

**COMMUNICATION IMPAIRMENT  
ASSOCIATED WITH CLEFTING**

与唇腭裂相关的沟通障碍

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**CHILDREN WITH CLEFT LIP AND/OR  
PALATE ARE AT RISK FOR  
COMMUNICATION IMPAIRMENT**

唇腭裂儿童是沟通障碍的高发群

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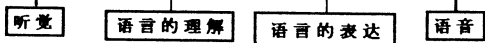
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**COMMUNICATION**



**交流沟通**



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**OCCURANCE OF SPEECH/LANGUAGE  
IMPAIRMENT IS VARIABLE**

语音/语言障碍的存在是多样的

- **NORMAL SPEECH/LANGUAGE**  
正常的语音/语言
- **IMPAIRMENT UNRELATED TO CLEFT**  
与唇腭裂不相关的沟通障碍
- **IMPAIRMENT RELATED TO CLEFT**  
与唇腭裂相关的沟通障碍

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**ALL CLEFT TYPES DO NOT  
HAVE THE SAME RISK FOR  
COMMUNICATION IMPAIRMENT**

各种不同类型的裂隙产生  
沟通障碍的危险性是不相同的

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**CHILDREN WITH CLEFT LIP AND/OR PALATE  
AS PART OF A SYNDROME ARE AT HIGHER  
RISK FOR COMMUNICATION IMPAIRMENT**

患有某种综合症的唇腭裂儿童  
产生沟通障碍的几率比较高

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**CHILDREN WITH ISOLATED  
CLEFT PALATE ARE AT GREATER RISK  
FOR COMMUNICATION IMPAIRMENT**

腭裂儿童产生沟通障碍  
的几率更高

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**CLEFTS AS FEATURES OF  
MULTIPLE ANOMALY SYNDROMES**

裂隙是综合症中多种  
异常特征之一

FRASER	1970	3%
ROLLNICK & PRUZANSKY	1981	44%
JONES	1988	30%
SHPRINTZEN	1995	53%

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**HEARING 听觉**

**ADEQUATE HEARING IS NECESSARY  
FOR NORMAL SPEECH AND  
LANGUAGE DEVELOPMENT**

充足的听觉是正常的语音和  
语言发育发展的必备条件

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**ALL CHILDREN WITH CLEFT PALATE  
ARE AT RISK FOR HEARING LOSS**  
所有腭裂儿童都易于产生听力减退

- **CONDUCTIVE** 传导性的
- **SENSORINEURAL** 感觉神经性的
- **MIXED** 混合性的

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### **HEARING 听觉**

**THE MOST COMMON CAUSE OF HEARING  
LOSS IN CHILDREN WITH CLEFT PALATE IS  
ABNORMAL ANATOMY AND FUNCTION OF THE  
EUSTACIAN TUBE**

造成听力减退的最常见的原因  
是咽鼓管的异常解剖结构和功能

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### **HEARING LOSS CAN BE:**

听力减退可以是：

- **FLUCTUATING**  
来回波动, 临时性的
- **STATIC**  
固定的
- **PROGRESSIVE**  
逐渐恶化的
- **UNILATERAL OR BILATERAL**  
单耳的或双耳的

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**HEARING 听觉**

**EVEN FLUCTUATING, LOW LEVEL HEARING LOSS CAN AFFECT THE DEVELOPMENT OF LANGUAGE AND SPEECH**

即使听力时好时坏，轻度的听力减退都会影响语音和语言的发展

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**LANGUAGE 语言**

**MANY CHILDREN WITH CLEFT PALATE HAVE LANGUAGE IMPAIRMENT**

许多腭裂儿童都有语言障碍

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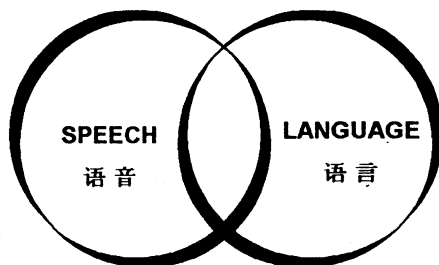
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**IN YOUNG CHILDREN SPEECH AND LANGUAGE ARE HIGHLY INTERRELATED**

对于幼儿来说，语音和语言是紧密联系的



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**LANGUAGE 语言**

**THERE IS A HIGH OCCURANCE OF EXPRESSIVE LANGUAGE IMPAIRMENT IN INFANTS AND TODDLERS WITH CLEFT PALATE**

腭裂婴幼儿出现语言表达障碍的几率很高

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**CONTROVERSY 争议**

**DO EARLY LANGUAGE DEFICITS :**

早期语言障碍是否 :

**DECREASE?**

逐渐减少 ?

**PERSIST?**

持续存在 ?

