990), J.C. Robins & J.L. Ambrus, Studies on Osteoporosis IX. Effect of Fluoride on Steroid Induced Osteoporosis, Research Communications in Chemical Pathology and Pharmacology, Vol. 37, No. 3, 453-61 (1982).
18. *See id.* (citing S.C. Freni, Journal of Toxicology and Environmental Health, Vol. 42, 109-21 (1994)).
19. *See id.* (citing M. Diesendorf, Tooth Decay Not Related to Fluoride Intake From Water, NATURE, Vol. 322, July 10, 1986; J. Colquhoun, Tooth Decay Related to Economics of Family, AMERICAN LABORATORY, Vol. 17, 1985, at 98-109; J. Colquhoun, COMMUNITY DENTISTRY AND ORAL EPIDEMIOLOGY, Vol. 13, 1985 at 37-41; JOHN YIAMOUYIANNIS, PH.D., FLUORIDE - THE AGING FACTOR (2d ed. 1986); D. Ziegelbecker, FLUORIDE, Vol. 14, 1981, at 123-28).
20. See National Primary Drinking Water Regulations; Fluoride, 50 Fed. Reg. 47,156, 47,171 (Appendix A - proposal for a new warning notice to the public, which reads: "Fluoride, at the appropriate levels in the drinking water of children up to the age of nine, reduces cavities."). See also AM. JUR. 3D Proof of Facts Taber's Cyclopedic Medical Dictionary 682 (16th ed. 1989), which states that "fluoride taken after the age of 8 to 10 will have little effect on the prevention of dental caries." ▲
21. U.S. DEPARTMENT OF COMMERCE - BUREAU OF THE CENSUS, HOUSEHOLD AND FAMILY CHARACTERISTICS: MAR. 1994 viii (Sept.1995).
22. Police power is not explicitly provided for in the Constitution. It is recognized as a power inherent in state sovereignty to protect the health, safety, general welfare, and morals of the public, secured by the Tenth Amendment. See *Lochner v. New York*, 198 U.S. 45, 53 (1905). "Police power" is a general term containing many ramifications and has never been pinpointed as to its exact meaning." *City Comm'n of the City of Fort Pierce v. State ex rel. Altenhoff*, 143 So. 2d 879, 889 (Fla. 1962).
23. See *Weinberger v. Salafi* 422 U.S. 749
- enforce any law which shall abridge the privileges or immunities of citizens of the United States." U.S. CONST. amend XIV, § 1.
169. See 139 N.E.2d at 160.
170. *Id.* at n.2. ▲
171. *Id.* at 161.
172. 257 N.Y.S.2d 531 (Sup. Ct. 1965).
173. *See id.* at 538.
174. *Id.* at 539.
175. "Sui juris" means "possessing full social and civil rights; not under any legal disability, or the power of another, or guardianship." BLACK'S LAW DICTIONARY 1000 (6th ed. 1991).
176. 257 N.Y.S.2d at 541.
177. Stare decisis is a policy of courts to abide by decided cases and not disturb a settled principle of law. See BLACK'S LAW DICTIONARY 978 (6th ed. 1991).
178. See 257 N.Y.S.2d at 542.
179. The Equal Protection Clause provides that [n]o State shall . . . deny to any person within its jurisdiction the equal protection of the laws." U.S. CONST. amend. XIV, § 1.
180. See, e.g. *Chapman v. City of Shreveport*, 74 So. 2d 142, 146 (La. 1954) appeal dismissed, 348 U.S. 892 (1954). See also *Hall v. Bates*, 148 S.E.2d 345 (S.C. 1966), *Kraus v. City of Cleveland*, 116 N.E.2d 779 (Ohio Com. Pl. 1953) aff'd, 127 N.E.2d 609 (Ohio 1955), appeal dismissed, 351 U.S. 935 (1956). For a classification involving age, see *City Comm'n of Fort Pierce v. State ex rel. Altenhoff*, 143 So. 2d 879 (D.C. Fla. 1962). In this case, plaintiffs alleged that fluoridation of the water system "is violative of the constitutional guarantee against Class Legislation in that its proponents only claim it is beneficial to children of the age group of one to fourteen years." *Id.* at 881. ▲
181. See *Zucht v. King*, 260 U.S. 174, 177 (1922). See also *West Coast Hotel Co. v. Parrish*, 300 U.S. 379, 400 (1937); *Sturges & Burn Mfg. Co. v. Beauchamp*, 231 U.S. 320, 326 (1913).
