

Myofunctional Therapy Using a New Oral Rehabilitation Apparatus “Lip Trainer Patakara®”



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The 150% improvement of Lip Closure Strength (LCS) is achieved from Lip Trainer Patakara®

The examiner assumes the oral respiration to be a chief complaint in the patient who holds an irregular suppletion in the mouth and amongst the total 104 people who came to the hospital; there were 18 men, 86 women in the age group of 4-82 year old persons. Each one's mouth lip closure power was measured by using a Labial-Closure-Strength(L-C-S) measuring device(Lip De Cum®). The functional training was conducted for extended 10 minutes per time, thrice a day in total.

Checklist of Mouth-breathing

Enter the linear measurement of the individual at the time of the first medical examination and after 3 months of functional training with the device. The table below is the improvement rate filled by patients after 3 months.

Clinical manifestations, which occur when there is an improvement in the oral breathing

Symptoms of the Mouth

Improvement rate

1. The lips, mouth and throat did not become dry at the time of waking up	85%
2. The throat did not ache at the time of waking up	78%
3. The phlegm did not get caught in the throat at the time of waking up	65%
4. There was no bad breath at the time of waking up	55%
5. There is refreshing feeling in the mouth at the time of waking up	82%
6. There was no hemorrhage (bleeding) of the gums or swelling of the gums at the time of brushing the teeth	55%
7. Gets a good nights sleep	95%
8. There was no deposition of the dental plaque, tartar, and tongue coating	78%
9. The light-brown color of the front teeth disappeared and the teeth become white again	68%
10. There was no tooth decay or mouth ulcers	44%

Symptoms of the Mouth, Nasal cavity and the Pharynx

1. There was no congested nose or nasal discharge and the nasal passage cleared	44%
2. ‘Snoring’ and ‘sleep apnea’ disappeared	67%
3. The throat pain disappeared and there was no cold	73%
4. Closing of the mouth improved and the slavering stopped	88%

Symptoms of the skin

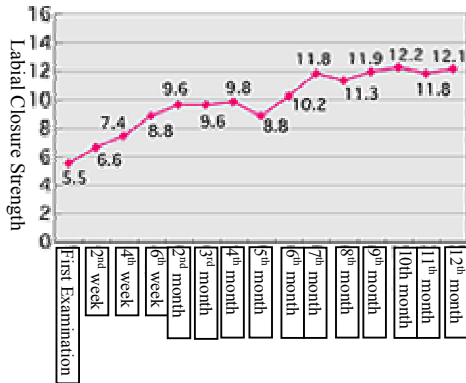
1. There was no dry skin and the roughness of the skin also disappeared	38%
2. The symptoms of contact dermatitis disappeared	40%
3. The symptoms of atopic eczema (dermatitis) improved	61%
4. The itching of the skin disappeared	55%

Symptoms of the Face and the whole body

1. There is refreshing feeling at the time of waking up	82%
2. There was no headache or a dull headache at the time of waking up or sleeping	38%
3. There was no drowsiness during the daytime	41%
4. Concentration power and memory improved	32%
5. The frequency of going to the toilet at nighttimes decreased	35%
6. There was no hypertension at nighttime	0%
7. There was no arrhythmia	0%
8. It was possible to sleep on the back (looking up)	45%
9. It was possible to get relief from fatigue	40%
10. The autoimmunity power improved and the body became strong	65%
11. There was no slackness and looseness of the face and the heaviness around the corners of the mouth	69%
12. The lips pressure has become strong (0 points if it is not strong)	100%

Case Paper 1

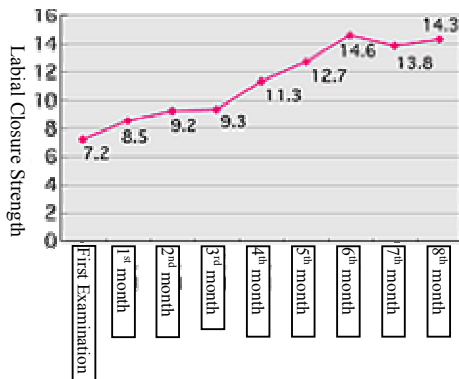
29 year old Female 26th April 2003~ 25th April 2004



