



# Calculating an S/Z Ratio

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## Instructions

1. Ask the client to take a deep breath and then to sustain the sound 's' for as long as possible at a comfortable pitch and loudness on one exhalation, without straining. Using a stopwatch, time (in seconds) how long the client can sustain the sound. Record the time in the table below under *duration of 1st 's'*.
2. Repeat this procedure but, this time, using the sound 'z'. Record the time as *duration of 1st 'z'*.
3. Repeat Step 1 and record the time under *duration of 2nd 's'*.
4. Repeat Step 2 and record the time under *duration of 2nd 'z'*.
5. Calculate the S/Z Ratio by dividing the time of the *longest 's'* by the time of the *longest 'z'*.

duration of 1st 's' =  seconds

duration of 1st 'z' =  seconds

duration of 1st 's' =  seconds

duration of 1st 'z' =  seconds

longest 's' =  seconds

longest 'z' =  seconds

longest 's' / longest 'z' = S/Z ratio =

## Interpretation

Norms for sustaining 's'	
age range (years)	duration (seconds)
7;00-10;00	8
11;00-15;00	12
16;00 + (women)	15
16;00 + (men)	20

95% of people who have problems with their vocal folds have an S/Z ratio of greater than 1.40.