

# Speech and Language Therapy

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# Session outline

- Communication in Ataxia
- Research Update
- Take away messages

# What determines successful communication?

## Speech :

- **Breath support**
- **Voice quality**
- **Speech sound articulation**

## Other factors:

- **Fatigue**
- **Attention**
- **Confidence**
- **Speaking Environment**
- **Communication partner**
- **Speaking Opportunities**

## Language :

- **Word finding**
- **Grammar**
- **Turntaking**

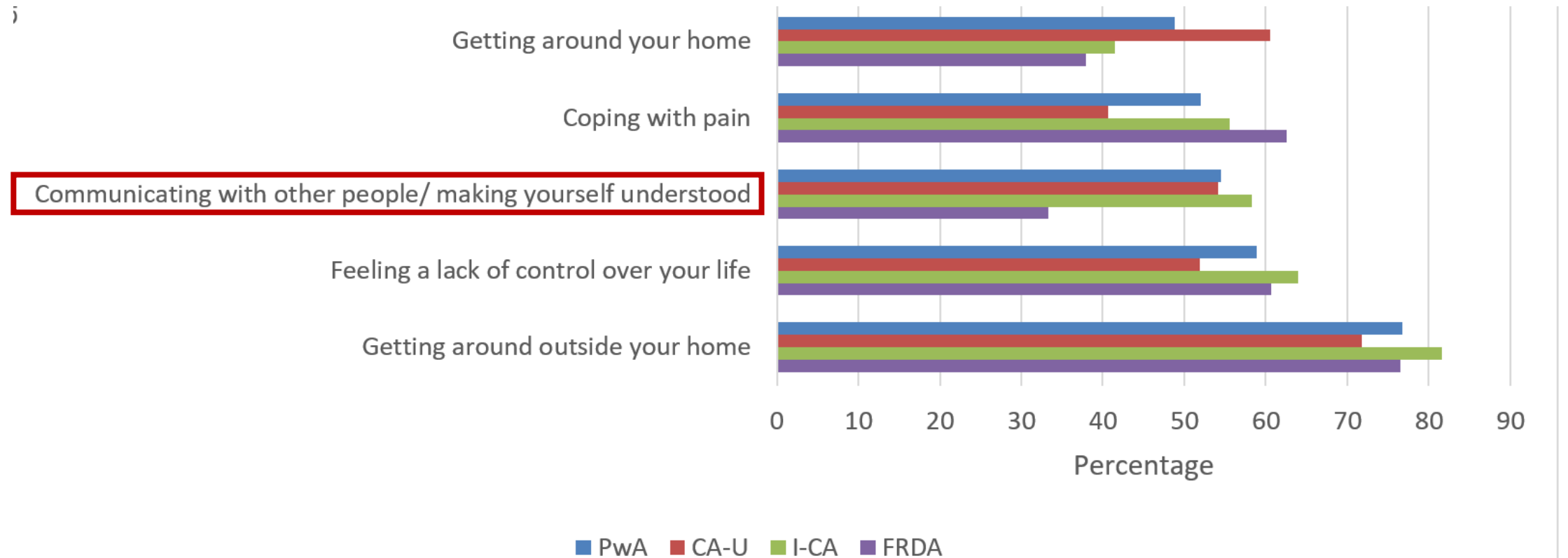
# What we know about challenges experienced by people with ataxia (Lowit et al. 2023)

**Ataxia UK  
member survey:**

**Frequency of  
medical  
symptoms**

Health problem	All PwA (n=366)
1. Balance problem/unsteadiness	97
2. Walking	90
3. Clumsiness	86
4. Falling	80
5. Slurred speech/dysarthria	74
6. Standing	73
7. Using hands/dexterity	70
8. Tiredness/fatigue/lack of stamina	68
9. Bladder incontinence	60
10. Coughing/choking	47
11. Weakness	47
12. Dizziness	45
13. Swallowing	39

# Impact of challenges experienced by people with ataxia



# Potential impact of communication difficulties

- 66% said they avoided social situations or interactions
- 51% reported lack of confidence or low self-esteem
- 42% were lonely or isolated from friends and family
- 42% were unable to work