- ◇ Objective: Improvement of mouth breathing and bad breath
- ◇ Underlying disease: Sinusitis (slight), Deviation of nasal septum, Chronic rhinitis
- ◇ Regularly used medicine: None
- ◇ Lips Closure Strength: 5.5N ⇒ 6.6N ⇒ 7.4 ⇒ 8.8N ⇒ 9.6N ⇒ 9.6N ⇒ 9.8 N ⇒ 8.8N ⇒ 10.2 N ⇒ 11.8 N ⇒ 11.3 N ⇒ 11.9 N ⇒ 12.2 N ⇒ 11.8 N ⇒ 12.1
- ◇ Improvement rate: 220% (5.5N ⇒ 12.1N) 1 year
- ◇ Dental formula: $\frac{7654321|1234567}{87654321|1234567}$ P1
- ◇ Biting: Front tooth maxillary protraction tendency
- ◇ Main complaint: Improvement in the discomfort symptoms due to dryness in the mouth (improvement in habitual mouth breathing)
- ◇ Condition at the time of first medical examination: The mouth is open most of the times and the nose is always blocked. The throat has always been weak from childhood and easily catches colds. Also worried about the bad breath at the time of waking up. Started Lip Trainer Patakara.
- ◇ Changes in the symptoms
 - (1) The discomfort symptoms at the time of waking up has reduced
 - (2) Did not get a feeling of bad breath at the time of waking up
 - (3) The throat ache has almost disappeared
 - (4) The nasal passage has cleared
 - (5) The dryness of the lips has disappeared and the inside of the mouth is always moist
 - (6) The nighttime sleep has improved and there is refreshing feeling in the mouth
 - (7) The deposition of the tartar and the dental plaque on the front teeth has decreased
- ◇ Functional training by Lip Trainer Patakara: (Effect judgment: effective)
Evaluation points as per the examination chart (65 points ⇒ 16 points)
- ◇ Functional training by Lip Trainer Patakara: (Patient satisfaction degree: Very satisfied)

Case Paper 2

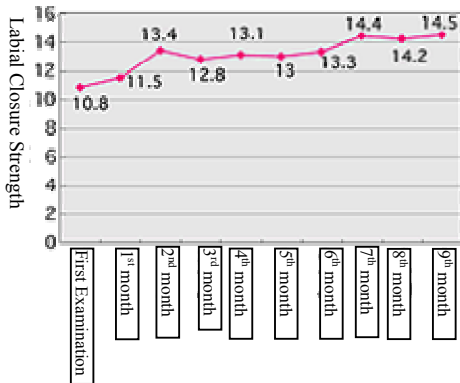
55 year old Female 19th August 2003~ 25th April 2004



- ◇ Objective: Improvement of oral (mouth) breathing and double chin
- ◇ Underlying disease: Infantile bronchial asthma, Atopic dermatitis, Allergic constitution
- ◇ Regularly used medicine: None
- ◇ Lips Closure Strength: 7.2N ⇒ 8.5N ⇒ 9.2 ⇒ 9.3N ⇒ 11.3N ⇒ 12.7N ⇒ 14.6 N ⇒ 13.8N ⇒ 14.3 N
- ◇ Improvement rate: 199% (7.2N ⇒ 14.3N) 8 months
- ◇ Dental formula: $\frac{7\ 54321\ | \ 345\ 7}{7\ 54321\ | \ 12345}$ P1
- Implant $\frac{\quad\quad\quad | 12}{6\quad\quad\quad | \quad 67}$
- ◇ Chewing: normal chewing
- ◇ Main complaint: Improvement in the discomfort symptoms due to dryness in the mouth (improvement in habitual oral (mouth) breathing)
- ◇ Condition at the time of first medical examination: The throat has always been weak from childhood and easily catches colds. Also worried about the bad breath at the time of waking up. Started Patakara.
- ◇ Changes in the symptoms
 - (1) The throat ache at the time of waking up has reduced
 - (2) The nighttime secretion has improved and can recognize tastes
 - (3) The throat has become strong and does not easily catch a cold
 - (4) The nasal passage has cleared there is refreshing feeling in the mouth
 - (5) Does not snore
 - (6) The dryness of the lips has disappeared and the yellow color of the front teeth had reduced
 - (7) There is a feeling of freshness around the neck
 - (8) Allergy symptoms are on the mend
 - (9) Stomatitis has disappeared
 - (10) Can chew well with both the sides and the corners of the mouth have improved
- ◇ Functional training by Lip Trainer Patakara: (Effect judgment : effective)
Evaluation points as per the examination chart (43 points ⇒ 16 points)
- ◇ Functional training by Lip Trainer Patakara: (Patient satisfaction degree: Satisfied)

