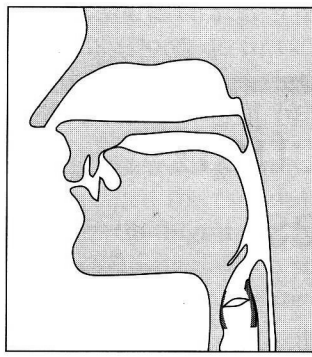
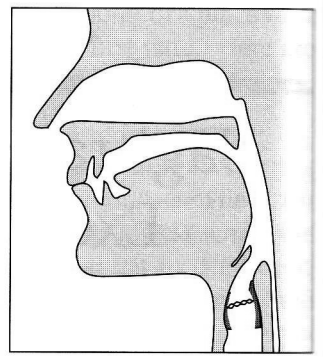


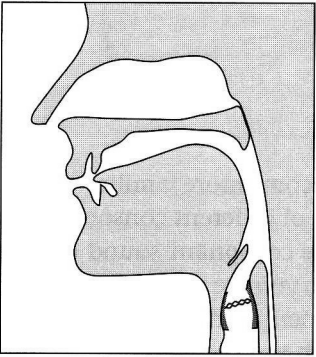
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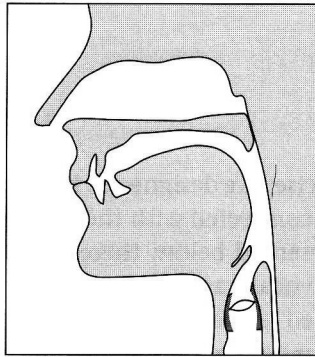
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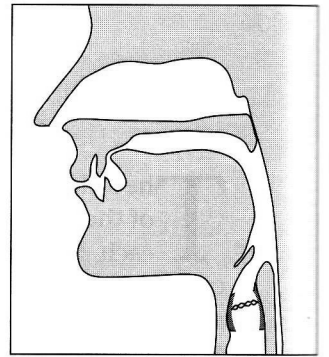
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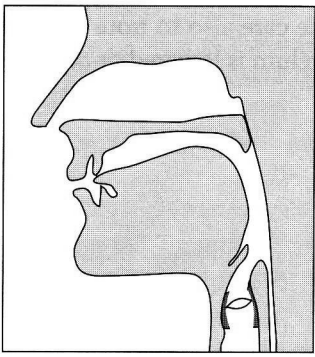
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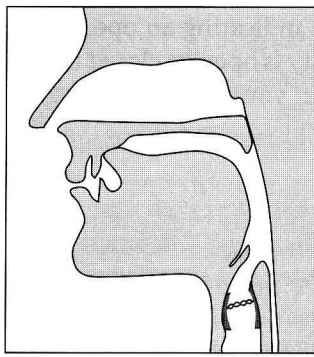
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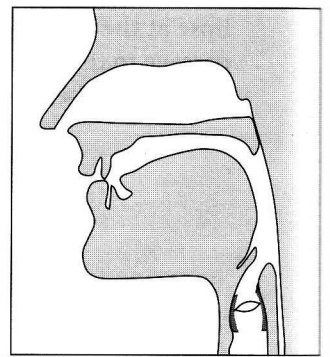
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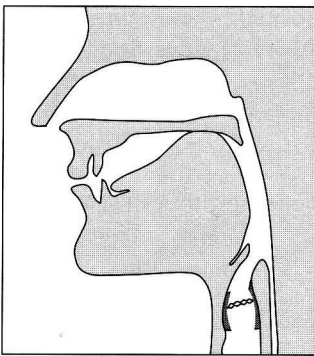
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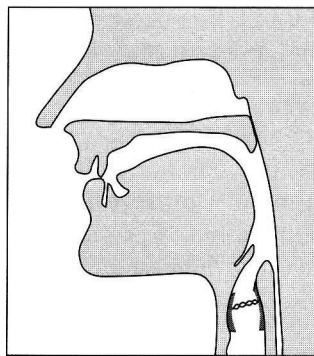
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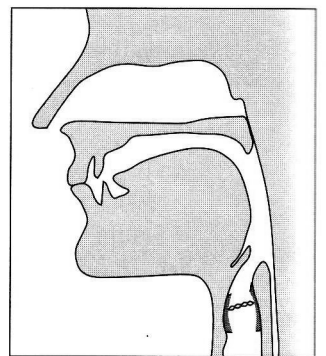
[d]



[t]



[d]



[t]

THE INTERNATIONAL PHONETIC ALPHABET (2005)

CONSONANTS (PULMONIC)

	Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Epi-glottal	Glottal
Nasal	m	ɱ	n			ɳ	ɲ	ŋ	ɴ			
Plosive	p b	ɸ β	t d			ʈ ɖ	c ɟ	k ɡ	q ɢ	ʔ		ʔ
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	ħ ʕ	h ɦ
Approximant		ʋ	ɹ			ɻ	j	ɰ				
Trill	ʙ		r						ʀ		ʀ	
Tap, Flap		ⱱ	ɾ			ɽ						
Lateral fricative			ɬ ɮ			ɮ	ɬ	ɮ				
Lateral approximant			l			ɭ	ʎ	ʎ				
Lateral flap			ɺ			ɻ						

Where symbols appear in pairs, the one to the right represents a modally voiced consonant, except for murmured *f*. Shaded areas denote articulations judged to be impossible. Light grey letters are unofficial extensions of the IPA.