182. *Chapman v. City of Shreveport*, 74 So. 2d 142, 145 (La. 1954).
183. *Readey v. St. Louis County Water Co.*, 352 S.W.2d 622, 632 (Mo. 1961).
184. U.S. CONST. amend. I.
185. See, e.g., *Teeter v. Municipal City of La Porte*, 139 N.E.2d 158 (Inc. 1956) (challenging a municipal ordinance on the grounds that it violated the rights of those

- 769 (1975) (citing *Richardson v. Belcher*, 404 U.S. 78, 84 (1971)).
24. *Village of Belle Terre v. Boraas*, 416 U.S. 1, 8 (1974) (citing *Reed v. Reed*, 404 U.S. 71, 76 (1971)).
  25. *Safe Water Ass'n Inc. v. City of Fond Du Lac*, 516 N.W.2d 13, 17 (Wis. Ct. App. 1994), review dismissed, 520 N.W.2d 91 (Wis. 1994).<sup>▲</sup>
  26. See *San Antonio Independent School District v. Rodriguez*, 411 U.S. 1, 38 (1973). See also BLACK'S LAW DICTIONARY 872 (6th ed. 1991) (defining rational basis test).
  27. See *Doe v. Bolton*, 410 U.S. 179, 215 (1973) (Douglas, J., concurring) (citing *Jacobson v. Commonwealth of Massachusetts*, 197 U.S. 11 (1905), which upheld state imposed vaccinations to prevent epidemics).
  28. See *San Antonio Independent School District v. Rodriguez*, 411 U.S. 1, 37-38 (1973). See also *Doe v. Bolton*, 410 U.S. at 216 (Douglas, J., concurring) (stating that "[u]nless regulatory measures are so confined and are addressed to the specific areas of compelling legislative concern, the police power would become the great leveler of constitutional rights and liberties").
  29. See *Roe v. Wade*, 410 U.S. 113, 155 (1973).
  30. *Washington v. Harper*, 494 U.S. 210, 229 (1990).<sup>▲</sup>
  31. There is no compelling state interest to impose regulations for noncontagious or nonhazardous health concerns. See, e.g. *Carey v. Population Services International*, 431 U.S. 678, 690 (1977) (holding that a statute controlling the distribution of nonhazardous contraceptives "bears no relation to the State's interest in protecting [public] health"). See also Michael S. Morgenstern, *The Role of the Federal Government in Protecting Citizens from Communicable Diseases*, 47 U. CIN. L. REV. 537, 538 n.2 (1978), which recognizes the governmental interest only in communicable diseases, which are "disease[s] the causative agent of which may pass or be carried from one person to another directly or indirectly." (citing DORLAND'S ILLUSTRATED MEDICAL DICTIONARY 455 (25th ed. 1964) (whose religious beliefs were opposed to medication)).
186. 116 N.E.2d 779 (Ohio Com. Pl. 1953).
  187. *Id.* at 805.
  188. *Id.* at 805, 806, (citing *Cantwell v. State of Connecticut*, 310 U.S. 296 (1940)).
  189. *Id.* at 808.
  190. U.S. CONST. amend. IX.<sup>▲</sup>
  191. See *Minnesota State Bd. of Health v. City of Brainerd*, 241 N.W.2d 624, 630 (Minn. 1976), appeal dismissed, 429 U.S. 803 (1976).
  192. *Id.* at 631 (quoting *Eisenstadt v. Baird*, 405 U.S. 438, 453 (1972)).
