



RECOMMUNICATE SPEECH

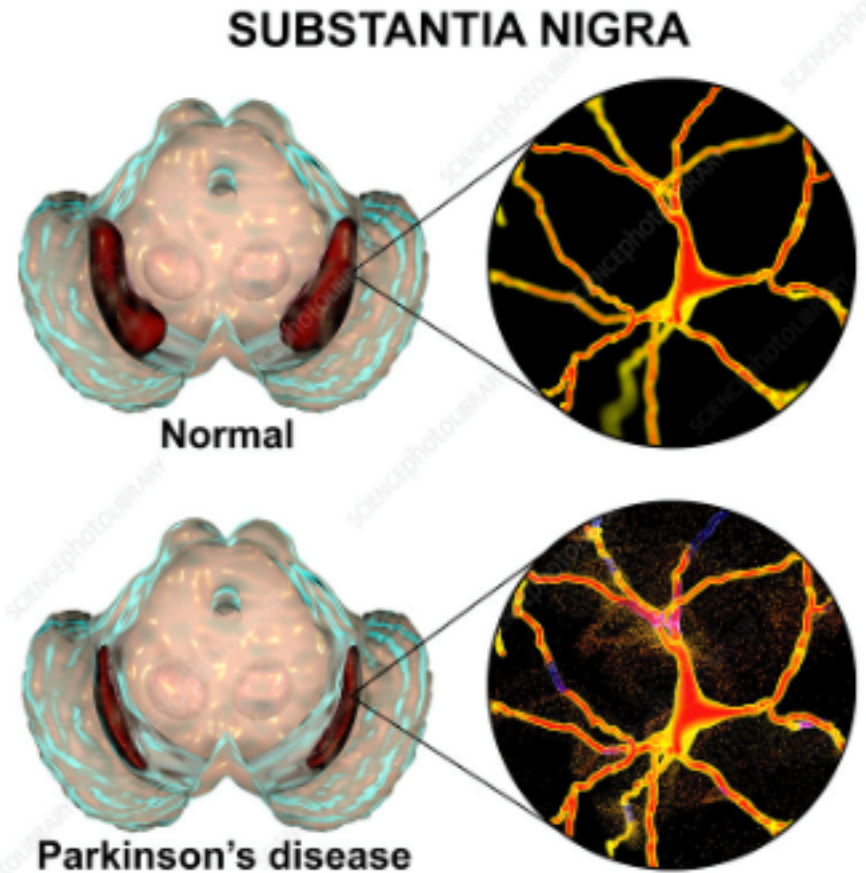
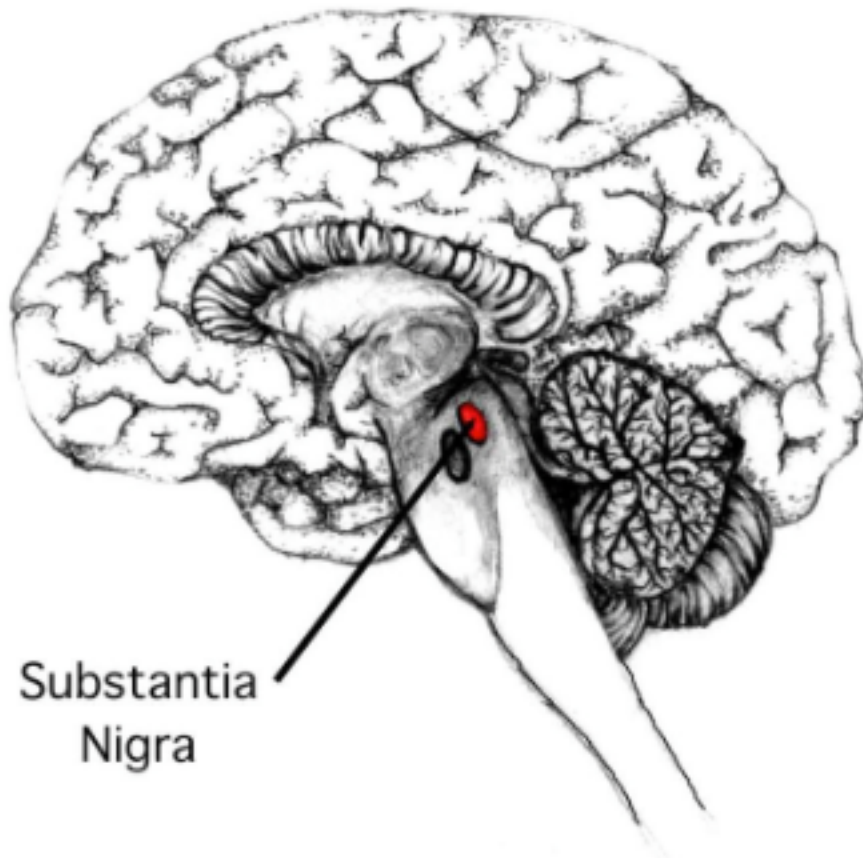
# Understanding Communication and Swallowing Changes in Parkinson's

