**Minimising food-related choking in early learning services – Q & As**

1. **Why do we need to worry about the risk of food related choking in Early Learning Services (ELS)?**

Food related choking incidents can kill young children. During 2002 – 2009, nine New Zealand children under six years of age have died as a result of the inhalation of food including meat/sausage, peanuts, apple and grapes. One of these deaths occurred in an ELS.

Data from Europe indicates that for every child that dies of foreign body inhalation (which includes food related choking) around ten children are hospitalised. Non-fatal choking incidents can cause severe acute and chronic health problems such as aspiration pneumonia, perforation to the airway or brain damage due to lack of oxygen. Again, serious incidents like these have occurred in New Zealand ELS.

Although there is no way to stop all such accidents happening, it is recommended by several international organisations that measures be taken to decrease the risk.

1. **Why is choking a particular risk to young children?**

While people of any age can choke on food, young children choke on food more easily for number of reasons. These include:

* the small size of their air and food passages (like the diameter of their little finger) which can be easily blocked by small objects
* their inexperience with moving food around in the mouth
* not fully developed biting and chewing skills
* a less effective cough mechanism to dislodge foreign objects.

The lack of second molars in young children impacts on their ability to successfully grind food prior to swallowing. Second molars are not usually fully erupted into the mouth and functioning until children are over 30 months (two and a half years) of age.

Overall the age of increased risk is 0 to 3 years of age (i.e. babies and young children less than 4 years old). Safe eating is one of the many skills that need to be learnt in early childhood.

1. **How were the recommendations arrived at and who was involved?**

The Ministry of Health’s recommendations to ELS are informed by a comprehensive review it completed in 2012, and an analysis of subsequent literature, data, international recommendations, specialist opinion and consideration of the ELS environment.

The 2012 process involved a review of the evidence, relevant New Zealand morbidity and mortality statistics, recommendations from international child health and injury prevention organisations, and consideration by a panel of technical paediatric experts. The resulting recommendations were designed for the home and whanau setting.

In 2019, the Ministry of Education requested the Ministry of Health’s advice to minimise the risk of food related choking for the ELS setting. The Ministry reviewed the evidence, international recommendations, and the available morbidity and mortality data since 2010. In addition, a paediatric speech language therapist specialising in feeding and eating development participated in formulating the most appropriate recommendations for the ELS setting. Representatives from the Ministry of Education and the Early Childhood Advisory Committee (ECAC) also provided advice about the ELS setting.

1. **Young children develop at different rates, with some very capable of safely managing a range of foods relatively early on. This doesn’t seem to have been considered in the advice?**

Within the expected range of development, individual children develop at different rates. The Ministry of Health’s 2012 advice to minimise choking risk considers this. It was written for the home setting and assumed a one-to-one (parent/permanent caregiver – child) relationship, where the adult is aware of the child’s individual stage of development. This close relationship and degree of supervision is not often possible in ELSs, so the advice is reliant on a broader, expected range of development. As a result, the advice is divided into the first year of life (0-1), one to three (1-3) years, and four years up to six (4-6) years.

1. **Why is being seated when eating recommended?**

Being seated, whether on a chair, stool, bench or on the ground, provides a more physically stable base and posture for a child eating, than if they are moving around. It also helps the child to focus on eating, and in a broader sense can encourage more of a sense of event and enhance the social aspects of eating and food.

1. **What is the difference between choking and gagging?**

**Gagging** on foods is **noisy** and **normal** in babies and young children, especially when they are transitioning from one food type or texture to another. Gagging is a reflex that pushes objects from the back of the throat to the front of the mouth. Gagging helps to stop objects from blocking the airway and can be noisy and messy (i.e., the child will often vocalise, spit, or vomit). The child may cry and/or get watery eyes, go red in the face and be visibly upset. Gagging on food is the child’s way of getting rid of a piece of food and is important developmentally to help them learn to manage food within their mouths. Sometimes gagging will also occur if a child’s stomach is full.

**Choking** is **silent** and **not** normal during meals. It can be life threatening. Choking occurs when food is stuck in the airway. A child who is choking will struggle to breathe and usually be unable to make any noise vocally. If a child is turning blue and cannot speak or cough, they require help straight away.

Giving large pieces of food that a child can choke or gag on can cause rejection of that food. Giving harder textures in forms that are safer and easier to chew will help children accept the food.

1. **Will restricting the types of food young children can eat inhibit the development of more advanced eating skills? Will it impact negatively on the child’s development?**

Restricting and modifying foods that are high risk for choking should not inhibit the development of eating and drinking skills, as children grow. By age four, chewing skills are consistent with mature feeders but continue to become more efficient over time. Skills for managing different food textures develop at different rates. Even when children can chew foods, they are often unable to determine appropriate bite size or how many pieces they can safely manage. Children will deal with the food presented in the least effortful way they can. If they are not developmentally ready for certain foods the child will modify their eating movement, whether sucking on a solid until it can be mashed or swallowed, spitting it out, or swallowing it whole.

In ELSs, foods that are high risk for choking but important nutritionally, (for example, hard textured fruits and vegetables and meats) are altered so that children can experience the taste and texture of that food more safely. Examples of altering a raw apple for children under four years of age include grating, thinly slicing or ‘spiralising’ it instead of chopping it into chunky pieces. These foods can be offered at home in a less altered way due to closer adult supervision and a greater knowledge of the child’s current chewing ability.

It is important to emphasise that very high-risk foods such as popcorn, hard sweets, chewing gum, large seeds, raisins, chunks of raw fruits or vegetables, spoonsful of peanut butter, whole grapes, sausages or hot dogs are not given to children in any setting unless modified to reduce the risk. Older children (four years and older), may need to be reminded to take small bites and chew well.

1. **How were the foods that need to be either removed or altered identified?**

The literature and most international recommendations identify the same small range of foods commonly involved in choking incidents. These include sausages/hot dogs, nuts, grapes, apples, hard sweets, and popcorn. Based on this information, a range of food characteristics that increase the choking risk was identified. These include small hard foods, small round or oval foods, foods with skins or leaves, compressible foods, foods with bones, thick pastes and fibrous or stringy foods.

The high-risk foods were then considered from a nutritional perspective. If they offered no or little nutritional benefit it was recommended, they be excluded from ELS. If the foods were considered nutritious, changes to their texture or size were recommended. Dried fruit are very concentrated sources of sticky sugar and are not recommended from an oral health perspective.