



EATING AND DRINKING ABILITY CLASSIFICATION SYSTEM

PURPOSE

The purpose of the Eating and Drinking Ability Classification System (EDACS) is to classify how individuals with cerebral palsy eat and drink in everyday life using distinctions that are meaningful. EDACS provides a systematic way of describing an individual's eating and drinking in five different levels of ability.

The focus is on the functional activities of eating and drinking such as sucking, biting, chewing, swallowing and keeping food or fluid in the mouth. The different parts of the mouth include the lips, jaw, teeth, cheeks, tongue, palate and throat. The distinctions between the different levels in the EDACS are based upon functional ability, the need for adaptations to the texture of food and drink, the techniques used and some other features of the environment. It classifies overall performance in eating and drinking, which includes both motor and sensory elements.

The system provides a broad description of different levels of functional ability. The scale is ordinal. The distances between the levels are not equal and individuals with cerebral palsy will not be distributed equally across the levels.

EDACS is not an assessment tool to look in detail at the component parts of eating and drinking. It does not provide the comprehensive mealtime guidance required by some individuals with cerebral palsy to eat and drink safely and efficiently.

Changes to eating and drinking performance occur as someone grows as a result of physical development and experience. This current version of EDACS describes the eating and drinking abilities of children with cerebral palsy from the age of 3 years.

BACKGROUND

EDACS classifies an individual's usual performance rather than what can be done to the best of their ability. The focus of EDACS is to determine which level most accurately represents an individual's present abilities and limitations. An individual may eat and drink differently in different settings, be influenced by personal factors and the skill and familiarity of the carer, and other environmental features.

The way an individual balances, controls head movements and sits upright influences their oral skills whilst eating and drinking. Some individuals will require close attention to positioning in sitting, standing and lying, and adapted equipment to optimise their eating and drinking abilities. The manner and degree of postural management required by individuals will depend upon their gross motor abilities.

We encourage users of EDACS to be aware of how other factors associated with cerebral palsy can influence an individual's performance whilst eating or drinking. These might include seizures and disturbances to cognition, communication, sensation, vision and hearing, as well as behaviour. Illness, tiredness, pain or medication will also have an effect. A wide range of personal factors and social, emotional and behavioural issues can become associated with eating and drinking. Features of the environment may also have an influence such as a familiar or new carer, background or sudden noises, quality of lighting and sudden movements. If an individual requires assistance with eating and drinking, a highly significant feature will be the quality of the relationship between the individual and the carer, including how well they each communicate with the other.

Disturbances of the digestive system such as gastro-oesophageal reflux or constipation will have an impact upon appetite and interest in food.

KEY FEATURES OF EATING AND DRINKING

Key features of the process of eating and drinking are **safety** and **efficiency**.

Safety refers to the risks of **choking** and **aspiration** associated with eating and drinking.

Choking occurs when a piece of food becomes lodged in the airway; this may be connected to limitations in chewing and biting as well as co-ordinating the movement of food in the mouth with swallowing.

Aspiration occurs when food or fluid enters the lungs; this may be connected to limitations in co-ordinating breathing and swallowing, controlling food or fluid in the mouth or an impaired swallow reflex. Some aspects of eating and drinking are impossible to observe, especially swallowing. Even if you know someone really well it is not always easy to notice the **signs of aspiration**; this is known as **silent aspiration**.

Aspiration may trigger respiratory illnesses and is potentially harmful. If **aspiration** is suspected, it is helpful to seek further assessment from a suitably qualified professional such as a speech and language therapist.

Efficiency refers to the length of time and effort required to eat or drink, as well as whether food or drink is kept in the mouth without loss. Limitations to the quality and speed of movement of the different parts of the mouth will affect how efficiently food and drink is consumed. The amount of effort required for eating and drinking will have an impact upon how quickly an individual tires during a meal.

The **efficiency** with which someone uses the parts of the mouth to eat and drink has an impact upon the amount of food and fluid they are able to consume. This is one of a number of factors that influence whether an individual is able to take in enough food and drink to grow and remain in good health. It is considered good practice to assess individual nutrition and hydration requirements and decide whether these are being met adequately.

USER INSTRUCTIONS

From the different descriptions given below, choose the level that best describes an individual's overall usual performance when eating and drinking.