**Louise Lim**

Specialist Speech & Language Therapist



# Parkinson's



Loss of dopamine = reduced control of movement



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# Communication

- Speech
- Language
- Voice
- Intonation
- Facial expression and body language



# Speech

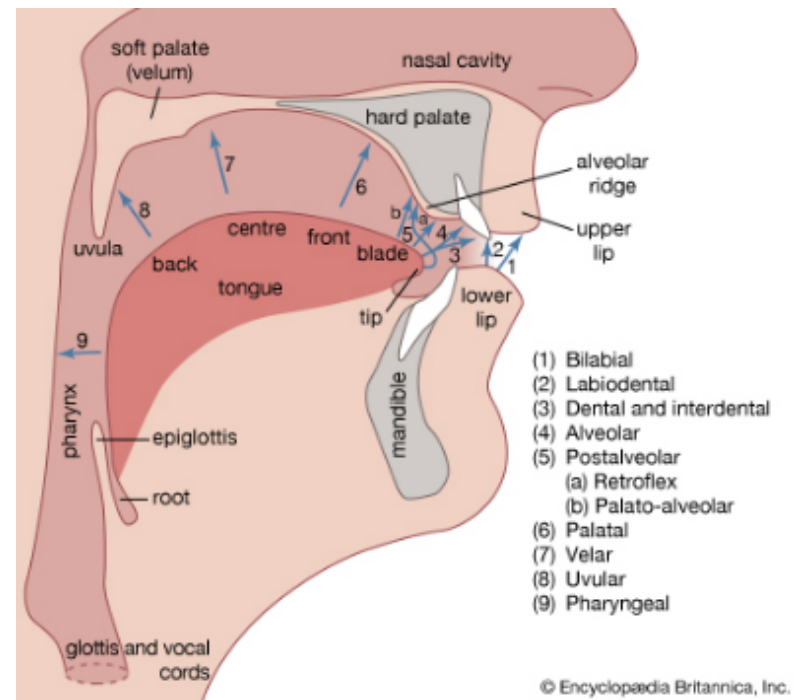
## *What is Speech?*

Movement of 'articulators' e.g. tongue, lips and palate to shape the air that's passing through the vocal tract

**Rate** and **range** is key  
**Breath support** is key

Carefully controlled  
speed, timing and positioning  
(Timely Accurate Coordinated)

Typical rate of  
speech  
Over 100 wpm,  
sometimes 140-160





# Speech

The articulators (tongue, lips, teeth) are  
Muscles/controlled by muscles

Harder to control putting  
the articulators where  
they need to be

Harder to do this at the  
right speed

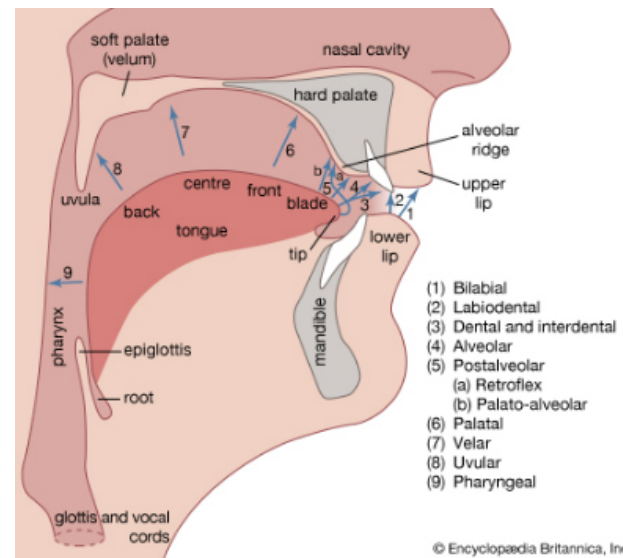
She sells sea shells by the sea  
shore.

Peter Piper  
picked a peck of  
pickled peppers.



# Potential Speech Changes in Parkinson's

- Hypokinetic
- Imprecise articulation
- Hypernasality
- Dysfluency
- Overly slow or fast speech rate



# Intonation in Parkinson's

- Stress on words affects meaning

e.g.

“What were you thinking?” vs  
“What were you thinking?”



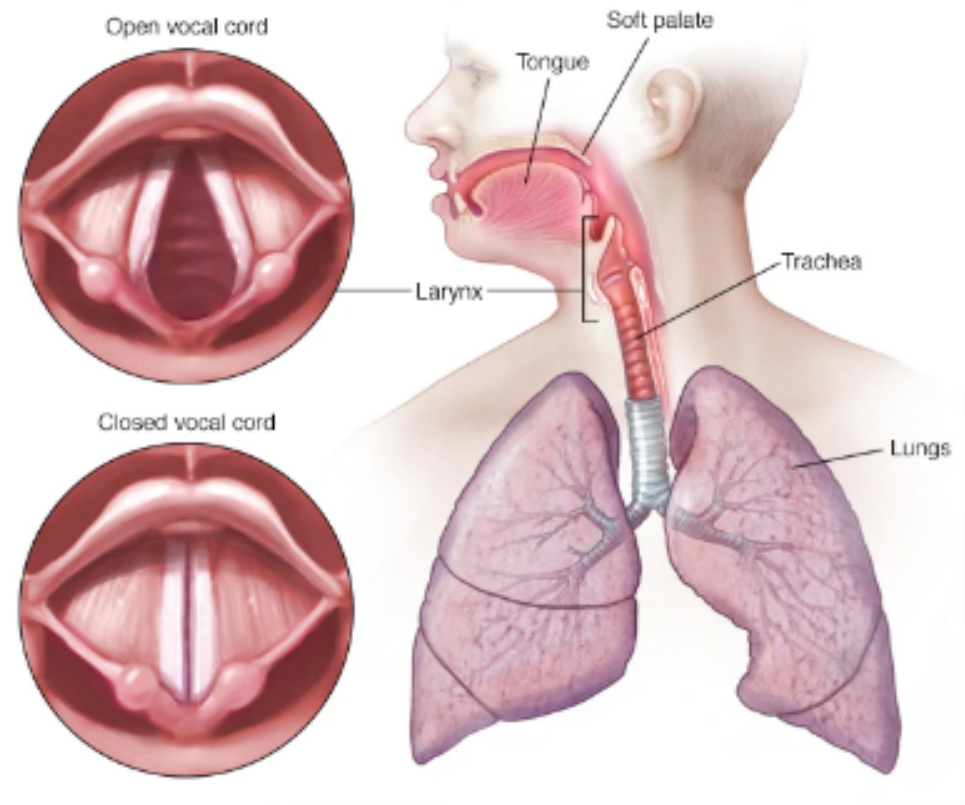
- Monotone and monopitch
  - can sound less enthusiastic
  - can be harder to engage the listener