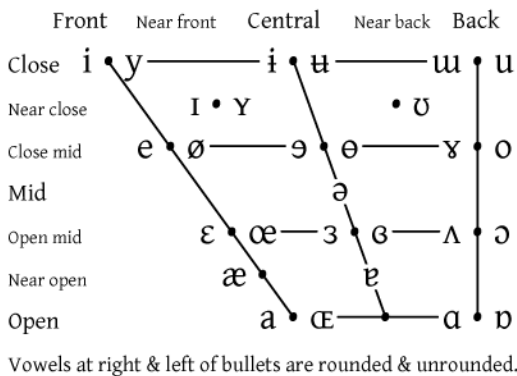
CONSONANTS (NON-PULMONIC)

Anterior click releases (require posterior stops)	Voiced implosives	Ejectives
◌ Bilabial fricated	ɓ Bilabial	ʼ <i>Examples:</i>
Laminar alveolar fricated ("dental")	ɗ Dental or alveolar	pʼ Bilabial
! Apical (post)alveolar abrupt ("retroflex")	ɟ Palatal	tʼ Dental or alveolar
‡ Laminar postalveolar abrupt ("palatal")	ɠ Velar	kʼ Velar
Lateral alveolar fricated ("lateral")	ɡ Uvular	sʼ Alveolar fricative

CONSONANTS (CO-ARTICULATED)

- ɱ Voiceless labialized velar approximant
- ʋ Voiced labialized velar approximant
- ɰ Voiced labialized palatal approximant
- ɕ Voiceless palatalized postalveolar (alveolo-palatal) fricative
- ʑ Voiced palatalized postalveolar (alveolo-palatal) fricative
- ɧ Simultaneous x and ʃ (disputed)
- kp̚ ts̚ Affricates and double articulations may be joined by a tie bar

VOWELS



SUPRASEGMENTALS

- ˈ Primary stress
- ˌ Secondary stress [ˌfoʊnəˈtʃən]
- eː Long
- e Short
- Syllable break
- INTONATION
 - | Minor (foot) break
 - || Major (intonation) break
 - ↗ Global rise
 - ↘ Global fall
- ˈˈ Extra stress
- ˉ Level tones
 - ˉ Top
 - ˉ High
 - ˉ Mid
 - ˉ Low
 - ˉ Bottom
- ˉˉˉ Tone terracing
 - ˉˉˉ Upstep
 - ˉˉˉ Downstep
- ˉˉˉ Contour-tone examples:
 - ˉˉˉ Rising
 - ˉˉˉ Falling
 - ˉˉˉ High rising
 - ˉˉˉ Low rising
 - ˉˉˉ High falling
 - ˉˉˉ Low falling
 - ˉˉˉ Peaking
 - ˉˉˉ Dipping

DIACRITICS

Diacritics may be placed above a symbol with a descender, as *ɲ̥*. Other IPA symbols may appear as diacritics to represent phonetic detail: *t˥* (fricative release), *bʰ* (breathy voice), *ʔ̚* (glottal onset), *ə̯* (epenthetic schwa), *o̯* (diphthongization).

SYLLABICITY & RELEASES		PHONATION		PRIMARY ARTICULATION		SECONDARY ARTICULATION			
ɲ̥ ɳ̥	Syllabic	ɲ̥ ɳ̥	Voiceless or Slack voice	ʈ̥ ɖ̥	Dental	tʰ dʰ	Labialized	ɔ̞ ɣ̞	More rounded
e̞ ʊ̞	Non-syllabic	ʂ̥ ʐ̥	Modal voice or Stiff voice	ʈ̥ ɖ̥	Apical	tʃ dʒ	Palatalized	ɔ̞ ɣ̞ʷ	Less rounded
tʰ h̥t	(Pre)aspirated	ɲ̥̚ ɳ̥̚	Breathy voice	ʈ̥̚ ɖ̥̚	Laminar	tʰ dʰ	Velarized	ẽ ʒ̥	Nasalized
d̚	Nasal release	ɲ̥̚ ɳ̥̚	Creaky voice	ɹ̥ ɻ̥	Advanced	t̚ d̚	Pharyngealized	ɶ ɷ	Rhoticity
d̚	Lateral release	ɲ̥̚ ɳ̥̚	Strident	ɹ̥ ɻ̥	Retracted	t̚ z̚	Velarized or pharyngealized	ɶ ɷ	Advanced tongue root
t̚	No audible release	ɲ̥̚ ɳ̥̚	Linguolabial	ä̞ j̞	Centralized	ũ̞	Mid-centralized	ɶ ɷ	Retracted tongue root
e̞ β̞	Lowered (β̞ is a bilabial approximant)			e̞ ɹ̞	Raised (ɹ̞ is a voiced alveolar non-sibilant fricative)				