# How can speech and language therapy help?

- Until 5 years ago, no studies progressive ataxia
  - Therapists unclear of how to support people effectively
  - Patients often offered advice only
  - Frequently no formal longterm support in place
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- Since 2018, a number of different techniques have been investigated:

Author	Participants	Treatment	Intensity	Positive Outcomes
<b>Park [2018]</b>	MSA-C, n=9	SPEAK OUT® programme	16 sessions over 4 weeks	<ul style="list-style-type: none"> <li>• voice quality</li> <li>• loudness,</li> <li>• pitch range</li> <li>• speech rate</li> <li>• intelligibility</li> </ul>
<b>Vogel et al. [2019]</b>	ARSACS, n=7	Home-practice app with multimodal speech exercises	Daily practice over 4 weeks	<ul style="list-style-type: none"> <li>• intelligibility</li> <li>• naturalness</li> </ul>
<b>Lowit et al. [2020]</b>	Mostly Friedreich's ataxia, n=20	LSVT LOUD® (LSVT-X)	16 sessions over 8 weeks	<ul style="list-style-type: none"> <li>• MPT</li> <li>• voice quality</li> <li>• Patient reports</li> </ul>
<b>Chae et al. [2020])</b>	MSA-C, n=9	water resistance therapy	6 sessions over 6 weeks	<ul style="list-style-type: none"> <li>• voice quality</li> <li>• maximum phonation time (MPT)</li> <li>• intelligibility</li> </ul>

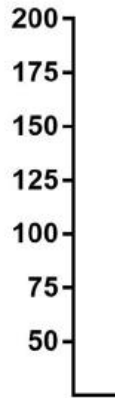


Author	Participants	Treatment	Intensity	Positive Outcomes
<b>Sonoda et al. [2021]</b>	MSA-C, n=15	multimodal speech exercises	20 sessions over four weeks	<ul style="list-style-type: none"> <li>oral diadochokinesis</li> <li>MPT</li> </ul>
<b>Vogel et al. (2022)</b>	SCA1, 2, 3 & 6, n=16	Home-practice app with multimodal speech exercises	Daily practice over 4 weeks	<ul style="list-style-type: none"> <li>Intelligibility</li> <li>Voice quality</li> <li>Pitch and loudness variation</li> </ul>
<b>Lowit et al. (2022)</b>	FA, SCA3, 6, 28, ICA, CANVAS & autoimmune ataxia, n=9  Plus a further 36 to date offered through Ataxia UK	Clear Speech Together (CST)	4 individual sessions over 2 weeks plus 20 group sessions over 4 weeks	<ul style="list-style-type: none"> <li>Intelligibility</li> <li>Voice quality</li> <li>Confidence</li> <li>Participation</li> </ul>
<b>Lowit et al. (ongoing)</b>	FA, n=6	LSVT Artic	16 sessions over 4 weeks	
<b>Lowit et al. (ongoing)</b>	MSA-C	Clear Speech Together (CST) vs standard therapy	CST vs 1 session a week for 6 weeks	

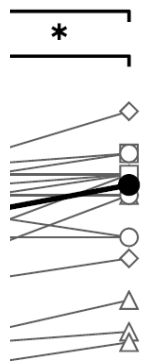
# Intelligibility Improvements in Vogel et al.