# Voice

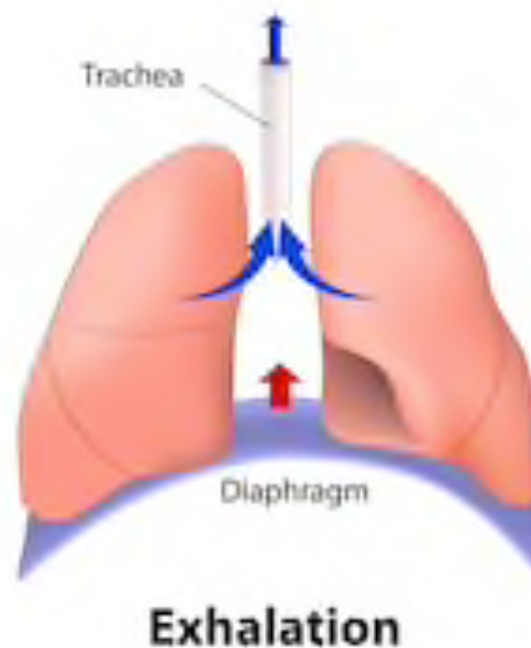
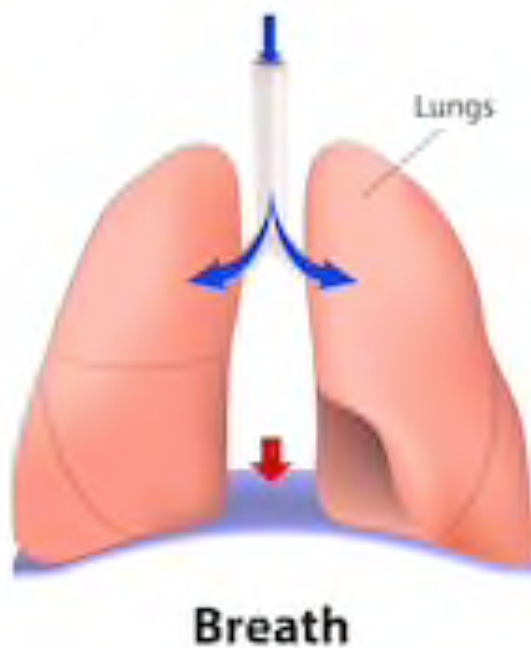
- Vibration of the vocal folds
- /S/ vs /Z/
- Air from the lungs passes up to the vocal folds to cause vibrations
- Vocal fold positioning is controlled by muscles

*Breath support is key*



# Voice and Breath Support

## The diaphragm functions in breathing



# Potential Voice Changes in Parkinson's

Reduced volume  
'hypophonia'

Altered resonance  
(inc hypernasality)

Changes to 'quality':

- Hoarse (shouting)
- Rough (smoking)
- Breathy (Marilyn Monroe)  
despite normal vocal folds



# identity

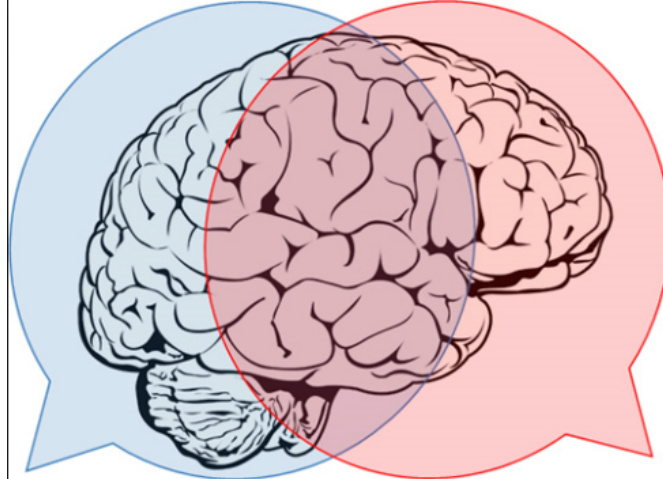


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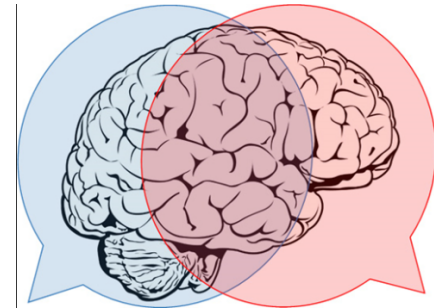
# Language