  193. *Id.*
  194. *Id.* (quoting *Schmerber v. California*, 384 U.S. 757 (1966)).
  195. See *id.* at 632.
  196. See 241 N.W.2d at 632.
  197. *Id.* at 633.
  198. 516 N.W.2d 13 (Wis. Ct. App. 1994), review dismissed, 520 N.W.2d 91 (Wis. 1994).
  199. See *id.* at 17.
  200. 69 N.W.2d 242 (Wis. 1955).<sup>▲</sup>
  201. 381 U.S. 479 (1965).
  202. 410 U.S. 113 (1973).
  203. See 516 N.W.2d at 17, 18.
  204. 431 U.S. 678 (1977).
  205. See 516 N.W.2d at 18.
  206. See *id.*
  207. *Kraus v. City of Cleveland*, 127 N.E.2d 609, 611 (Ohio 1955).
  208. See *supra* note 126 and accompanying text.
  209. See *supra* Part III.A.
  210. 260 P.2d 98 (D. Cal. 1953).<sup>▲</sup>
  211. See *id.* at 101.
  212. *Id.*
  213. See *id.* at 102.
  214. 417 P.2d 632 (Wash. 1966).
  215. See *id.* at 633.
  216. See *id.* at 635.
  217. See *supra* Part III.B.
  218. 273 P.2d 859 (Okla. 1954).
  219. See *id.* at 861, 863.
  220. 66 N.W.2d 207 (N.D. 1954).<sup>▲</sup>
  221. See *id.* at 212.
  222. See *supra* Part III.C.1.
  223. See U.S. CONST. amend. XIV, § 1 (emphasis added).
  224. JOHN E. NOWAK & RONALD D. ROTUNDA, *CONSTITUTIONAL LAW*, § 13.4, at 519 (5th ed. 1995). See also BLACK'S LAW DICTIONARY 633 (6th ed. 1991) (liberty amounts to freedom from

- 1974).
32. 497 U.S. 261 (1990).
  33. 494 U.S. 210 (1990).
  34. A binary compound is composed of two elements. See WEBSTER'S NEW UNIVERSAL UNABRIDGED DICTIONARY 183 (2d ed. 1983).
  35. See DORLAND'S ILLUSTRATED MEDICAL DICTIONARY 643 (27th ed. 1988).▲
  36. See John J. Miller, Ph.D., The Fluoride Ion, PREVENTION, July 1964, at 56.
  37. See GEORGE L. WALDBOTT, M.D., FLUORIDATION: THE GREAT DILEMMA 20 (1978).
  38. See Jonathan Forman, M.D., What Looks Like a Neurosis May Be a Fluorosis, PREVENTION, June 1964, at 92. See also John J. Miller, Ph.D., The Fluoride Ion, PREVENTION, July 1964, at 57-58.
  39. See National Primary Drinking Water Regulations; Fluoride, 50 Fed. Reg. 47,142, 47,145 (Table 1) (codified at 40 C.F.R. § 141.51). See also Kraus v. City of Cleveland, 116 N.E.2d 779, 792 (Ohio 1953).
  40. See 10 COLLIER'S ENCYCLOPEDIA 109 (1992). This observation was limited to only those children whose teeth were still developing when they drank the fluoridated water. See *id.*▲
  41. See Michael Wollan, Controlling the Potential Hazards of Government-Sponsored Technology, 36 GEO. WASH. L. REV. 1105, 1128 (1968).
  42. WEBSTER'S NEW UNIVERSAL UNABRIDGED DICTIONARY 1118 (2d ed. 1983) (defining "medicine").
  43. ANNE-LISE GOTZSCHE, THE FLUORIDE QUESTION 68 (1975).
  44. For the Material Safety Data Sheet (MSDS) detailing the characteristics and health hazards of sodium fluoride, see (visited May 10, 1997).
