

## SPEECH PROBLEMS AND PARKINSON'S

### A. Speech Changes in Parkinson's

#### How Speech is Made:

When we speak, three motor systems work together in a wonderful and complex way:

- the breathing system supplies the energy for speech
- the larynx produces sound by converting the air from the lungs into voice
- the throat and mouth amplify the voice and by making small, precise movements, turn it into speech

#### Speech and Parkinson's:

While some people with Parkinson's (PD) experience little or no change in their speech, many do develop speech difficulties. Muscle movements in the three motor systems become stiffer, smaller and more difficult to initiate. Typically these changes affect:

- breathing and voice
- pronunciation
- prosody (rhythm, intonation, and speaking rate)

Speech researchers have recently noted another way PD affects speech: it disrupts the feedback mechanism that we use to monitor how we talk:

1. **Breathing/Voice:** Often the first change noted in speech is loss of volume resulting in a soft or fading voice. The first indication may be frequent requests by family and friends to repeat what has been said. Some people also note changes in the voice quality: it sounds breathy, tremulous or hoarse.
2. **Pronunciation:** Words may become slurred or unclear. In particular, consonant sounds can be imprecise or omitted, eg. the "k" in "lake" or "making".
3. **Prosody:** There may be changes in rate and rhythm. Speech can become faster, resulting in a headlong rush towards the end of a sentence. Some people experience difficulty beginning conversations, either with long hesitations or with uncontrolled repetitions of words or phrases. Reductions in intonation may produce a monotonous voice lacking in expression.
4. **Feedback:** If their speech feedback mechanism is disrupted, people may not be aware of how their speech really sounds. The most common example is the perception of loudness. A person with PD may feel he/she is speaking perfectly audibly, when in fact listeners are straining to hear. If he/she speaks in a normal loudness he/she feels they are shouting. Getting used to "speaking loudly" can be both challenging and very useful.

### B. Improving Your Speech

If you are having speech problems it is useful to consult a speech-language pathologist. He or she will evaluate your speech, give you information and advice and may suggest a program of speech therapy. We hope you also find the following general suggestions helpful:

### **Speaking:**

- In PD, good speech often requires conscious effort. Pay attention to **how** you are speaking as well as what you are saying.
- Good posture is important for a good voice: stand or sit as upright as possible.
- Exaggerate the loudness of your voice while talking: think loud!
- Group your thoughts clearly:
  - short, concise phrases are easier to understand than longer ones
  - when using longer sentences, pause to give a listener time to understand

### **Environment:**

- Face your listener. We all lip-read to some extent and your listener will benefit by watching your face.
- Use extra effort to speak loudly in a noisy environment. Background noise muffles your speech and can distract your listeners.
- Be near your listener. Avoid trying to talk to someone in another room.

### **Feedback:**

- Encourage family and friends to tell you when they have difficulty understanding.
- Their feedback is important. It lets you know when you need to make a conscious effort to speak louder.
- You should talk for yourself whenever possible and not rely on others to talk for you.

## **C. A Note to Listeners**

### **Small things can make a big difference:**

- Face the speaker and give him or her your full attention.
- Be aware that facial masking in PD reduces emotional expression and may give the mistaken impression that the person is bored, depressed or uninterested. Don't take facial cues at their face value.
- Be a relaxed listener. Give the speaker plenty of time to start and don't interrupt.
- Indicate that you understand by nodding or saying "yes".
- When in doubt, report back what you thought was said and ask if it is correct.
- If the speech is too quiet, suggest that the person talk in a voice that feels very loud.
- If the person is in a speech or voice therapy program, you can help by reinforcing the techniques recommended by the speech-language pathologist.

#### Sources:

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