- Thinking of a particular word
- Constructing meaningful sentences
- Sticking to topic



# Potential Language Changes in Parkinson's

- Word-finding difficulties
- Reduced verbal fluency
- Reduced verb generation
- Changes in social pragmatics



May be specific to language or may go along with more general cognitive changes e.g. reduced thinking speed and ability to attend



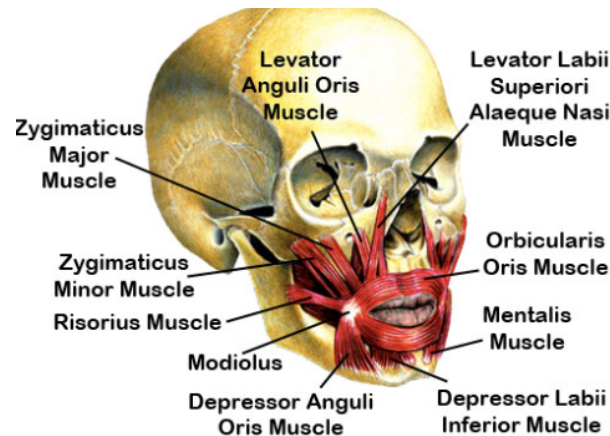
# Facial expression and Body Language in Parkinson's

- Facial expression relies on muscle movement – may appear less expressive

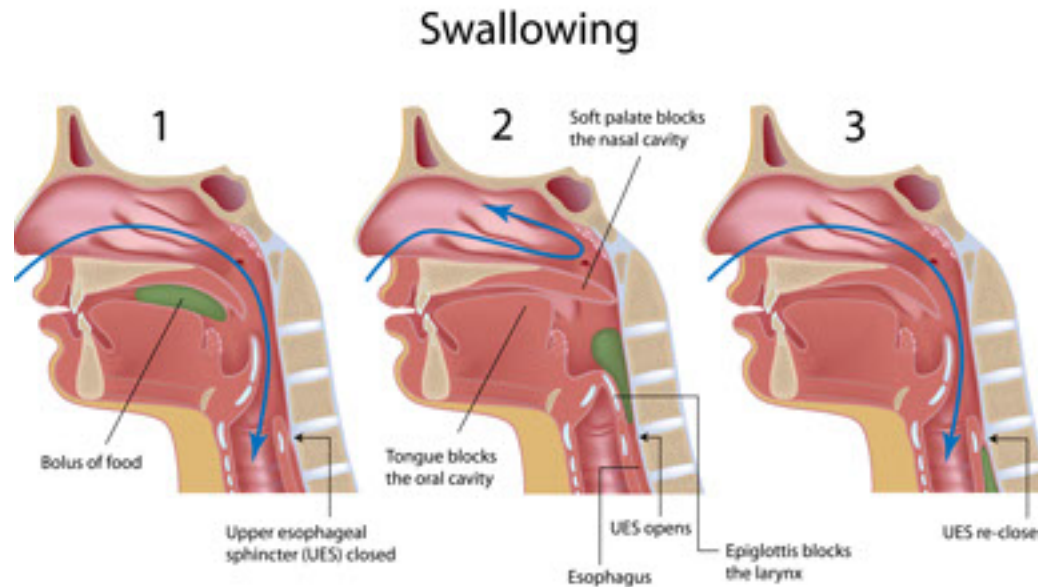


- Posture may appear more 'closed'

*Appearances may not match how a person is actually feeling!*



# Swallowing



1. Chewing and bolus formation
2. Movement of bolus to pharynx and
3. ....oesophagus

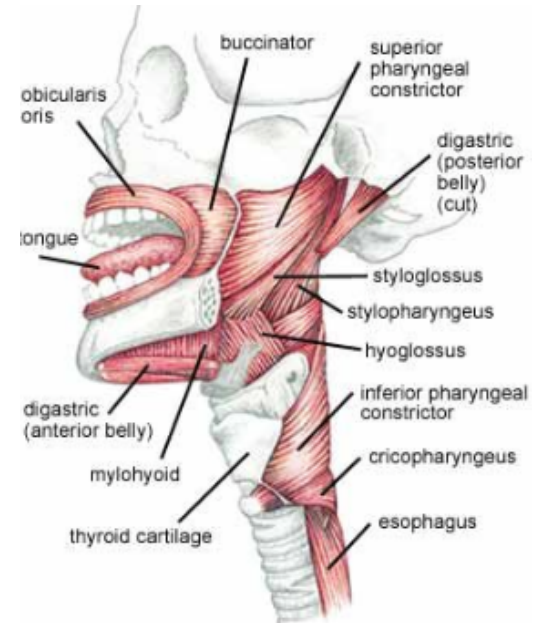
Airway protection mechanisms:

2. Epiglottis closes over larynx, vocal folds adduct to cover airway, soft palate blocks nasal cavity



# Swallowing

Tongue  
Palate, Pharynx  
Oesophagus  
....are all muscles



Teeth (movement controlled by jaw muscles)

Timely Accurate Coordinated



# Potential Swallowing Changes in Parkinson's

- More residue around the mouth
- Escape of food/drink from the front of the mouth
- Longer eating and drinking times
- Food and/or drinks going ‘the wrong way’