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**LANGUAGE 语言**

**EXPRESSIVE LANGUAGE IMPAIRMENT ONLY: IMPAIRMENT DECREASES**

单独的语言表达障碍 : 逐渐减少

**RECEPTIVE AND EXPRESSIVE LANGUAGE IMPAIRMENT: IMPAIRMENT PERSISTS**

语言的理解和表达障碍 : 持续存在

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**QUESTIONS REGARDING CLEFT AND LANGUAGE**

有关裂隙和语言的问题

- **UNREPAIRED CLEFT LIP**  
未修补的唇裂
- **AGE OF PALATE REPAIR**  
腭裂修补时的年龄
- **CULTURAL DIFFERENCES**  
文化上的差异

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**LANGUAGE 语言**

**CONSIDER EXPRESSIVE AND RECEPTIVE  
LANGUAGE SKILLS BEFORE DESIGNING AND  
EMBARKING ON SPEECH THERAPY PLAN**

在设计着手进行语音治疗计划之前  
应考虑病人语言的理解和表达能力

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**SPEECH PRODUCTION 语音的产生**



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**SPEECH IMPAIRMENT ASSOCIATED WITH CLEFT PALATE**

与腭裂相关的语音障碍

- ARTICULATION 口腔构音
- RESONANCE 共鸣
- NASAL AIR EMISSION 鼻漏气
- VPI 腭咽功能异常
- PHONATION 发嗓音

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**INCIDENCE OF SPEECH DISORDERS ASSOCIATED WITH CLEFT PALATE**

与腭裂相关的语音障碍的发生率

	UCLP 单侧唇腭裂	BLCF 双侧唇腭裂	CPO 腭裂	TOTALS 总数
ARTICULATION ERRORS 构音错误	99%	87%	71%	91%
CONSISTENT VPI 持续的腭咽功能异常	20%	10%	18%	17%

ADAPTED FROM PETERSON-FALZONE (In Bardach and Morris, 1990)

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**FACTORS AFFECTING FREQUENCY AND SEVERITY OF SPEECH IMPAIRMENT**

影响语音障碍发生频率和严重程度的因素

- CLEFT TYPE 裂隙类型
- PHYSICAL CHARACTERISTICS OF CLEFT  
裂隙的生理特征
- TYPE OF PALATE REPAIR 腭修补术的类型
- TIMING OF PALATE REPAIR 腭修补术的时间
- SKILL OF SURGEON 外科手术医生的技术

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**CONSONANT PRODUCTION IS CHARACTERIZED BY:**

辅音发音的特征包括：

- PLACE OF ARTICULATION 发音的部位
- MANNER OF ARTICULATION 发音的方式
- VOICING 声带的状态

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**PLACE 部位 (Pinyin 拼音)**

MANNER 方式

	Bilabial 双唇音	Labio-dental 唇齿音	Alveolar 齿龈音	Retroflex 卷舌音	Alveolo-palatal 齿龈-腭音	Palatal 腭音	Velar 软腭音
Stop 爆破音	p, b		t, d				k, g
Nasal 鼻腔音	m		n				ng
Fricative 擦音		f	s		x	sh	h
Affricate 塞擦音			z, c		j, q	zh, ch	
Liquid 液体音			l	r			

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**PHONETIC ERRORS 语音错误**

**"ERRORS IN THE ARTICULATION OR FORMATION OF THE SOUNDS OF SPEECH ARE RELATED TO ABNORMALITIES IN ANATOMY, FUNCTION, AND/OR MOTOR CONTROL OR SPECIFIC PROBLEMS IN LEARNING"**  
WITZEL (In Shprintzen, 1995)

“口腔构音时或语音音素形成时产生的错误与以下情况相关：解剖结构，功能，运动控制，或学习过程中的特定问题”

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**PHONOLOGIC ERRORS 语音错误**

**"INDICATE A DIFFICULTY IN THE CHILD'S ORGANIZATION,  
LEARNING AND REPRESENTATION OF THE SOUND UNITS  
AND SOUND SYSTEM OF A LANGUAGE"**  
WITZEL (In Shprintzen, 1995)

“表明了孩子在组织, 学习和表达其母语音素  
和语音系统过程中的困难”

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**ARTICULATION 口腔构音**

**INDIVIDUALS WITH CLEFT PALATE HAVE MORE  
ERRORS IN PLACE OF ARTICULATION THAN  
MANNER OF ARTICULATION**

腭裂患者的发音位置错误多于  
发音方式错误

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**COMPENSATORY ARTICULATION 代偿性发音**

**DISTINCTIVE PATTERN OF PLACEMENT ERRORS**  
发音部位错误的特定模式

**ATTEMPTS TO SHAPE THE AIRSTREAM BELOW OR  
BEFORE THE VELOPHARYNGEAL VALVE  
OR OPEN CLEFT**

试图对经过腭咽口或裂隙  
以下的或之前的气流进行调整

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**COMPENSATORY ARTICULATION 代偿性发音**

**COMPENSATORY ARTICULATION ERRORS DO NOT  
ALWAYS SIGNAL CURRENT ABNORMALITIES IN  
VELOPHARYNGEAL VALVING**

代偿性发音错误不一定总是标志着  
当前的腭咽闭合异常

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**HYPERNASALITY 过度鼻音**

**HYPERNASALITY OCCURS ON VOWELS WHEN  
SOUND WAVES CAUSE BOTH THE ORAL AND  
NASAL CHAMBERS TO VIBRATE**

在发元音时，音波气流经过口腔和  
鼻腔的共振而产生过度鼻音

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**FACTORS AFFECTING RESONANCE**