## SpeechATAX Exercises:

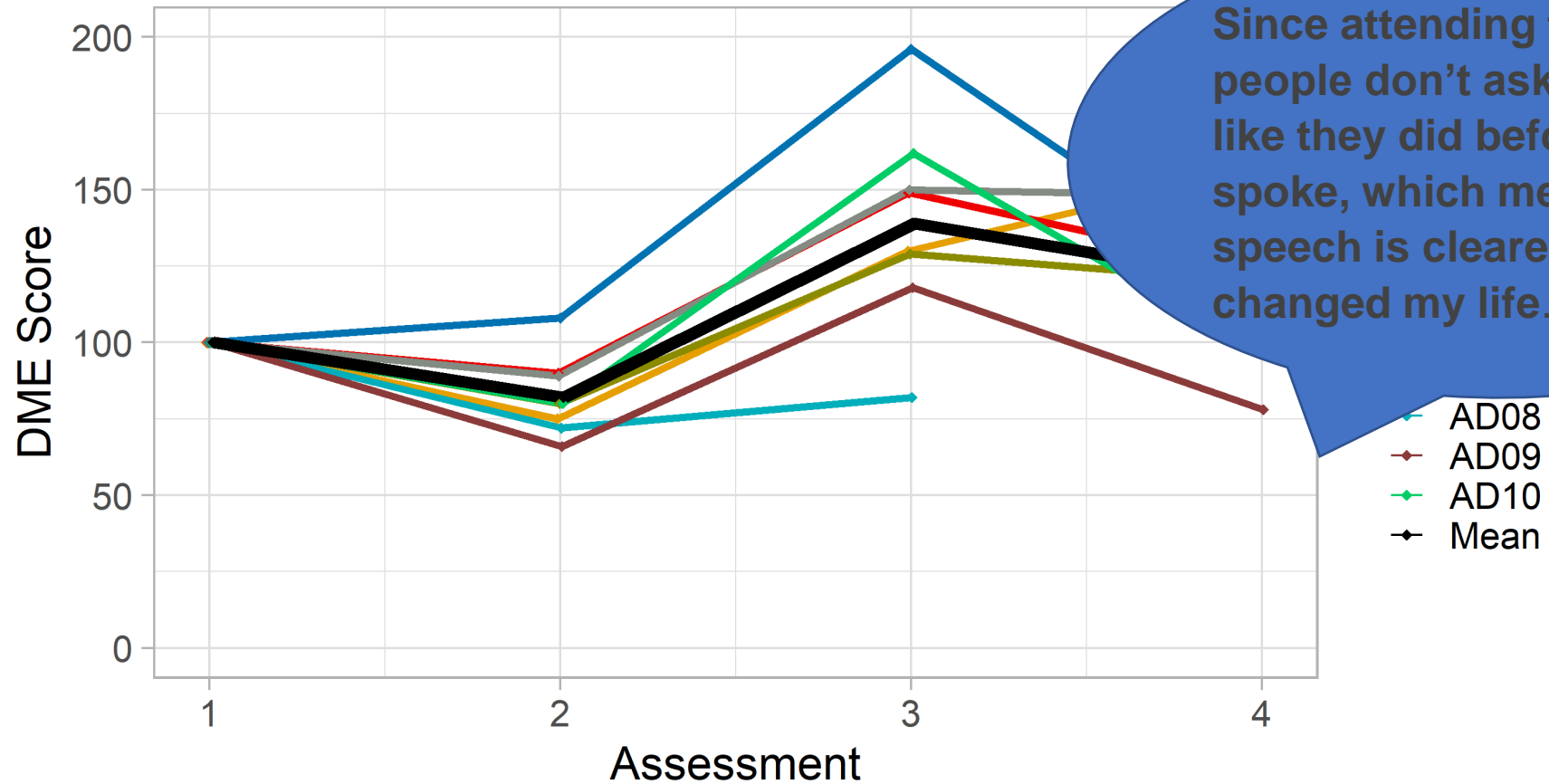
1. Long Vowel
2. Vocal Control - Loudness
3. Vocal Control - Pitch
4. Emphasis/Stress
5. Articulation
6. Reading
7. Daily Question



SpeechATAX 



# Intelligibility Improvements in CST



Since attending the group, people don't ask "what" like they did before when I spoke, which means my speech is clearer. It has changed my life.