  45. The chemical symbol of sodium fluorosilicate, a salt of hydrofluorosilicic acid, is Na<sub>2</sub>SiF<sub>6</sub>. See GEORGE L. WALDBOTT, M.D., FLUORIDATION: THE GREAT DILEMMA 24 (1978).▲
  46. Also called hydrofluosilicic acid, its chemical symbol is H<sub>2</sub>SiF<sub>6</sub>. See *id.* Hydrofluorosilicic acid and sodium fluorosilicate are used commercially for electroplating, water fluoridation, wood preservation, concrete hardening, a flux all restraints except those justly imposed by law which are not arbitrary and are "reasonable regulations and prohibitions imposed in the interests of the community.")
  225. BLACK'S LAW DICTIONARY 633 (6th ed. 1991).▲
  226. See U.S. CONST. amend. XIV, § 1.
  227. See JOHN E. NOWAK & RONALD D. ROTUNDA, CONSTITUTIONAL LAW, § 13.8, at 548 (noting that "[t]he adversary process is best designed to safeguard individual rights against arbitrary action by the government."). See also BLACK'S LAW DICTIONARY 346 (6th ed. 1991) (defining due process of law).
  228. See, e.g., Washington v. Harper, 494 U.S. 210 (1990) cited in JOHN E. NOWAK & RONALD D. ROTUNDA, CONSTITUTIONAL LAW, § 10.6, at 358. The Supreme Court's analysis of the substantive due process issue found that the state interest in protecting persons from a psychotic prisoner with whom he might come in contact with was Reasonably related to a legitimate penological interest. JOHN E. NOWAK & RONALD D. ROTUNDA, CONSTITUTIONAL LAW, § 10.6, at 358 (quoting Turner v. Safley, 428 U.S. 78 (1987)). There was a separate procedural due process issue in Washington, which was whether twenty-four hour notice prior to a hearing before a medical board complied with due process principles. See *id.* at 358-59. See also BLACK'S LAW DICTIONARY 836, 977 (6th ed. 1991) (defining procedural due process and substantive due process, respectively).
  229. 127 N.E.2d 609 (Ohio 1955).
  230. See *id.* at 610.▲
  231. See *id.* at 613-14.
  232. See *supra* note 28 and accompanying text.
  233. See, e.g., Roe v. Wade, 410 U.S. 113 (1973).
  234. JOHN E. NOWAK & RONALD D. ROTUNDA, CONSTITUTIONAL LAW, § 10.3, at 343 (citing the Slaughter-House Cases, 83 U.S. (16 Wall.) 36 (1873)). This case held that "the clause only refers to uniquely federal rights such as the right to petition Congress, the right to vote in federal elections, the right to interstate travel or commerce, the right to enter federal lands, or the rights of a citizen while in custody of federal officers." *Id.* (citing Slaughter-House Cases at 79-81).
  235. 139 N.E.2d 158 (Inc. 1956).

- for metal casting, production of synthetic mica, extraction of zirconium, and for making acid resistant cements. *See id.* at 24, 25.
47. *See id.* at 25.
48. FIFRA requires all new pesticides to be registered, as well as the reregistration of pesticides first registered before November 1, 1984. See Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. §§ 136a, 136a-1 (exceptions omitted). The Special Review and Reregistration Division in EPA's Office of Pesticide Programs publishes a document called the "Rainbow Report" (Status of Pesticides in Reregistration and Special Review) which lists sodium fluoride as an active ingredient in pesticides. See Environmental Protection Agency, Pesticide Active Ingredients Index, (visited May 10, 1997). Sodium Fluoride was originally labeled as an "economic poison" under FIFRA. See 7 U.S.C. § 135a(a)(4) (1981) (omitted). "The term 'economic poison' means (1) any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, weeds, and other forms of plant or animal life or viruses, except viruses on or in living man or other animals, which the Administrator shall declare to be a pest ...." 7 U.S.C. § 135(a) (omitted).