To identify the level of eating and drinking ability of an individual with cerebral palsy, it is necessary to involve someone who knows that person well such as a parent or carer. Some aspects of eating and drinking are not possible to see, so it may be helpful to assign a level together with a professional who has knowledge about the necessary skills for safe and efficient eating and drinking.

In borderline cases the level of the EDACS which describes the greater level of limitation should be assigned.

Different degrees of assistance will be needed when eating or drinking depending upon age and the ability to bring food or drink to the mouth. The level of assistance required may change throughout life, beginning with the total dependence of the young infant. The EDACS level assigned to an individual is supplemented with an indication of whether an individual is Independent whilst eating and drinking, Requires Assistance in bringing food and drink to the mouth or is Totally Dependent.

DEFINITIONS

Age appropriate food textures refers to textures of food typically given to a particular age group (e.g. in some cultures, nuts and tough meats are not given to young children).

Aspiration is defined as the entry of material (e.g. food or fluid) into the airway or lungs below the vocal cords. This may occur when there is weak or uncoordinated movement of food or fluid from the mouth to the oesophagus whilst eating. This is usually accompanied by coughing, breathing changes and other signs of aspiration; the term **silent aspiration** is used if outward signs of aspiration such as coughing are not obvious when a person aspirates. Aspiration may cause harm by contributing to respiratory illness and chronic respiratory diseases.

Breathing changes might be noticed during eating or drinking which might suggest difficulty clearing food or fluid away from the airway and throat. The changes observed may be linked to the sound of the breathing (e.g. wheezy, rattly, noisy or wet) or may be linked to changes to the way someone breathes (e.g. changes to the rate of breathing or laboured, effortful breathing).

Choking is the partial or complete blocking of the airway due to a foreign object becoming lodged in the throat or windpipe. The blockage may be relieved by coughing. If not, the individual will require assistance (e.g. UK Resuscitation Council recommendations).

Fluid Consistency refers to how thick or thin a fluid is. Fluid consistency changes the speed at which fluid moves. It may mean the difference between fluid being swallowed safely and fluid entering the airway or lungs. Thin fluids, such as water, are fast flowing and require quick co-ordination of the movements of swallowing and breathing. Smooth thicker fluids flow more slowly and may be recommended to individuals with slower movements during swallowing in order to reduce the risk of fluid entering the airway or lungs, and / or to reduce loss of fluid from the lips. Thick fluids may be prepared by using diluted yoghurts or thick soups; thin fluids may be thickened using commercially available thickening agents.

Food textures will affect how easy it is to eat something. Different foods have a range of qualities requiring different degrees of effort, strength and co-ordination to eat. Features to consider include the shape and size of the food, how hard it is to bite and chew the food into small enough pieces ready for swallowing and what happens once bitten – foods can dissolve, splinter, crumble or lump together. Most foods can be modified to change the texture to one that is easier to manage (e.g. mixed textures can be mashed down, tough meats blended, large pieces cut into smaller pieces). Some individuals may need to avoid certain foods if they cannot be modified.

EDACS refers to:

- **Firm bite and effortful chew textures** which are the most challenging to eat (e.g. tough meats, molluscs, hard nuts, crunchy fibrous fruit and vegetables).
- **Mixed textures** where different food textures and fluid consistencies are combined (e.g. lumps of food in a thin soup, watery puree which separates into fluid and food, meat and salad sandwich).
- **Slippery textures** of food are particularly challenging to control in the mouth and eat safely (e.g. melon or grapes).
- **Sticky foods** can cause problems if an individual has difficulty clearing the mouth (e.g. nut butters, halva, tahini and toffee).
- **Hard chew textures** require effort, strength and co-ordination to eat (e.g. raw fruit and vegetables, meat, crackers, crusty bread).
- **Soft chew textures** require less effort, strength and co-ordination to eat (e.g. well cooked non fibrous vegetables, very ripe peeled fruit without seeds, well cooked pasta and soft cake).
- **Well mashed foods** require very little chewing (e.g. well cooked meat mashed with potato or well cooked vegetables, well cooked pasta or cake mashed with cream).
- **Puree** has a smooth uniform consistency which requires no chewing.
- **Tastes or Flavours** may be offered when eating or drinking is not safe. **Tastes** are a minute amount of puree to be swallowed. A **flavour** has nothing of substance to be swallowed (e.g. what remains on a finger dipped in fluid with the drips shaken off).