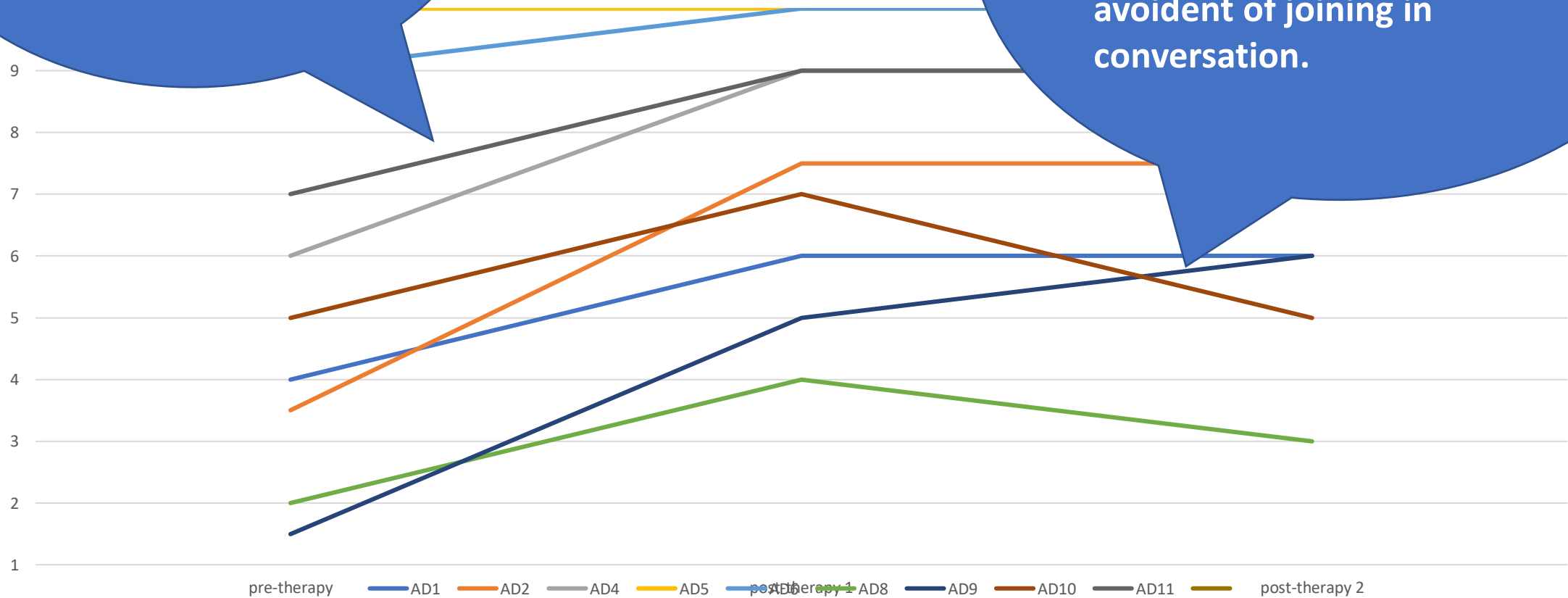
- AD08
- AD09
- AD10
- Mean

# Results in Confidence - 6

It has given me more confidence to speak when in company rather than just allow the conversation to go on around me.

My self confidence in terms of my speech has really improved. Not only am I speaking more but I am using longer words and not so avoident of joining in conversation.