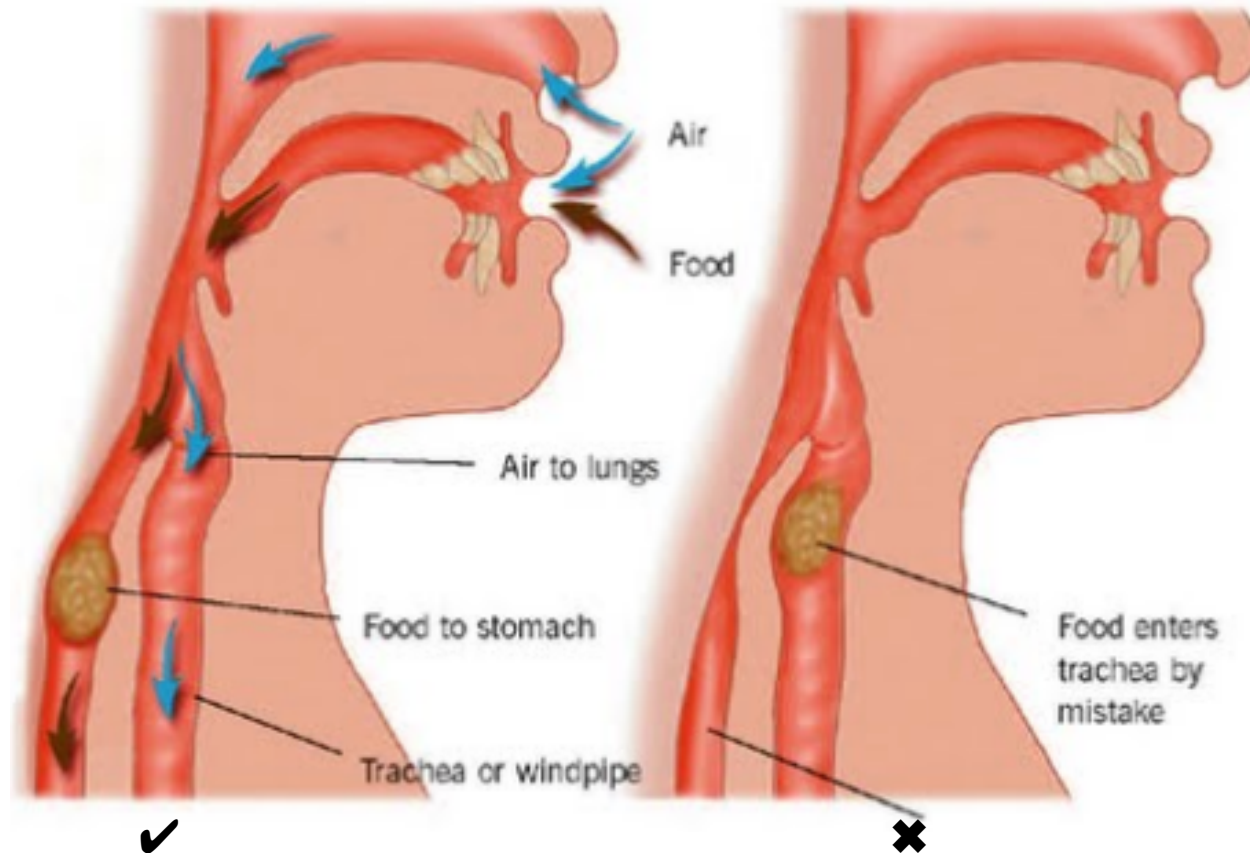


Consider asking GP for referral for swallowing assessment





# Potential Swallowing Changes in Parkinson's



Choking and/or aspiration pneumonia



# Potential Swallowing Changes in Parkinson's

Food/drink going towards the larynx and trachea (windpipe)



## Warning signs:

- **Coughing** or **choking** when eating or drinking
- Unexplained **weight loss**
- Repeated **chest infections**
- **Repeated** need to swallow in order to clear food
- Swallowed food enters the **nose** from the mouth
- **Wet gurgly** sounding **voice** after drinking/eating



# Saliva Management

We keep saliva where it's meant to be through:



