

**Table A: Days to Reach Acute Fluoride Intake**

<b>Age Group</b>	<b>F = 0.7mg/L</b>	<b>F = 1mg/L</b>	<b>F = 1.2mg/L</b>	<b>F = 1.5mg/L</b>
<b>All Ages</b>	<b>840 days ~2.3yrs</b>	<b>588 days</b>	<b>490 days</b>	<b>392 days</b>
<b>&lt; 0.5 years</b>	<b>108 days ~0.3yrs</b>	<b>76 days</b>	<b>63 days</b>	<b>51 days</b>
<b>0.5 – 0.9 yrs</b>	<b>170 days ~0.5yrs</b>	<b>119 days</b>	<b>99 days</b>	<b>79 days</b>
<b>1-3 years</b>	<b>549 days ~1.5yrs</b>	<b>385 days</b>	<b>321 days</b>	<b>256 days</b>
<b>4-6 years</b>	<b>621 days ~1.7yrs</b>	<b>435 days</b>	<b>362 days</b>	<b>290 days</b>
<b>7-10 years</b>	<b>893days ~2.4yrs</b>	<b>625 days</b>	<b>521 days</b>	<b>417 days</b>
<b>11-14 years</b>	<b>1099 days ~3yrs</b>	<b>769 days</b>	<b>641 days</b>	<b>513 days</b>
<b>15-19 years</b>	<b>1190 days ~3.2yrs</b>	<b>833 days</b>	<b>694 days</b>	<b>556 days</b>
<b>20-24 years</b>	<b>952 days ~2.6yrs</b>	<b>667 days</b>	<b>556 days</b>	<b>444 days</b>
<b>25-54 years</b>	<b>893 days ~2.4yrs</b>	<b>625 days</b>	<b>521 days</b>	<b>417 days</b>
<b>55-64 years</b>	<b>840 days ~2.3yrs</b>	<b>588 days</b>	<b>490 days</b>	<b>392 days</b>
<b>&gt;65 years</b>	<b>794 days ~2.2yrs</b>	<b>556 days</b>	<b>463 days</b>	<b>370 days</b>

## **National Research Council Review 2006 data used**

**Table B-11** shows source of daily water intake by age group and acute dose threshold data. This is an estimate for how long it can take for that acute dose to be reached by various age groups in the population for a range of fluoride concentrations

**Table B-14** shows that the range of consumption is **4 times greater** for the 99<sup>th</sup> percentile group than the average group;

**Table 2-4** shows that susceptible groups consume up to **10 times more** than the mean; e.g., diabetics, lactating mothers, athletes, construction workers, police, firefighters, and military.

**Acute F threshold** is the amount of F that causes adverse health effects. Highest estimate of 5 mg/kg/day is used in these calculations:

- per Whitford (1996), the threshold for acute F dosage is 5 mg/kg/day. Source: p24 HC Review 2009;
- per Akiniwa (1997), the threshold for acute F dosage is 0.1 to 0.8 mgF/kg. Source: Tardif 2006 (internal submission to HC review 2009).

**Bioaccumulation factor (BioA F)** is the amount of F that accumulates in the body over time:

- 50% of ingested F bioaccumulates in a healthy adult body;
- 75%+ of ingested F bioaccumulates in young children under 1 year (Whitford 1994);
- Those with impaired kidney function will bioaccumulate more than healthy adults.

**Water and Fluoride Intake per day:**

- millilitre per kilogram per day (mL/kg/day) for estimated water intake;
- milligrams per kilogram per day (mg/kg/day) for estimated fluoride intake;
- F intake per day estimates do not include F from other sources (foods, beverages using fluoridated water, dental products, air, drugs, salt; Windsor & Sifto salt is 200 ppm – Gingerich 2006).

**Time to acute F intake is significantly less:**

- when all sources of F exposure are included.
- when fluoride concentrations are higher. Many communities in Ontario exceed the MAC of 1.5 mg/L, including Stratford, Ingersoll, Sebringville, Mitchell, Chepstow, St. Paul's.
- for children under the age of 1.
- for those who are above average consumers of tap water, regardless of age group
- for those with kidney impairment, regardless of age group.
- for those who consume significant F from other sources, regardless of age group.