49. See 7 U.S.C. § 136(q)(2)(D) (1991) (emphasis added).
50. Promotion and Application of Water Fluoridation: Hearings Before the Dept. of Labor and Health, Education and Welfare Appropriations, 89th Cong., Vol. 5, (1967) (statement of Dr. John W. Knutson, Chief, Division of Dental Public Health, Public Health Service, at the proceedings of the Fourth Annual Conference of State Dental Directors with the Public Health Service and the Children's Bureau, held at the Federal Security Building in Washington, D.C., on June 6-8, 1951).<sup>▲</sup>
51. *See id.*
52. See 40 C.F.R. § 141.23(k)(3)(ii) (1994). See also 40 C.F.R. § 141.51 (1996) (contaminant table listing fluoride between cyanide and lead). Additionally, "[f]rom today's perspective, health professionals were reckless to promote
- 236.257 N.Y.S.2d 531 (Sup. Ct. 1965).
237. See supra Part III.C.1.(b).
238. See supra Part III.C.1.(c).
239. 74 So. 2d 142 (La. 1954).
240. *See id.* at 146.<sup>▲</sup>
241. Fluoridation opponents raise the equal protection issue because fluoridation is purported to benefit only children under the age of nine, thus creating a special class. However "[t]he Supreme Court has not found that any form of heightened judicial scrutiny should be used when reviewing classifications that are based on age." JOHN E. NOWAK & RONALD D. ROTUNDA, CONSTITUTIONAL LAW, § 14.3, at 609 n.38. The Supreme Court uses the rational basis test when the classification does not relate to a fundamental right. *See id.*
242. See 74 So. 2d at 146.
243. *See id.* at 146, 147.
244. See supra Part I.
245. See generally 21 C.F.R. Part 355, Anticaries Drug Products for Over-the-Counter Human Use. There are also many fluoridated products available by prescription.<sup>▲</sup>
246. GEORGE L. WALDBOTT, M.D., FLUORIDATION: THE GREAT DILEMMA 307 (1978).
247. *See id.*
248. *See id.* A further argument against fluoridated water can be made in that many children do not drink tap water at all. We are a society of processed food and beverages. Infants drink canned formula, and children drink bottled milk, juice, and soft drinks. Rare is the child who will reach for a glass of tap water when thirsty. However, some children's drinks, such as Kool-Aid®, do require tap water to make. But even these "mix it yourself" drinks will not contain artificial fluoridation if the water is drawn from a private well. Thus, the entire purpose of fluoridation is being unintentionally circumvented by the advent of ready-to-drink beverages, unless of course, the beverage manufacturer uses fluoridated water.
249. *See id.*
250. See supra Part III.C.2.<sup>▲</sup>
251. 116 N.E.2d 779 (Ohio 1953), *aff'd*, 127 N.E.2d 609 (Ohio 1955), appeal dismissed, 351 U.S. 935 (1956).
252. *See id.* at 805.
253. See *Cantwell v. State of Connecticut*, 310 U.S. 296 (1940).

- mass fluoridation as early as 1951" because fluoride is an acute poison and only crude risk data was available then. Allan Mazur, *Why Do We Worry About Trace Poisons?*, RISK: HEALTH, SAFETY AND ENVIRONMENT 35, 41 (Winter 1996). Mr. Mazur believes that in 1951 health professionals were not as concerned about chronic exposure to trace poisons as we are today, and that if fluoridation of public water systems were proposed today, supported only by the risk data available in 1951, it would not be approved. *See id.* at 41-42.
53. See generally National Primary Drinking Water Regulations, Fluoride, 50 Fed. Reg. 47,142 - 47,155 (codified at 40 C.F.R. § 141.51).
  54. *See id.* at 47,145.
  55. Fluorosis is "a condition due to exposure to excessive amounts of fluorine or its compounds," resulting in combined osteosclerosis and osteomalacia (alternating brittle and soft areas of bone). DORLAND'S ILLUSTRATED MEDICAL DICTIONARY 643 (27th ed. 1988).▲
  56. A mutation is "a sudden variation in some inheritable characteristic . . . as distinguished from a variation resulting from generations of gradual change." WEBSTER'S NEW UNIVERSAL UNABRIDGED DICTIONARY 1186 (2d ed. 1983).