- Posture
- Lip seal
- Automatically swallowing when saliva builds up



# Communication and Swallowing Changes in Parkinson's

Don't be worried, be aware

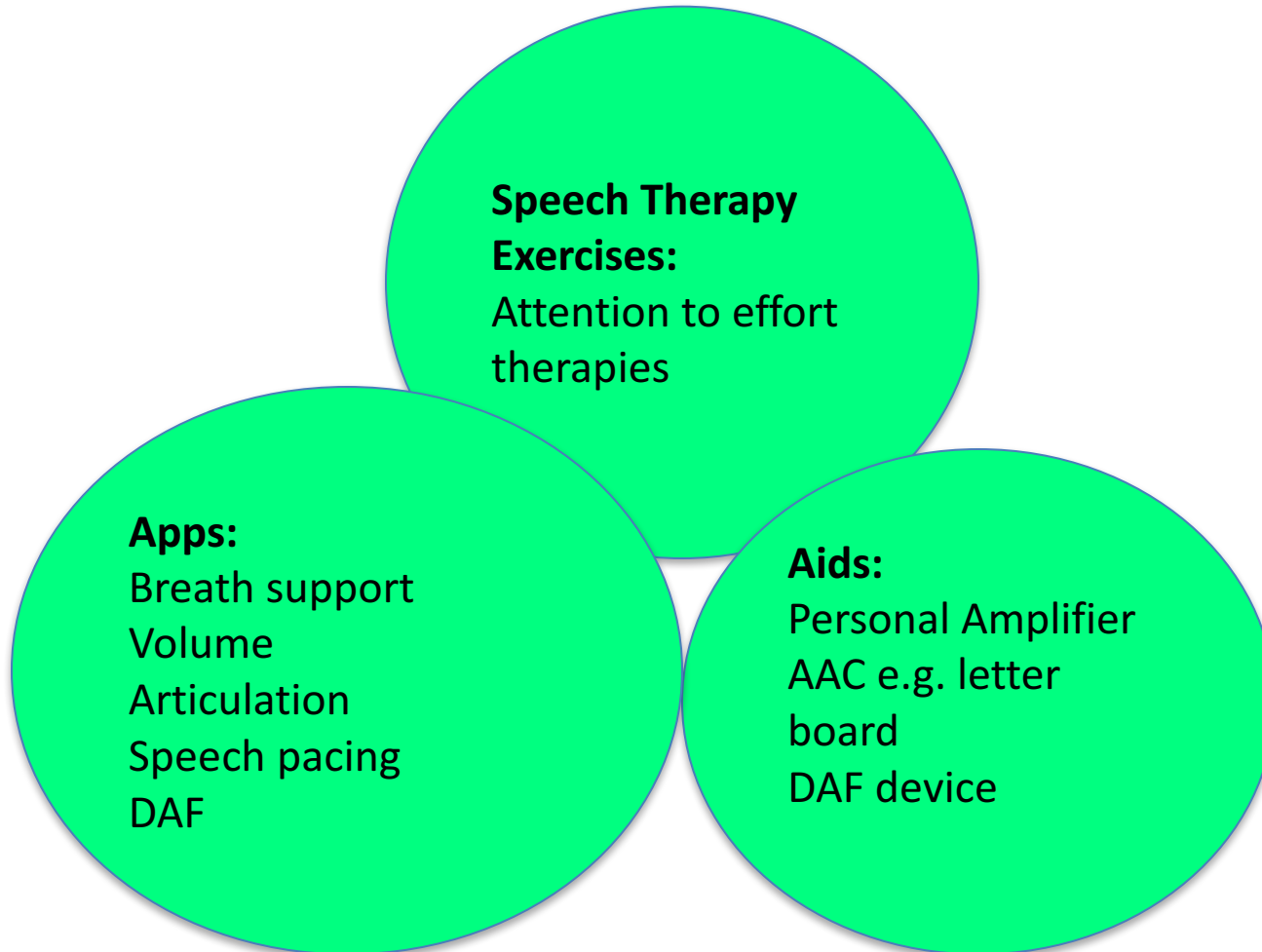
*Doesn't affect everybody and timing and extent is different for everyone*

Be one step ahead:

- Aim to actively maintain speech clarity and vocal strength
- Aim to be aware of and spot early signs of swallowing difficulties




# What you can do to help: Speech & Voice



# Speech & Voice: Speech Therapy Approaches

- 'Attention to effort' therapies  
e.g. Lee Silverman 'LSVT'
- Breath support work
- Vocal and resonance exercises
- Over-articulation exercises
- Pacing and syllable segmentation



Singing  
involves  
lots of  
these!



[www.singtobeat.co.uk](http://www.singtobeat.co.uk)



Video from 'Speak Out' explaining 'attention to effort therapies' or

'Speaking with Intent'



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# Voice: Apps for Breathing



## **Breathe+ Simple Breath Trainer**

Breathe In. Breathe Out.

[Dynamic App Design LLC](#)

★★★★★ 4.7, 1K Ratings

Free · Offers In-App Purchases

Free  
Apple



## **iBreathe – Relax and Breathe**

Simple Guided Breathing

[Jade Lizard Software LLC](#)

★★★★★ 4.8, 397 Ratings

Free · Offers In-App Purchases

Free  
Apple



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# Speech & Voice: Apps for Articulation

## App Store Preview



### **Astound - Voice & Speech Coach** 4+

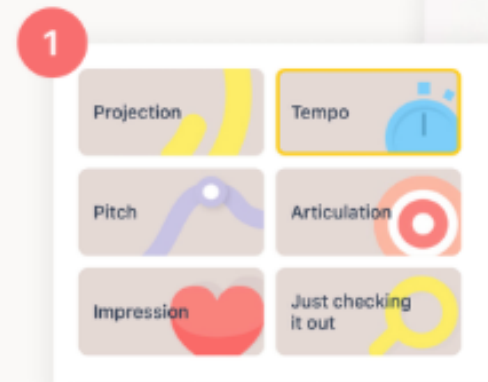
Make Yourself Heard

Astound Inc

★★★★★ 4.8, 252 Ratings

Free · Offers In-App Purchases

Free to try then monthly subscription of £3 or £4  
Apple only



# Speech & Voice: Apps for Articulation



**Word Vault Essential**

HomeSpeechHome PLLC

★★★★★ 4.2, 10 Ratings

Free · Offers In-App Purchases

Free  
Apple only

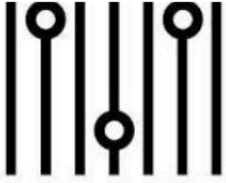
List of words and phrases of different length – can select number of syllables




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# Speech & Voice: Apps for Volume

Bla Bla Bla



Bla Bla




Approved by  
my therapy


Clinician Rating  
4.5 (3) ★★★★★

User Rating  
★★★★★

**Medical Condition**  
Stroke & Brain Injury apps

**Will help with**  
 Communication

**Description**  
Bla Bla Bla is a sound reactive application for iPhone and iPad. This app derives from an exercise called "Parametric Mask". A variety of animations that move with voice. Works on recovery of voice and volume control. Volume sensitivity can be varied.  
Tested: 1/4/17 Version: 2.0 apple.