影响共鸣的因素

- **TISSUE MASS AND ELASTICITY**  
生理组织的质量和弹性
- **NASAL STRUCTURE** 鼻腔构造
- **VOCAL TRACT CONSTRUCTION** 声门结构
- **MOUTH OPENING** 口形张开程度
- **TONGUE MOVEMENT** 舌部运动
- **COORDINATION** 协调性

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**HYPONASALITY 过低鼻音**

**HYPONASALITY OR DENASALITY OCCURS WHEN THE NOSE IS BLOCKED AND PREVENTS SOUND WAVE VIBRATION IN THE NASAL CAVITY**

在发音时，由于鼻道的阻塞并阻止了声波气流在鼻腔中的振动，从而造成了过低鼻音或无鼻音

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**NASAL AIR EMISSION 鼻漏气音**

**AUDIBLE OR INAUDIBLE AIRFLOW DIRECTED THROUGH THE NOSE INSTEAD OF THE MOUTH DURING ORAL CONSONANT PRODUCTION**

在发口腔辅音时，由于听得见的或听不见的气流经过鼻腔而非口腔，从而产生鼻漏气音

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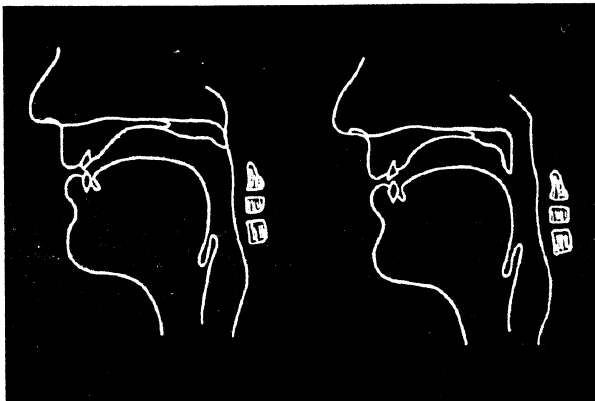
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**VELOPHARYNX**

腭咽腔

- MUSCLES OF THE SOFT PALATE  
软腭的肌肉
- LATERAL PHARYNGEAL WALLS  
咽腔侧壁
- POSTERIOR PHARYNGEAL WALL  
咽腔后壁

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**SOURCES OF VP SYMPTOMS**

腭咽功能异常症状的根源

- LACK OF SUFFICIENT TISSUE  
缺乏充足的生理组织
- NEUROMOTOR IMPAIRMENT  
神经运动系统障碍
- MISLEARNING  
不良的学习过程
- INVOLVEMENT OF OTHER STRUCTURES  
涉及其它生理结构

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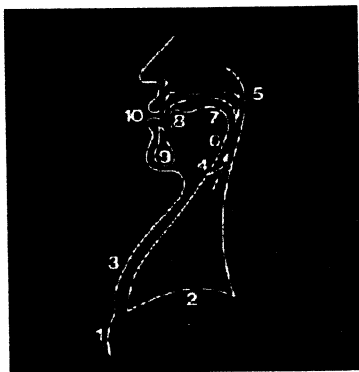
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**SUMMARY**

总结



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**ROLE OF THE SPEECH PATHOLOGIST  
DIFFERENTIAL DIAGNOSIS**

语言治疗师在诊断中的作用

- **FAULTY LEARNING**  
错误的学习过程
- **CURRENT STRUCTURAL  
ABNORMALITIES**  
当前的生理结构异常

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**THE GOAL OF CLEFT CARE IS  
THE FULL INTEGRATION OF THE  
INDIVIDUAL INTO SOCIETY**

唇腭裂照顾的最终目标是使患者  
全面地融入到社会中去

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**RECOMMENDED READINGS**

**Bardach and Morris HL (1990).** *Multidisciplinary Management of Cleft Lip and Palate.* Philadelphia, PA: WB Saunders Company.

**Bzoch KR (1997).** *Communicative Disorders Related to Cleft Lip and Palate, Fourth Edition.* Austin, TX: Pro-Ed.

**Golding-Kushner (2001).** *Therapy Techniques for Cleft Palate Speech and Related Disorders.* San Diego, CA: Singular.

**Kummer AW (2001).** *Cleft Palate and Craniofacial Anomalies: The Effects on Speech and Resonance.* San Diego, CA: Singular.

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**RECOMMENDED READINGS**

**McWilliams BJ, Morris HL and Shelton RL (1990).** *Cleft Palate Speech Second Edition.* Philadelphia, PA: BC Decker.

**Shprintzen R (1998).** *Genetics, Syndromes, and Communication Disorders.* San Diego, CA: Singular.

**Shprintzen RJ and Bardach, J (1995).** *Cleft Palate Speech Management: A Multidisciplinary Approach.* St. Louis, MO: Mosby.

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