

CONCERNS ABOUT LIP TAPING IN OROFACIAL MYOFUNCTIONAL THERAPY

ABSTRACT

The procedure used by some orofacial myologists of lightly taping the lips to help stabilize a lips together rest posture is discussed. Since airway needs change during sleep, this technique could result in harm to patients, and should be discouraged. A minimum prerequisite for use of lip taping, even during the daytime, is clearance from a physician that the patient's airway is clear and can tolerate this procedure without fear of creating medical problems.

Background: As a reminder to maintain a closed-lips rest posture, a therapy technique employed by some orofacial myologists is to tape the lips shut lightly with a thin tape that breaks easily as one opens to lips. The tape is usually applied in an "X" fashion over the upper and lower lips and adjacent skin.

For patients with lips habitually open who have clear airways and are able to sit with lips together for long periods of time, one purpose of lip taping during daytime therapy exercise is to provide a tactile reminder for patients to monitor their lip rest position.

Lip taping has also been implemented during night sleeping. This use of light lip taping is controversial due to the potential harm that may follow.

FACTS

Some background facts to support this concern about lip taping include:

Fact: the metabolic processes of the body change and slow dramatically during sleep as compared to being awake.

Fact: the breathing process changes during sleep as compared to being awake.

Fact: moisture or dryness in the air can influence the way a person breathes either while awake or asleep. As well, allergies, medications, normal mucous flow and nasal debris accumulations can also influence the body in a different manner while asleep as compared to being awake.

Fact: many individuals who breathe adequately during the day need help to maintain a healthy exchange of oxygen during sleep, such as a CPAP.

ASSUMPTIONS AND RESPONSES

There are many false assumptions that are associated with a decision to tape the lips together at night:

Assumption: It is abnormal to sleep with mouth open; that is, everyone should be able to sleep through the night with lips together, engaging in a nasal pattern of breathing.

Response: The evidence for this claim is lacking. The facts presented above show why a predominant oral breathing pattern is a normal respiratory process as nasal resistance changes occur during sleep.

Assumption: All individuals are left with an ability to take in a sufficient amount of oxygen through the nose as may be needed during sleep with the lips taped together.

Responses: an orofacial myologist is not adequately qualified to know the relationship between the body's increased need for oxygen during sleep and the degree of mouth opening that may be required to fulfill changing oxygen needs during sleep.

Assumption: There is sufficient area around the tape provided for breathing with lips closed as sleep needs change during the night.

Response: This is not a reasonable conclusion that ignores that the buildup of nasal debris and changes in the mucous membranes of the nose during sleep occur naturally and can influence the breathing process and the need for oral airflow to make up for a diminished ability to breathe nasally.

Assumption: There is no impact on breathing when the range of mouth opening is restricted during the sleep process with lips taped together.

Response: This presumption is not well founded and assumes that all individuals should be able to sleep with lips together.

Assumption: That a mouth-open posture during sleep is a negative behavior.

Response: There is no clear evidence that sleeping with lips apart, mouth open, with an oral mode of breathing, is a negative behavior that should be changed.

Assumption: During sleep, the configuration of the nasal airway does not change as metabolism slows down; that is, there are no changes in size of the mucous membranes of the nose, nor does nasal resistance change during sleep. Said another way, the nasal chamber remains patent during sleep.

Responses: for most individuals, upon awakening, there is a need to clean the nasal cavity of debris that accumulates during the night. This may and will vary night-by-night, as related to a host of environmental and bodily influences and needs. The posture of lying recumbent changes the natural flow of drainage in and out of the nasal cavity during sleep, and the buildup of nasal debris differs from the self-cleansing processes while awake. As a result, there is often a need for increased oral breathing during sleep as the resistance to airflow through the nasal cavity changes during sleep.

Can a MFT presume arbitrarily that whatever increased oxygen needs that may exist can be met if the range of mouth opening is restricted by taping?

Assumption: Since taping the lips shut at night provides a sufficient flow of oxygen in and out of the mouth so that there is no chance that any cardiac or other episode could occur or develop later with a patient that could possibly be linked to this intervention in the sleep process

Response: If a patient experiences a cardiac incident or developmental heart problem that can be related to sleeping with lips taped closed, the orofacial myologist involved would have great difficulty defending this practice in any legal action that may follow.

COR PULMONALE

The possibility of a patient developing COPD (chronic obstructive pulmonary disease) from lip taping is a consequence that orofacial myologists should be alerted to. The medical condition of cor pulmonale is a form of pulmonary hypertension that puts a strain on the right side of the heart. One of many causative agents is upper respiratory obstruction.

Lip taping can result in an upper respiratory obstruction. Lip taping assumes that there are no changes in the patency of the nasal cavity while the lips are gently taped closed. This is a false assumption. A normal physiological process during sleep, or even awake, involves changes in nasal resistance, even minute by minute. Such changes, with lips taped, can potentially contribute to the onset of cor pulmonale.

RECOMMENDATIONS

On the basis of the facts presented above, and discussion of various assumptions and responses, it would seem prudent for orofacial myologists to avoid using lip taping in orofacial myofunctional therapy. A minimum requirement for lip taping (during day or especially night) should include approval and clearance by the family physician.

KEY WORDS: Lip taping, chronic obstructive pulmonary disease (COPD); cor pulmonale.