

## Special Points to Note for Stroke Rehabilitation by Lip Trainer Patakara®

If the lips are partially affected or paralysed, insert or slide the Patakara between the lips and the teeth from the paralysed side first.

- The specified 4 times a day of Lip-training is meant to increase the Lip Closure Strength, so please check with the Process of recovery speed from chronic diseases table provided if speed of recovery or improvement of your chronic disease is slow compared with speed of recovery mentioned.
- Look at yourself in the mirror during Lip-training and check if your lips are closing on the device completely. (Please ensure there is no gap between the upper and lower part of the device)
- Pull the rope of the device forward if it causes pain or discomfort on the gums at the initial stage.
- The device does not require wetting with water. However, if it is too dry to use, soak the device in water and shake off excess water before inserting it into the mouth.
- Patients who are intellectually disabled will be able to close their lips for 1sec. → 5 sec. → 10 sec. → 30 sec. → 1 min. after one month of training. Patients can often close their lips for a moment at the initial stage (e.g. Alzheimer's dementia, autism, down syndrome and regardless of classification of diseases.)

### How best to use the Patakara

- 1) **Insert or slide the device into the mouth on the paralyzed side first and let the patient close the mouth.** (You will notice that the paralyzed side of mouth always remain slanted and somewhat open wider than the healthy side.)
- 2) Basically, the way to train is to only **keep closing the mouth for 3 minutes** after the device is inserted. Lip-stretching (by pulling on the rope) might make the device come out of the mouth, especially for stroke patient who are suffering from Bell's palsy.
- 3) For speeding up of recovery for disabled parts of body (e.g. paralyzed on one side because of stroke), **turn the face to the healthy side while lip remains closed on the device. At the same time, a nurse (therapist) can help to lift up patient's paralyzed arm slowly.** Or it would be better to move the paralyzed legs during lip-training with the device. Where possible, utilize the treadmill for a work-out is a good idea for additional stimulation and creation of newborn synapses inside the brain.
- 4) **Carry out abdominal breathing.** This is especially helpful during lip-training rather than during normal daily routine.
- 5) It is recommended that a **"Bottle-liptrainer"** be used at the paralyzed side of the mouth when patient drinks water. It makes recovery faster.
- 6) Even those who have been suffering from the after effects of disease for 5~10 years and their age is below 65 years old, it is possible for unforeseeable drastic changes in the facial muscles after training for 2~3 month.
- 7) Frequency of training for stroke patient should be **2 times per day at beginning stage.** Exercising 4 times per day can wait until the patient gets used to the device.
- 8) Help is often needed to close the lips if patient cannot manage at the beginning stage. However, most patients (including Alzheimer's / dementia cases,) will be able to manage lip-training by themselves eventually.
- 9) Please allow patient to use the device while lying down on the bed or couch, if there is no helper during the training. Gravity is considered as an environmental load for them.

10) A maximum of 6 minutes per session of exercise is enough, as longer periods of exercise do not help much to increase the lip closure strength. On the other hand, **increase in frequency of exercise per day will help.**

11) A Japanese rheumatologist, PhD, reported that patients seldom increase in their lip closure strength even when lip-training for 4 times per day. But **upon increase of exercise frequency to 6~8 times per day, the patients started to improve quickly.** The rheumatologist also found that those patients who did not improve well, did not keep their lips closed properly. The success rate of recovery from rheumatism was over 50 % among 500 patients.

12) Please try to tell patients that the **cause of disability is in some portion of the brain.** Therefore it's important to have more cerebral blood flow to rebuild neuronal circuits. We are proud of the amazing result in patients after exercising more than 3 times a day for 2-3 months. Everybody will say that **"Improvement by lip-training is much more than other kinds of rehabilitation"**

13) A typical mouth breather might feel some pain when he starts the lip-exercise initially using the device. This is because of their dry mouth due to evaporation of saliva; as a result, the skin inside the mouth is thin and delicate. **Please do not force the patient to do the lip-exercise regularly, if he can't stand the pain due to abrasion of the skin. Stop using for 1-3 days and re-start afterwards when the patient will not feel the pain anymore.**

14) **Try not to allow user to leave a gap between the upper and lower parts of the Lip Trainer.** The difference between a gap of even 1mm and NO gap at all, makes a big difference to the loading on the lips. **So it is important to keep the lip trainer completely closed.** However the upper and lower teeth must not meet (but stay relaxed) during lips closing exercises, otherwise the force on the lips for closing is not strong enough. The Lips would not close tightly if the upper and lower teeth are closed against each other. **Concentrate on using the lips only.**

1. Turn the neck in the healthy direction (not paralyzed side)
2. Place the Lip Trainer in the mouth from the paralyzed side and close the mouth (the mouth must be open wider than healthy side)
3. Raise the unhealthy side arm till it is above the head (with the help of a nursing staff)
4. Do abdominal breathing (bear in mind during training as well as during normal routine)