Case Paper 3

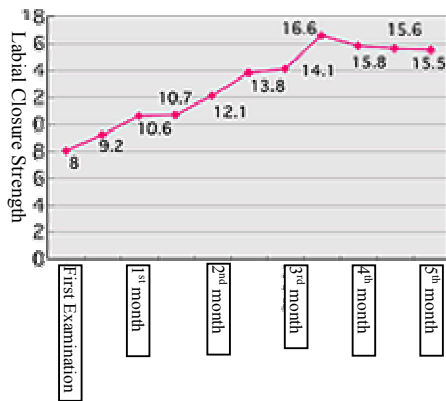
65 year old Female 28th August 2003~ 25th April 2004



- ◇ Objective: Improvement of oral (mouth) breathing and in the sagging face due to aging
- ◇ Underlying disease: Systemic erythematodes, high blood pressure symptoms, Empyema, tonsillitis
- ◇ Regularly used medicine: Anti hypertensive drugs (Adalart), Anti-platelet drugs (Bufferin for infants), steroid hormones (Predonine)
- ◇ Lips Closure Strength: 10.8N ⇒ 11.5N ⇒ 13.4 ⇒ 12.8N ⇒ 13.1N ⇒ 13.0N ⇒ 13.3 N ⇒ 14.4N ⇒ 14.2 N ⇒ 14.5 N
- ◇ Improvement rate: 134% (10.8N ⇒ 14.5N) 8 months
- ◇ Dental formula:
$$\begin{array}{r|l} 54 & 8 & P1 \\ \hline 76 & 321|1234567 & PD \\ \hline 7654321 & |1234567 & FD \end{array}$$
- ◇ Dentures
- ◇ Chewing: normal chewing
- ◇ Main complaint: Improvement in the discomfort symptoms due to dryness in the mouth (improvement in habitual oral (mouth) breathing) and making new dentures
- ◇ Condition at the time of first medical examination: There is a dry feeling in the mucous membrane of oral cavity. The throat has always been weak from childhood and easily catches colds. She had empyema in high school and has undergone an operation to remove the tonsillitis. Because of hypodermal bleeding due to thrombocytopenia at the age of 48, she was diagnosed with systemic erythematodes and was hospitalized for 3 months. She is currently taking steroid hormones 5mg/day.
- ◇ Changes in the symptoms
 - (1) The throat ache at the time of waking up has reduced
 - (2) The dryness of the lips has disappeared and the inside of the mouth is always moist.
 - (3) The throat has become strong and does not easily catch a cold
 - (4) The nasal passage has cleared and the mouth has become tight (steady)
 - (5) The headaches at the time of waking up has improved and feels fresh at the time of awakening
 - (6) Chewing is comfortable with the dentures and can chew strongly
 - (7) The dentures are stable
 - (8) The feeling around the neck is fresh and it had become thin
- ◇ Functional training by Lip Trainer Patakara: (Effect judgment : effective)
Evaluation points as per the examination chart (67 points ⇒ 23 points)
- ◇ Functional training by Lip Trainer Patakara: (Patient satisfaction degree: Satisfied)

Case Paper 4

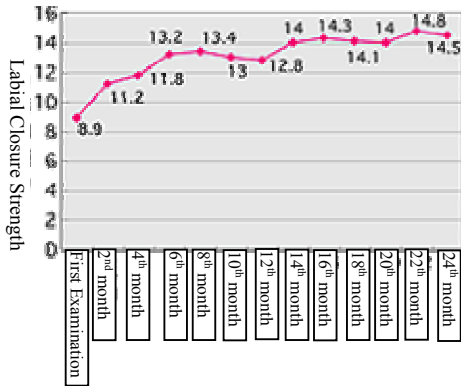
38 year old Male 23rd December 2003~ 25th May 2004