  57. See National Primary Drinking Water Regulations, Fluoride, 50 Fed. Reg. 47,142, 47,145 (codified at 40 C.F.R. § 141.51).
  58. See JOHN YIAMOUIYIANNIS, PH.D., FLUORIDE - THE AGING FACTOR (1983).
  59. *See id.* passim.
  60. See National Primary Drinking Water Regulations, Fluoride, 50 Fed. Reg. 47,142, 47,153 (codified at 40 C.F.R. § 141.51).▲
  61. *See id.* at 47,151.
  62. Oncogenicity is a factor that causes the development of cancer. See CONCISE SCIENCE DICTIONARY 484 (2d ed. 1991).
  63. See National Primary Drinking Water Regulations Fluoride, 50 Fed. Reg. 47,142, 47,147 (codified at 40 C.F.R. § 141.51). In 1993 the EPA announced that
254. See 116 N.E.2d at 806-08.
  255. *See id.* at 807.
  256. See Chapman v. City of Shreveport, 74 So. 2d 142, 146 (La. 1954).
  257. See 116 N.E.2d at 807.
  258. The public does not have a choice of providers from whom it may receive tap water, however. One of the leading experts in water law has correctly categorized those receiving water from a public water system as "captive consumers." See A. Dan Tarlock, *Safe Drinking Water: A Federalism Perspective*, 21 WM & MARY L. REV. 233, 239 (1997). The argument has been made that since water is an article of commerce under *Sporhase v. Nebraska ex rel. Douglas*, 458 U.S. 941 (1982), then consumers have a "freedom of choice" to seek an alternate source for this "product," such as bottled spring water. The problem with this argument is that it fails to recognize that the municipality has a monopoly over the public water system; consumers cannot switch to a different provider, as is possible with telephone service.
- The United States Supreme Court has held that police power measures which impose an undue cost and inconvenience on commerce are an unconstitutional burden. See, e.g., *Bibb v. Navajo Freight Lines, Inc.*, 359 U.S. 520 (1959). Purchasing bottled water to avoid drinking fluoridated tap water is both expensive and inconveient, and thus is an impermissible burden to be placed on the public. Further, the highly touted charcoal filters, such as the Brita® water pitcher, are not able to filter out fluoride. Expensive reverse osmosis systems or distillation is required to extract fluoride out of the water. Besides this undue burden, it would be virtually impossible to exercise your "freedom of choice" if you are at a restaurant, school, library, shopping mall, the movies, or anywhere away from your supply of bottled water. Therefore, the "freedom of choice" argument is untenable and merely an exercise in obfuscation.▲
259. *See id.* at 808.
  260. See supra Part III.C.3.▲
  261. 241 N.W.2d 624 (Minn. 1976).
  262. *See id.* at 631.
  263. *See id.* at 632.
  264. 431 U.S. 678 (1977).

- it would not revise the maximum contaminant level goal (MCLG) for fluoride after it had considered recent reports concerning the health effects from ingesting fluoride. See *Drinking Water Maximum Contaminant Level Goal; Fluoride*, 58 Fed. Reg. 68,826 (1993). The decision was based on the results of a study performed by the National Academy of Sciences (NAS), which saw no immediate need to change the MCLG, but felt that further research was needed in the areas of dental fluorosis, bone strength and fractures, and carcinogenicity. *See id.* at 68,827. Accordingly, the EPA announced that it will continue to solicit public comments on this issue, and hopes to issue a final decision after the NAS research is concluded, which it anticipates will be around the year 2001. *See id.*
64. See *National Primary Drinking Water Regulations; Fluoride*, 50 Fed. Reg. 47,142 (summary) (codified at 40 C.F.R. § 141.51).
  65. *See id.* ♣
  66. *Id.* at 47,153.
