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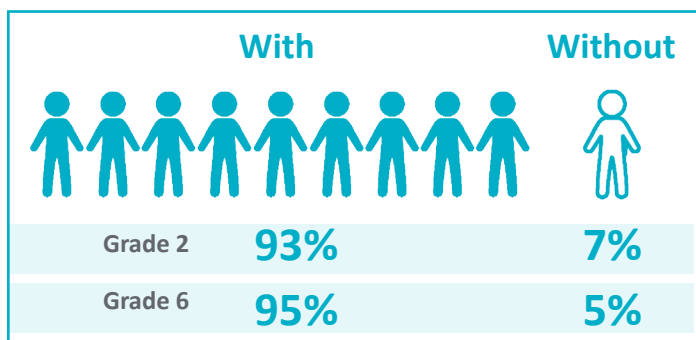
Caries Experience Among Montréal Elementary Schoolchildren¹

Dental caries is a process where tooth minerals are lost under certain conditions such as dental plaque accumulation and sugar consumption. When the amount of mineral lost on the tooth surface is low, it can be replenished and therefore “heal” the tooth, if appropriate preventive measures are undertaken. Accordingly, this early dental caries process is called reversible. ÉCSBQ-Montréal 2012-2013 provides data on this condition for the first time. When the amount of minerals lost is sufficient to form a cavity on the tooth surface, therapeutic treatment is usually required in the form of a filling or, in severe cases, tooth extraction. This advanced dental caries process is called irreversible. Data on dental caries experience provided in this leaflet refers to dental fillings, dental extractions, or reversible or irreversible caries.

Dental caries: a common disease

More than 90% of Montréal schoolchildren in grades 2 and 6 in public and private schools have caries experience in the form of fillings, extractions or reversible and irreversible dental caries.

Proportion of elementary schoolchildren with caries experience, primary and permanent teeth



Source: ÉCSBQ-Montréal, 2012-2013

Notable problems, even in grade 2

Primary dentition refers to the first 20 teeth to appear in the mouth throughout the first 30 months of life. Permanent teeth gradually replace primary teeth, starting at about age 6. Grade 2 students in Montréal still have about two thirds of their primary teeth—about 13 teeth. On average, 4.2 of these teeth have reversible or irreversible dental caries, fillings, or have been extracted because of caries. Of special concern, nearly 60% of schoolchildren have irreversible dental caries, fillings, or have had teeth extracted due to caries. They have 2.8 affected teeth, on average. There has been no observable improvement since the end of the 1990s.

- More than 9 out of 10 Montréal schoolchildren have caries experience.
- Effective preventive solutions exist such as tooth-brushing with fluoride toothpaste and dental sealants.

¹ GÉNÉREUX, M., D. PICARD, G. VEILLEUX et J. DUROCHER (2017). Étude clinique sur l'état de santé buccodentaire des élèves montréalais du primaire 2012-2013 (ÉCSBQ-Montréal 2012-2013), Montréal, Direction régionale de santé publique du CIUSSS du Centre-Sud-de-l'Île-de-Montréal. Document available in English at : dsp.santemontréal.qc.ca and clic on Santé buccodentaire.

This leaflet was written in association with Hélène Riberdy.

Permanent teeth already damaged by grade 6

Grade 6 schoolchildren have on average 24 permanent teeth in the mouth out of a possible 28 teeth. Although recently erupted for the most part, about 5 teeth already have developed reversible or irreversible dental caries or are already filled or extracted. Considering only irreversible dental caries, fillings or extractions, 37% of these schoolchildren have experienced dental caries with, on average, one tooth being affected. In other words, nearly 4 out of 10 children already show irreversible damage to their permanent teeth as early as grade 6. Nonetheless, this is a significant improvement over the 1990s since there were then 54% of schoolchildren with such a caries experience.

Some schoolchildren at greater risk than others

This Montréal study reveals that 27% of grade 2 schoolchildren accounted for 79% of teeth that had been filled or extracted, or had irreversible dental caries on primary dentition. In grade 6, 11% of schoolchildren cumulate 61% of this caries experience in the permanent dentition. Second graders are about twice as likely to be in this group if they attend a disadvantaged or somewhat disadvantaged school, or when the language spoken at home is neither French nor English. Schoolchildren with high levels of debris on their teeth are about three times more likely to be part of this group.

Two CIUSSS stand out from the others

Two of the 5 CIUSSS stand out in terms of average number of primary and permanent teeth with reversible or irreversible dental caries, fillings or extractions because of caries. Compared with the rest of Montréal, the average number is lower for children living in the territory of CIUSSS de l'Ouest-de-l'Île-de-Montréal and higher for those in the CIUSSS Centre-Ouest-de-l'Île-de-Montréal territory.

Known health impacts

Having dental caries before age 12 can have many consequences. It can increase the risk of caries in adulthood, and negatively affect school performance and attendance, appearance, self-esteem, speech and quality of life. Also, when irreversible dental caries is left untreated, it causes pain and infection that can lead to poor feeding which, in turn, has a negative impact on the child's weight and growth.

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Effective solutions exist and should be used on a larger scale

Dental caries are a public health problem that can be both prevented and eradicated. To ensure that all young Montrealers improve their dental health, it is necessary to enhance preventive measures that are known to be effective:

- Optimal exposure to fluoride (toothpaste, professional topical application, fluoridated drinking water)
- Promotion of healthy habits
 - Toothbrushing (at home, in educational childcare services, at school)
 - Reduced consumption of sugary foods and liquids
- Dental sealants

An underused preventive measure

Dental sealants are very effective in preventing dental caries. In 2012–2013, 47% of grade 6 schoolchildren had dental sealants on at least one permanent tooth, whereas at the end of the 1990s, the figure was 32%. This is a clear improvement for the city, although it should be noted that in the rest of the province, the figure in 2012–2013 was 62%. Although dental sealants are available in dental offices, they are not covered by the Régie de l'assurance maladie du Québec. However, this service has been available free of charge in Montréal since 2007, as part of school-based activities outlined in the Québec Public Health Program. Currently, however, there are not enough dental hygienists in Montréal's public health network to reach the objectives set by the Ministère de la Santé et des Services sociaux. These elements contribute to significantly reducing the implementation of the preventive measure.

Recommendations for Montréal

- Consolidate biannual individual dental preventive follow-up measures among children at high risk of dental caries, from kindergarten to grade 2.
- Apply dental sealants to all grade 2 schoolchildren who need them.
- Increase the ability to act of parents in Integrated Perinatal and Early Childhood Services (SIPPE) for families living in vulnerable situations, so they can foster good dental health habits starting in the early years of life.
- Implement a supervised toothbrushing activity using fluoridated toothpaste in educational childcare services.
- Implement a supervised toothbrushing activity using fluoridated toothpaste in elementary schools.
- Increase the number of dental hygienists and organize dental services according to each CIUSSS, based on dental needs.
- Support any ministerial strategy related to fluoridated water.

Montréal's Integrated Regional Action Plan includes a service offer that supports these recommendations. It aims to maintain and improve the health of young Montrealers, in close collaboration with intersectoral partners working with this population. [Online: dsp.santemontreal.qc.ca/pari]