

**Treatment of Compensatory  
Articulation Errors**

代償性構音障礙的治療  
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**Compensatory misarticulations are  
substitution errors in place of production.  
They tend to be backed articulations relative  
to the target place of production.**

代償性構音障礙是屬於發音位置的錯誤取代  
代償性發音位置比正確位置更為後置 (見圖)

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**Although compensatory articulation  
is sometimes a consequence of VPI,  
VPI may be a consequence of  
compensatory articulation.**

雖然代償性構音有時是源自於顎咽閉  
鎖不全,但代償性構音亦可能造成顎  
咽閉鎖不全。

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**Types of Compensatory Articulation Errors** 代償性構音的類型

- **Glottal stop**
- **Pharyngeal fricative**
- **posterior nasal fricative**
- **Middorsum palatal stop**

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**Glottal Stop** 喉頭塞音

- **The most common compensatory speech error** 最常見的代償性構音錯誤
- **Produced by abrupt adduction and release of the vocal folds** 利用聲帶迅速關閉再放開發出此音
- **usually a substitution for stop consonants** 通常用來取代塞音
- **may be used for other consonant types** 亦可用來取代其他子音

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**Posterior Nasal Fricative**

- **tongue and soft palate are positioned to generate frication at the VP valve** 在顎咽處利用舌背與軟顎做出擦音
- **always accompanied by audible nasal air emission** 同時伴有很明顯的鼻漏息的聲音
- **Substitution for sibilant and fricative sounds** 用來取代擦音

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### Pharyngeal Fricative

- **Produced by constriction between the retracted tongue and pharynx**  
利用舌頭往後靠近後咽壁來產生擦音
- **usually substituted for fricatives**  
通常用來取代擦音
- **associated with VPI**  
與顎咽閉鎖不全有相關

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### Mid-dorsal Palatal Stop

- **Produced by use of the tongue blade to contact the palate in a central region** 利用舌面與硬顎接觸來產生塞音
- **anterior to placement for /k,g/**
- **posterior for /t,d/**  
位置比/k.g/更前面一點,代但比/t,d/更後面一點
- **associated with oronasal fistula**  
與口鼻瘻管相關

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### Basic Principles of Therapy 基本治療原則

- **Be sure the patient and parent understand the problem.**  
患者與家屬得先了解問題的所在
- **In general the goal is to bring articulation anterior by beginning with front sounds.**  
通則是將構音位置先往前帶,所以可以先帶出前面的音例如/f,d,t,xi/ 等

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**Basic Principles of Therapy**

**基本治療原則**

- **Encourage the use of strong articulatory contacts, especially if there is weak intraoral pressure.**

若是口內氣壓不足可以鼓勵患者使用比較出力的構音方式

- **Be direct and specific.**

給的指令要清楚而直接

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**Therapy Procedures**

**治療的技巧**

- **The first step is administration of an articulation test and analysis of speech sound production in words, sentences, and conversational speech.** 首先要做構音測驗並分析在不同層次(字詞,句子,日常對談)時呈現的構音錯誤型態

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**Therapy Procedures**

**治療的技巧**

- **Using a sustained /h/ to eliminate glottal stops** 利用持續發/h/去掉喉頭音
- **Proceed from simple to complex** 先練簡單的,再練困難的,循序漸進
- **move quickly from nonsense syllables to meaningful syllables and words** 先練習單音再練習有意義的字詞

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### Therapy Procedures

#### 治療的技巧

- **Providing multiple types of cues to elicit production of sounds**  
要利用多種提示來引發特定的音

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### Cues

#### 提示的種類

- **Auditory cues** 聽覺的提示
- **Phonetic cues** 語音的提示
- **Visual cues** 視覺的提示
- **Verbal cues** 口頭的提示
- **Manual cues** 操作性提示
- **Tactile cues** 觸覺的提示

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### Auditory cues

#### 聽覺的提示

- **Modeling** 直接示範
- **most common type of cueing**  
最常用的提示法
- **patient repeating a sound produced by the clinician**  
患者重複治療師所發的音

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### Phonetic cues

#### 語音的提示

- **A sound produced correctly is used as a phonetic facilitator to elicit another sound**

利用已經會發的音來引發另一個音

- **example: using /θ/ to elicit /s/**

例如用/θ/的音來引發/s/這個音

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### Visual cues

#### 視覺的提示

- **Watching the therapist's use of articulators directly**

直接看治療師如何發出語音

- **Using mirror, feather or cotton ball to provide visual feedback of oral air flow**

或借用鏡子,羽毛,綿球看到氣流的方向

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### Verbal cues

#### 口頭的提示

- **The therapist provides specific instructions for articulation placement and manner of air-stream management.**

- 治療師告訴患者發音的位置或發音方法

- **E.g. put your tongue behind your teeth and make the air come out of your mouth for /s/**

- 例如要患者把舌頭放在牙齒後面吹出氣流來發/s/

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**Manual cues**

操作性提示

- **Manipulating the lips, tongue or nose of the patient**

擺放患者的唇舌或鼻來發音

- **example: use of nasal occlusion to force oral air emission**

例如捏住患者鼻孔讓氣流從口而出

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**Tactile cues**

觸覺的提示

- **Providing the patient feedback about some aspect of production**

提供觸覺的回饋以了解發音的特性

- **example: feeling a puff of air from mouth on the hand**

例如用手去感覺氣從口中吹出

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**Important Therapy Principles**

特別強調的治療原則

- **Intensity of therapy**
- **Effective use of reinforcers**  
有效運用增強物
- **Frequency of therapy** 密集治療
- **Home assignments and carryover**  
家庭作業
- **Responsibility for therapy progress**

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### Intensity of therapy

- **70~100 correct production of the target sounds should be elicited at each session** 每次治療患者要發出正確的目標70到100次
- **moving from one level to the next when a 90% correct response rate during 2 consecutive sessions is achieved** 連續兩次都可以達到百分之九十的正確率就可以調高目標

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### Effective Use of Reinforcers 有效運用增強物

- **Reinforcers should be simple, immediate and motivating to be effective.**  
增強物要簡單而且立刻給才有效
- **Verbal reinforcement should be specific.**  
口頭式增強要精確描述所增強的行為

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### Frequency of Therapy 治療的頻率

- **Therapy should initially be individual and frequent.**  
剛開始應該先個別治療
- **Short sessions are more effective than long ones, especially at the beginning.**  
剛開始每堂課時間要短但次數頻繁

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**Home assignments and Carryover** 家庭作業與類化

- 10 minutes of home practice should be scheduled on all non-therapy days 每天應該要作十分鐘功課
- Tasks to be completed at home should be useful and simple. 所給的功課應該要簡單而有用

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**Responsibility for Therapy and Progress** 治療的進展

- If progress is not seen or is very slow, the therapist must review his or her own performance before attributing it to abnormal anatomy. 如果患者的進展非常的緩慢 治療師應該先檢討自己的治療方法 才考慮是否因為患者器官條件不佳

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