  67. Codified at 21 C.F.R. Part 355 (1996).
  68. The Food and Drug Administration (FDA) is now allowing bottled water to have fluoride added, but requires that it have a label listing fluoride as an ingredient. See 60 Fed. Reg. 57,076, 57,079 (1995) (codified at 21 C.F.R. § 165.110(b)(4)(ii) (1997)).
  69. 21 C.F.R. § 355.3(c) (1996).
  70. 70. See 21 C.F.R. § 355.10(a) (1996). ♣
  71. *See id.* § 355.10(b) (1996).
  72. *See id.* § 355.10(c) (1996).
  73. A dentifrice is "[a]n abrasive-containing dosage form for delivering an anticaries drug to the teeth." 21 C.F.R. § 355.3(e) (1996).
  74. One part per million is the same concentration as one milligram per liter (mg/L). See I. TAXEL, *CONVERSION FACTORS* (1964).
  75. See 21 C.F.R. § 355.10(a)(1) (1996).
  76. *See id.* But see § 355.10(c)(i) (1996) (requiring stannous fluoride dentifrices to have a fluoride ion concentration of at least 700 ppm). Stannous fluoride is a compound of fluorine and tin. See *WEBSTER'S NEW UNIVERSAL UNABRIDGED DICTIONARY 1773* (2D ed. 1983) Stannous fluoride has a
    265. See *Safe Water Association, Inc. v. City of Fond Du Lac*, 516 N.W.2d 13, 18 (Wis. Ct. App. 1994).
    266. 74 So. 2d 142.
    267. *See id.* at 143.
    268. *Id.*
    269. 241 N.W.2d 624 (Minn. 1976).
    270. *See id.* at 634 (Yetka, J., dissenting). ♣
    271. *See id.*
    272. *See id.* at 634-35.
    273. 277 P.2d 352 (Wash. 1954)(en banc).
    274. *See id.* at 359 (Hill, J., dissenting, citing Freund on Police Power 116, § 123).
    275. *See id.*
    276. *See id.*
    277. *Id.* (citing *Jacobson v. Massachusetts*, 197 U.S. 11 (1905)).
    278. 277 P.2d at 359.
    279. *Id.* at 359-60.
    280. *See id.* at 360. ♣
    281. *Id.* at 361.
    282. *See id.* (emphasis added).
    283. 497 U.S. 261 (1990).
    284. *Id.* at 279 n.7.
    285. *Id.* at 278.
    286. *Id.* at 279.
    287. *Id.* at 278 (citing *Washington v. Harper*, 494 U.S. 210, 229 (1990)).
    288. 497 U.S. at 279, (citing *Youngberg v. Romeo*, 457 U.S. 307 (1982)).
    289. See *Roe v. Wade*, 410 U.S. at 155.
    290. See, e.g. *Carey v. Population Services International*, 431 U.S. 678, 690 (1977) (holding that a statute restricting access to nonhazardous contraceptives had no relation to any compelling state interest in protecting public health). ♣
    291. 197 U.S. 11 (1905).
    292. See supra note 29 and accompanying text.
    293. See generally *National Primary Drinking Water Regulations; Fluoride*, 50 Fed. Reg. 47,142 - 47,155 (codified at 40 C.F.R. § 141.51).
    294. 494 U.S. 210 (1990).
    295. *Id.* at 229.
    296. *Cruzan v. Director, Missouri Dep't of Health*, 497 U.S. at 279. ♣

- chemical symbol of SnF<sub>2</sub>. See GEORGE L. WALDBOTT, M.D., FLUORIDATION: THE GREAT DILEMMA 25 (1978).
77. A fluoride ion is "[t]he negatively charged atom of the chemical element fluorine." 21 C.F.R. § 355.3(g) (1996).
  78. A treatment rinse is "[a] liquid dosage form for delivering an anticaries drug to the teeth." *Id.* § 355.3(j).
  79. *See id.* § 355.10(a)(3).
  80. *See generally id.* § 355.50 (1996) (Labeling of anticaries drug products).▲
  81. *Id.* § 355.50(c)(1).