Gastrostomy or PEG (Percutaneous Endoscopic Gastrostomy) is a surgical opening into the stomach usually for the long term placement of a feeding tube.

Oesophagus is the name of the tube which connects the mouth and back of the throat to the stomach.

Postural Management Programme is a planned approach encompassing all activities and interventions which impact on an individual's posture and function. Programmes are tailored specifically for each child and may include special seating, night time support, standing supports, orthotics, active exercise, surgery and individual therapy sessions.

Signs of Aspiration are clinical observations that have been linked to Aspiration: coughing, wet sounding voice, breathing changes (sound of breathing as well as the rate and manner of breathing), changes in skin colour, whole body reactions, eye widening or watering, or panic reactions evident in facial expression.

Silent Aspiration is the term given when aspiration takes place but outward signs of aspiration such as coughing do not occur. Other Signs of Aspiration such as eye widening or watering, or panic reactions evident in facial expression may be observed.

Suction is when secretions are cleared from an individual's airway through the use of a specifically designed suction pump.

Tube Feeding is when a tube is passed through the nose (or mouth) or through a surgical incision into the body (e.g. naso-gastric tube or gastrostomy). Medication, fluid or a liquid feed may be passed down this tube.

GENERAL HEADINGS

- Level I** Eats and drinks safely and efficiently.
- Level II** Eats and drinks safely but with some limitations to efficiency.
- Level III** Eats and drinks with some limitations to safety; there may be limitations to efficiency.
- Level IV** Eats and drinks with significant limitations to safety.
- Level V** Unable to eat or drink safely – tube feeding may be considered to provide nutrition.
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Fuller descriptions of the levels are given below along with distinctions between the levels. These are to assist in determining the level that most closely resembles an individual's current eating and drinking ability.

LEVEL OF ASSISTANCE REQUIRED

An individual's eating and drinking ability will be expressed as a level I-V followed by an indication of the degree of help needed at mealtimes. For example, a child who is able to eat safely with some limitations to efficiency and requires assistance in loading the spoon or steadying a cup would be **EDACS Level II Requires Assistance (RA)**; a child who has an unsafe swallow and is able to bring food and drink to the mouth would be **EDACS Level V Independent (Ind)**.

Independent (Ind) indicates that individuals are able to bring food and drink to their own mouth without any assistance. It does not indicate that individuals are able to modify food to the required texture for safe and / or efficient eating and drinking. It also does not indicate that individuals are able to sit independently.

Requires Assistance (RA) indicates that an individual needs help to bring food or drink to the mouth, either from another person or through the use of adapted equipment. Help may be needed loading the spoon, placing food in the hand or guiding the individual's hand to the mouth, holding a cup steadily, providing close supervision or verbal prompts.

Totally Dependent (TD) indicates that an individual is totally dependent upon another to bring food or drink to the mouth.

DESCRIPTIONS OF DIFFERENT LEVELS

Level I Eats and drinks safely and efficiently

- Eats a wide range of different texture foods that are age appropriate.
- May be challenged by some very firm bite and chew foods.
- Moves food from one side of the mouth to the other; may close lips whilst chewing.
- Drinks thin or thick fluids from range of cups with consecutive swallows, including through a straw.
- May cough or gag for very challenging textures.
- Eats and drinks at a similar speed to peers.
- Retains most food or fluid in the mouth.
- Clears food from most tooth surfaces and dislodges most foods from the sides of the mouth.

Distinctions between I and II: Compared with Level I, individuals in Level II will have some limitations with more challenging food textures. Eating and drinking will take longer for individuals at Level II.

Level II Eats and drinks safely but with some limitations to efficiency

- Eats a range of food textures that are age appropriate.
- Challenged by some firm bite, effortful chew, mixed and sticky textures.
- Moves food slowly from one side of the mouth to the other using the tongue.
- May chew with lips open.
- Drinks thin or thick fluids from most cups with consecutive swallows; may drink through a straw.
- Coughs or gags on new or challenging textures or when tiring.
- May sometimes cough if fluid is fast flowing or large quantity taken in the mouth.
- May tire if textures challenging and mealtimes will take longer than for peers.
- Loses small amounts of food or fluid especially challenging textures.
- Some foods will collect on some tooth surfaces and between cheeks and gums.