Confidence Rating



# CPIB: Does your condition interfere with

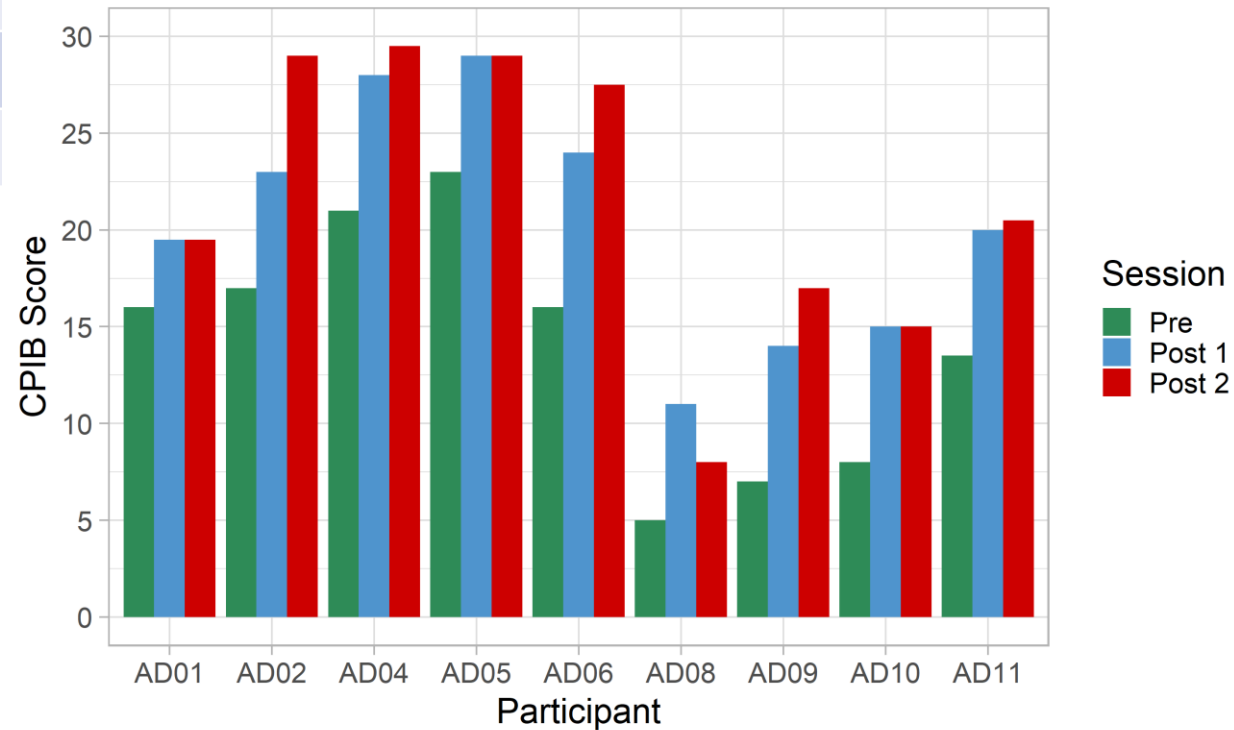
1. ....talking with people you know?
2. ...communicating when you need to say something quickly?
3. ...talking with people you do NOT know?
4. ....communicating when you are out in your community (e.g., errands, appointments)?
5. ...asking questions in a conversation?
6. ...communicating in a small group of people?
7. ...having a long conversation with someone you know about a book, movie, show or sports event?
8. ....giving someone detailed information?
9. ....getting your turn in a fast-moving conversation?
10. ...trying to persuade a friend or family member to see a different point of view?

Less self-conscious

More confident talking in larger groups

More likely to talk when tired

Less worried to use the phone



# Why does group therapy work?

## Social Benefits

Meeting other people with ataxia

Feeling you're not the only one who has the problem

Find out more about different ataxia presentations and severities and associated problems

Sharing coping strategies

Sharing frustrations

Psychological support

## Speech Benefits

Opportunity to talk, everybody gets a turn

Feedback from others / constructive criticism valuable to learning

Taking cues from one another / hearing others use speech strategies helps and motivates to integrate them into own speech

Helps conquer apprehension about speaking in a more supportive environment / gives confidence talking with others

Improves motivation to practise

Allows practice of real-life speaking situations, re-establishment of roles

# Speech Therapy CAN support people with progressive ataxia

Different approaches but generally focusing on

- Voice
- Clear speech/articulation
- General consensus that intensive therapy is better but needs to be determined
- Transfer and maintenance important – group and/or family involvement
- Not a one size fits all situation – choose approach carefully



# Other issues to consider

- **Voice banking:** irrespective of effective speech therapy, voice might degrade to level where aids are necessary
- Voice banking when speech is still good helps make these aids more personalised and acceptable to the person with ataxia
- **Language problems / cognitive issues:** some types of ataxia are associated with cognitive decline, which can also affect communication and should be looked at
- **Swallowing problems** do not affect communication but can pose a serious health risk and should be discussed with the SLT