Glottal sounds in Nłe?kepmxcín

? c' ý k kw l' ấ m n p q qw t' w ý ź ſ ſw

The glottal sounds in Nłe?kepmxcín fall into three classes, based on how they're made.

1. Ejectives

$$\vec{c}$$
 \vec{k} \vec{k}^w $\vec{\lambda}$ \vec{p} \vec{q} \vec{q}^w \vec{t}

- 2. Laryngealized Continuants ý ľ m n w y ż s s s s s
- 3. Glottal Stop

They are called glottal because they all involve actions of the *glottis*, a part of the vocal apparatus located in the *larynx* or voice box. The glottis is the opening between the vocal folds which vibrates when you hum and produces the tone of your voice.

Ejectives – $\vec{c} \cdot \vec{k} \cdot \vec{k}^w \cdot \vec{\lambda} \cdot \vec{p} \cdot \vec{q} \cdot \vec{q}^w \cdot \vec{t}$

Motion of the glottis creates extra-high pressure in the mouth without the lungs3.



Steps for producing ejective k'

- 1. Create a glottal closure as if holding your breath
- 2. Create a k closure with the middle of the tongue
- 3. Glottis moves up, compressing air
- 4. Middle of the tongue moves down, releasing \boldsymbol{k}

Steps for producing ejective p'

- 1. Create a glottal closure as if holding your breath
- 2. Create a p closure with your lips
- 3. Glottis moves up, compressing air
- 4. Lips move apart, releasing p closure



Laryngealized Continuants – ý ľ m n w ý ż S S W

These sounds may be shorter in duration, ending with a catch in the throat like the middle sound in "uh-oh". They may also be produced with *creaky* voicing, made by compressing the vocal folds while they vibrate. To feel it, try lowering the pitch of your voice as far as possible. This is similar to "vocal fry".

Glottal Stop - ?

Pronunciation depends on the position in the syllable.

- Before a vowel it is like a catch in the throat, like the middle sound in "uh-oh".
- After a vowel it can make the vowel creaky. It may also make the vowel longer.