 Get App

**Price: Free**

Free  
Apple only

# Speech & Voice: Apps for Volume



Decibel X - Sound Meter dBA,  
Noise Detector

SkyPaw Co.,Ltd Tools

★★★★★ 1,596

PEGI 3

Contains ads · Offers in-app purchases

Add to wishlist

Install

£4.99

Apple and Android

## App Store Preview



**Speak Up For Parkinson's** 4+

Sandcastle

★★★★★ 3.5, 2 Ratings

Free

Free

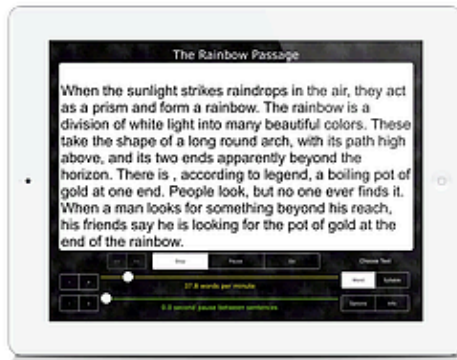
Apple only



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# Speech & Voice: Apps for Pace



## SPEECH PACESETTER PRO

Designed specifically for clients with stuttering, cluttering and dysarthria, Speech Pacesetter Pro offers clever visual and audio cues that can effectively reduce rate of speech and improve speech clarity. Includes a built-in library of short stories and allows you to create and save a library of custom reading passages.



£7.99

Apple only



## SPEECH PACESETTER

The original version of Speech Pacesetter PRO. Speech Pacesetter uses effective visual and sound cues to help individuals pace their rate of speech. Included phonemically balanced passages and a choice of visual cues.



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# Speech & Voice: Aids for Communication

- **Low tech** e.g.  
Letter board/AAC,  
Communication passport

*Via SLT, Google or self-made*

A	About	All	Also	An	And	Any	Are	As	At	Be	Because	Been	Before
But	By	Can	Come	Could	Did	Do	Does	Don't	Down	Even	Feel	For	From
Get	Give	Go	Good	Had	Has	Have	He	Hello	Help	Her	Him	His	How
I	I am	If	In	Is	It	Just	Know	Let	Like	Look	Make	Many	May
Maybe	Me	Might	More	Most	Move	Much	Must	My	Need	No	Not	Now	Of
Off	Okay	On	One	Only	Or	Other	Ouch	Our	Out	Over	Please	Put	Rest
Said	Say	See	She	Should	So	Still	Such	Take	Talk	Than	Thanks	That	The
Their	Them	Then	There	These	They	Think	This	A	B	C	D	Delete Letter	•
Those	Time	To	Too	Up	Under	Us	Use	E	F	G	H	Space	That's not what I meant
Want	Was	We	Were	What	When	Where	Which	I	J	K	L	M	N
Who	Why	Will	With	Would	Yes	You	Your	O	P	Qu	R	S	T
					?	!	,	U	V	W	X	Y	Z
					\$	:	Message Code	-s	-ed	-ing	Hold On...	Start Over	I'm Finished
1	2	3	4	5	6	7	8	9	0	Please separate each letter/word as I point to it.			

Please do not laminate this board if it is used with a laser pointer.

AlphaCore Course © Amy Fowler

# AlphaCore

- **High tech** e.g.  
I-pad/tablet based,  
Lightwriter

*Via SLT*

*NB Huge range & Individual*



# Speech & Voice: Aids for Fluency



**Parkinson's Speech Aid**

Janus Development Group, Inc.

Free

Free  
Apple

*Example only -  
others are  
available and  
should be chosen  
and tried with an  
SLT*

Fluency Device  
from Voice  
Amp.net  
£800



Fluency VA601i

# Speech & Voice: Aids for Volume



£54

Available from  
Parkinson's UK  
website



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# What you can do to help: Language

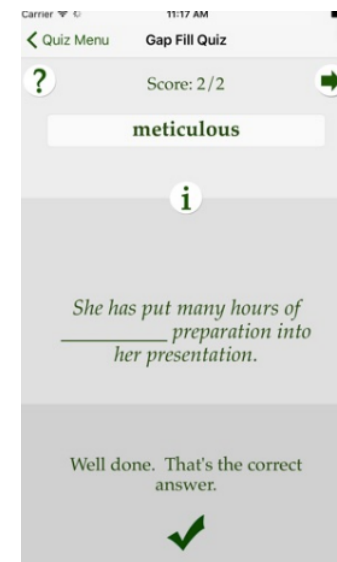
- Maintain social interaction
- Maximise conditions for communication e.g.
  - Talk 1:1
  - Reduce background noise and distractions
  - Avoid rushed situations
  - Save big conversations for your best time



# What you can do to help: Language



- Play language focused games e.g. category generation, describing-guessing games (tailor to your interests!)
- Use a vocab app e.g. Wordbrag
- Create a small photo reference book
- Ask GP for referral to SLT