Distinctions between II and III: Individuals in Level II manage most age appropriate food textures and drink with some slight modifications. Individuals at Level III will need more food textures to be modified in order to reduce risk of choking.

Level III Eats and drinks with some limitations to safety; there may be limitations to efficiency

- Eats puree and mashed food and may bite and chew some soft chew food textures.
- Challenged by large lumps, firm bite and effortful chew textures which may lead to choking and reduced efficiency.
- It is challenging to move food from one side of the mouth to the other, to keep food in the mouth, and to bite and chew for safe eating.
- Eating and drinking performance is variable and depends upon overall physical ability, positioning or assistance given.
- May drink from an open cup but drinking from cup with a lid or spout may be required to control the flow of fluid.
- May drink thickened fluids more easily than thin and may need time between sips.
- May choose to drink only in certain situations such as with a trusted carer or with no distractions.
- Specific food textures and positioning of food in mouth are required to reduce the risk of choking.
- May cough or aspirate if fluid is fast flowing or large quantity taken in the mouth.
- May tire whilst eating if food requires chewing and mealtimes will be prolonged.
- Food and fluid loss is likely and food will collect on tooth surfaces, roof of the mouth and between cheeks and gums.

Distinctions between III and IV: Individuals at Level III manage to chew soft lumps. Individuals at Level IV will need close attention given to a number of different factors to swallow food and drink safely because of the significant aspiration and choking risk.

Level IV Eats and drinks with significant limitations to safety

- Eats smooth purees or well mashed food.
- Challenged by food that requires chewing; choking may occur if lumps are eaten.
- May at times be difficult to co-ordinate swallowing and breathing when eating and drinking as shown by signs of aspiration.
- It is challenging to control the movement of food and fluid in the mouth, to control mouth opening and closure, and to control swallowing, biting and chewing.
- May swallow lumps whole.
- May find it easier to drink thickened fluids than thin fluids; thickened fluids taken slowly and in small quantities from an open cup may increase control whilst drinking.
- May choose not to drink fluids or to drink only in certain situations such as with trusted carer.
- Likely to need time between mouthfuls to swallow repeatedly before continuing.
- Will require specific food textures, fluid consistency, techniques, skilled carers, positioning and modified environment to reduce risks of aspiration and choking and increase efficiency.
- May tire whilst eating and mealtimes are likely to be prolonged.
- Significant food and fluid loss from the mouth.
- Food may become stuck on tooth surfaces, roof of the mouth and between teeth and gums.
- Supplementary tube feeding may be considered.

Distinctions between IV and V: Individuals at Level IV are able to swallow safely only if close attention is given to food texture and fluid consistency as well as the way in which food or drink is offered. Individuals at Level V cannot swallow safely so that taking food or drink in to their mouths will cause harm.

Level V Unable to eat or drink safely – tube feeding may be considered to provide nutrition

- May manage very small tastes or flavours.
- Ability to manage small tastes and flavours will be affected by positioning, personal factors and environmental features.
- Unable to swallow food or drink safely due to limitations to the range and co-ordination of movement for swallowing and breathing.
- It is likely to be challenging to control mouth opening and tongue movement.
- Aspiration and choking are very likely.
- Harm from aspiration is evident.
- May require suction or medication to keep airway clear of secretions.
- Alternative means of providing nutrition such as tube feeding may be considered

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Funding

The Eating and Drinking Ability Classification System is the product of an independent research project funded for three years from April 2010 to March 2013 by the National Institute of Health Research, under its Research for Patient Benefit Programme (Grant Reference Number PB-PG-1208-18144). The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health.

Reference

Sellers D, Mandy A, Pennington L, Hankins M and Morris C (2013). Development and reliability of a system to classify eating and drinking ability of people with cerebral palsy. *Developmental Medicine and Child Neurology*. **15**(3):245-251. DOI: 10.1111/dmcn12352.

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