- ◇ Objective: Improvement of oral (mouth) breathing and suppression of the allergic symptoms
- ◇ Underlying disease: Tonsillitis, Bronchial asthma, Allergic dermatitis, hay fever, allergic constitution (metals, drugs)
- ◇ Regularly used medicine: None
- ◇ Lips Closure Strength: 8.0N ⇒ 9.2N ⇒ 10.6 ⇒ 10.7N ⇒ 12.1N ⇒ 13.8N ⇒ 14.1 N ⇒ 16.6N ⇒ 15.8 N ⇒ 15.6 N ⇒ 15.5 N
- ◇ Improvement rate: 194% (8.0N ⇒ 15.5N) 5 months
- ◇ Dental formula: $\frac{7654321 | 1234567}{7654321 | 1234567}$ P1
- ◇ Chewing: normal chewing
- ◇ Main complaint: Improvement in the discomfort symptoms due to dryness in the mouth (improvement in habitual oral (mouth) breathing) and Treatment for decayed teeth
- ◇ Condition at the time of first medical examination: Repeatedly suffering from tonsillitis, bronchial asthma, allergic dermatitis since school days and even now as an adult he has a very weak throat. He always has a feeling of tiredness in his voice.
- ◇ Changes in the symptoms
 - (1) The throat ache at the time of waking up has reduced
 - (2) The nighttime secretion has improved
 - (3) The throat has become strong and does not easily catch a cold
 - (4) The inside of the mouth is always moist and there is a refreshing feeling at the time of waking up.
 - (5) The nasal passage has cleared
 - (6) The allergic symptoms are on the mend
 - (7) The tiredness after sleep has improved
 - (8) The pimples on the face and on the neck have disappeared
- ◇ Functional training by Lip Trainer Patakara: (Effect judgment : effective)
Evaluation points as per the examination chart (68 points ⇒ 15 points)
- ◇ Functional training by Lip Trainer Patakara: (Patient satisfaction degree: Very satisfied)

Case Paper 5

62 year old Female 19th April 2002~ 25th May 2004



- ◇ Objective: Improvement of oral (mouth) breathing and chronic tonsillitis
- ◇ Underlying disease: Chronic tonsillitis, Asthma, Allergic Rhinitis, Gastrointestinal disease
- ◇ Regularly used medicine: Mouthwash (azunol), Stomach wall protective drugs
- ◇ Lips Closure Strength: 8.9N ⇒ 11.2N ⇒ 11.8 ⇒ 13.2N ⇒ 13.4N ⇒ 13.0N ⇒ 12.8 N ⇒ 14.0N ⇒ 14.3 N ⇒ 14.1 N ⇒ 14.0 N ⇒ 14.8 N ⇒ 14.5 N
- ◇ Improvement rate: 163% (8.9N ⇒ 14.5N) 2 years
- ◇ Dental formula: $\frac{7654321}{754321} | \frac{1234567}{1234567} P1$
- ◇ Chewing: normal chewing
- ◇ Main complaint: Improvement in the discomfort symptoms due to dryness in the mouth and pharynx (improvement in habitual oral (mouth) breathing)
- ◇ Condition at the time of first medical examination: Suffering from chronic tonsillitis from before and the right and left tonsils always swell with the change in seasons and physical conditions and there is yellow colored hardening in the throat. Even with regular brushing there is a daily feeling of bad breath at the time of waking up and she recalls very painful throat aches.
- ◇ Changes in the symptoms
 - (1) The throat ache at the time of waking up has reduced
 - (2) The dryness of the lips has disappeared and the inside of the mouth is always moist.
 - (3) The throat has become strong and does not easily catch a cold
 - (4) The bad breath at the time of waking up has disappeared
 - (5) The nasal passage has cleared
 - (6) The inside of the mouth always feels fresh
 - (7) The tonsillitis condition has improved a great deal
 - (8) Chewing has become easy and is able to chew strongly
- ◇ Functional training by Lip Trainer Patakara: (Effect judgment : effective)
Evaluation points as per the examination chart (66 points ⇒ 22 points)
- ◇ Functional training by Patakara: (Patient satisfaction degree: Very satisfied)