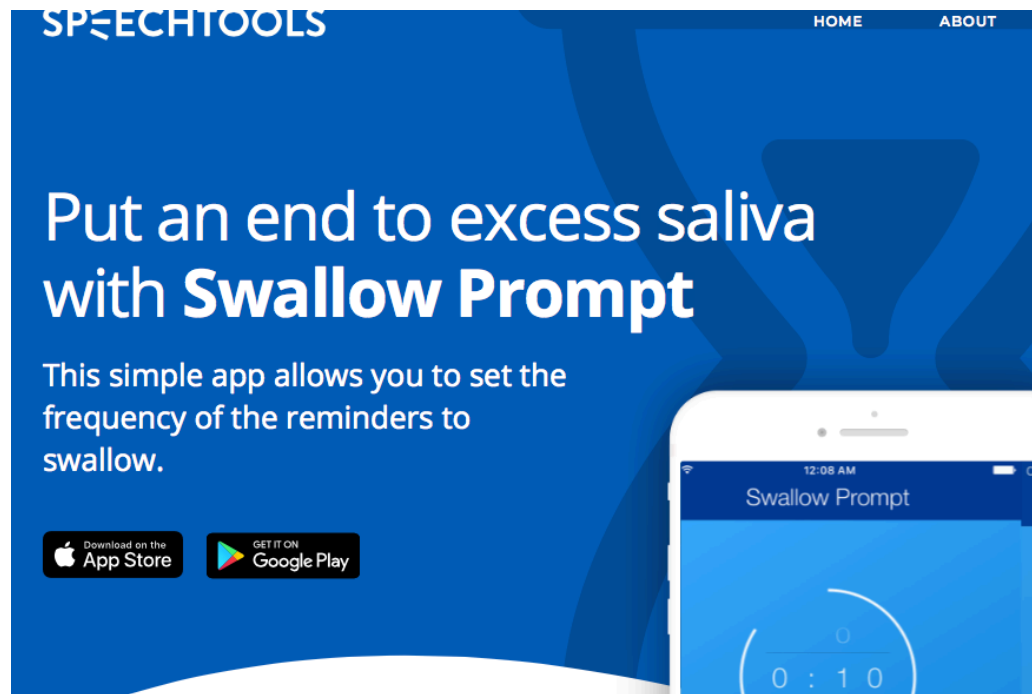


# What you can do to help: Saliva Management and Swallowing

- Good oral hygiene
- Upright posture
- Lip seal exercises
- Swallow reminder app e.g. Swallow Prompt
- Sip water regularly



# Saliva Management and Swallowing Apps



99p  
Apple and  
Android

Featured on  
Parkinson's UK  
website



RECOMMUNICATE SPEECH



# What you can do to help: Swallowing, Eating and Drinking

- Avoid 'high risk' foods e.g. nuts, whole grapes
- Consciously chew and swallow
- Avoid multi-tasking e.g. talking when eating
- Always sit upright

Disclaimer: general advice only, seek specific assessment and advice via NHS Health Professional if concerned



# What you can do to help: Swallowing, Eating and Drinking

1. Go to GP
2. Assessed by an SLT



- Modified texture diet
- Thickened drinks e.g. Slo, Thick n Easy
- Swallow manoeuvres and exercises



# Modified Texture Diet and Thickened Drinks




# Modified Texture Diet

01225 753 636 **apetito** Customer log in

Our food ▾ Our services ▾ About us ▾ Careers ▾

Home ▸ Our range ▸ Texture-Modified



## Texture-Modified Diets

Search by product name or code...

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**Easy to prepare, nutritionally balanced delicious puréed dishes** See Our Pureed Range

### Puréed Ready Meals


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WELCOME TO **SIMPLY PUREE**

Life with Dysphagia is difficult enough without the worry that mealtimes can bring along with the chore of preparing food. With our textured and reshaped pureed range, we offer a visually attractive, delicious and nutritionally balanced meal bringing a sense of normality back to your loved ones.

**TRADITIONAL CHICKEN & STUFFING - PUREED READY MEAL**  
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PUNJAB KITCHEN  
• AUTHENTIC •  
**HALAL MEALS**  
WITH THAT  
**homecooked**  
TASTE

**VEGETARIAN**  
- P A K O



# Thickened Drinks

**Slō® Drinks**

✉ support@slodrinks.com ☎ +44 (0)345 2222 205



MENU



If you are living with dysphagia, then you know that to maintain good health, you need a wide range of thickened drinks that flow slowly.

We have therefore created a reliable, convenient method for you to change drinks that meet all your healthcare needs into Slō Drinks and all of them are:



RECOMMUNICATE SPEECH

# Thickened Drinks





## *If you only remember this...*

- Look out for early signs of swallowing difficulties and take action
- Your GP should be able to refer you to an SLT
- Aim to monitor and maintain your speech, language and voice through use, exercises and games: find what suits you
- Attention to effort principle: over-articulate, regulate your pace and use your breath support when speaking





# Come singing!

**North Walsham and District Skylarks – 1st and 4th Wednesdays of each month.** Sacred Heart Church Hall, Kings Arms Street, North Walsham NR28 9JP. 11am for tea/coffee, singing 11:30am until 12:30pm.

[View/download class poster \(PDF\)](#)



[www.playingforcake.uk](http://www.playingforcake.uk)