  82. *See id.* § 355.50(d)(2), (d)(4). In fact, many toothpastes contain a warning stating that children under 6 years old should use only a pea-sized amount and should be supervised to prevent swallowing. Such a warning is needed because swallowing too much fluoride can be fatal. *See infra* note 83.
  83. *See* Robert D. McFadden, \$750,000 Given in Child's Death in Fluoride Case, N.Y. TIMES, Jan. 20, 1979, at 23 (a 3 year old boy died after receiving an overdose of fluoride at a New York City Dental Clinic).
  84. *See supra* note 38 and accompanying text.
  85. *See* GEORGE L. WALDBOTT, M.D., FLUORIDATION: THE GREAT DILEMMA 20 (1978).▲
  86. *See supra* note 69 and accompanying text.
  87. *See generally* National Primary Drinking Water Regulations; Fluoride, 50 Fed. Reg. 47,142 - 47,155 (codified at 40 C.F.R. § 141.51).
  88. 15 A. 440 (Pa. 1888).
  89. *See id.* at 441.
  90. Wholesome water must "not be injurious to the health of those using it." *Id.* at 442.▲
  91. *See id.*
  92. *See id.* at 443.
  93. *See* 15 A. at 443.
  94. *See* EDWARD J. CALABRESE ET AL., SAFE DRINKING WATER ACT 1 (1989).
  95. Originally promulgated as the Public Health Service Act, ch. 373, title XIV (1944). The Safe Drinking Water Act is now codified at 42 U.S.C. §§ 300f to 300j-26, as amended by Act of Aug. 6, 1996, Pub. L. No. 104-128, 1996 U.S.C.C.A.N. (110 Stat.) 1613-93 (1996).

96. See National Primary Drinking Water Regulations; Fluoride, 50 Fed. Reg. 47,142 (summary) (codified at 40 C.F.R. § 141.51). See also EDWARD J. CALABRESE ET AL., SAFE DRINKING WATER ACT 17-18.
97. See Safe Drinking Water Act § 1412(a)(2), 42 U.S.C. § 300g-l(a)(2). See also EDWARD J. CALALBRESE ET AL., SAFE DRINKING WATER ACT 19.
98. Safe Drinking Water Act § 1412(b)(3)(A), 42 U.S.C. § 300g-l(b)(3)(A).
99. "The most clearly established fluoride-induced bone complaint is crippling skeletal fluorosis, also called chronic fluoride toxicity ...." ANNE-LISE GOTZSCHE, THE FLUORIDE QUESTION 86 (1975).
100. See National Primary Drinking Water Regulations; Fluoride, 50 Fed. Reg. 47,142 (summary) (codified at 40 C.F.R. § 141.51). ▲
101. The maximum contaminant level is the maximum permissible level of a contaminant in the public water system which may adversely affect the public welfare. See Safe Drinking Water Act § 1401(2), (3), 42 U.S.C. § 300f(2), (3).
102. See National Primary Drinking Water Regulations, Fluoride, 50 Fed. Reg. 47,142, 47,143 (codified at 40 C.F.R. § 141.51).
103. *See id.*
104. Fluorosis is "[a] condition caused by an excessive intake of fluorides (2 or more p.p.m. in drinking water), characterized mainly by mottling, staining, or hypoplasia of the enamel of the teeth, although skeletal bones are also affected. STEDMAN'S MEDICAL DICTIONARY 599 (25th ed. 1990).

\*This Comment is dedicated to my dad, Ralph F. Balog, who has opposed fluoridation of public water systems since the early 1960s. The author received a B.S. from Parks College of St. Louis University in 1985, an M.S. from Embry- Riddle Aeronautical University in 1990, and a J.D. from Pace University School of Law in 1997. Thanks to Andrea Herbst and her group for their excellent editing job.

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**Fluoride: Protected Pollutant or Panacea?**

Are the claimed benefits of ingesting fluoride over-rated  
and the risks to our health and eco-system under-reported?



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