
UPCOMING EVENTS

- **Let's Get Loud** | Mondays, April 1, 8 & 15
Learn more & register: <https://www.parkinson.bc.ca/loudvoice-24>
- **Rock Steady Boxing (Level 3)** | Tuesdays, April 2, 9, 16, 23 & 30
Learn more & register: <https://www.parkinson.bc.ca/rsb-marapr24>
- **DOPABEATS (Series 2)** | Wednesdays, April 3, 10, 17, 24 & May 1
Learn more & register: <https://www.parkinson.bc.ca/dopamar-24>
- **Songshine with Joani (Series 2)** | Thursday, April 4
Learn more & register: <https://www.parkinson.bc.ca/songshinefeb-24>
- **Communication and Swallow Workshop (Kamloops)** | April 6
Learn more & register: <https://www.parkinson.bc.ca/commswall-ka24>
- **Nanaimo Regional Conference** | Saturday, April 13
Learn more & register: <https://www.parkinson.bc.ca/nanaimoregional24>
- **Intimacy with Parkinson's** | Tuesday, April 16
Learn more & register: <https://www.parkinson.bc.ca/intimacy-24>
- **Victoria Regional Conference** | Saturday, May 4
Learn more & register: <https://www.parkinson.bc.ca/victoriaregional24>
- **Seated Exercise Circuit** | Thursdays, May 9, 16, 23 & 30
Learn more & register: <https://www.parkinson.bc.ca/seatedexercise24>
- **SongShine with Joani (Series 3)** | Thursdays, May 9, 16, 23, 30, and June 6 & 13
Learn more & register: <https://www.parkinson.bc.ca/songshinemay-24>

For a full list of our upcoming events, visit www.parkinson.bc.ca/events/education-events/

UPCOMING FUNDRAISING EVENTS

Donate a Car Canada

[Donate a Car Canada](#) accepts vehicle donations for Parkinson Society British Columbia (PSBC)! Free towing is provided in most areas across Canada. When you donate your car, truck, RV, boat, or motorcycle to PSBC through Donate A Car Canada, it will either be recycled or sold at auction (depending on its condition, age, and location). After your vehicle donation is complete, PSBC will send you a tax receipt and will put your gift to good use.

We are looking for more Champions!

Do you want to help fund research, grow support networks, and improve the quality of life for those living with Parkinson's disease (PD)? Become a Champion for Parkinson's and plan your own independent community fundraising event! Contact us at events@parkinson.bc.ca or 1-800-668-3330.

TIP JAR

The Tip Jar is where we share advice from Parkinson's community members on a wide range of topics from daily lifestyle hacks to safety. This month we share a tip about adaptive clothing:

Clothing with features such as magnetic closures, Velcro fasteners, or larger buttons can make dressing and undressing easier for individuals with restricted hand mobility or tremors.

Additionally, choosing clothing made from stretchy or soft materials can reduce friction and make it easier to maneuver in and out of garments. By selecting adaptive clothing options, individuals with Parkinson's can maintain their independence and comfort while dressing, saving time and energy for other activities throughout the day.

Do you have any tips or tricks that you would like to share with the Parkinson's community? These can be tips from something that works well, to eating and dressing, to getting out of bed or travelling! All tips and tricks are welcome! Please share your ideas at info@parkinson.bc.ca.

NEWS & ANNOUNCEMENTS***April is Awareness Month***

Every year, Parkinson Society British Columbia (PSBC) dedicates the month of April to raising awareness of the unique experiences of people with Parkinson's, and the needs of our community. Parkinson's Awareness Month is an opportunity to engage the public in expanding their understanding of Parkinson's, and the profound effects it has on the lives of over 17,500 British Columbians living with the disease. This April, we want to spread the message that *Parkinson's is **more than a tremor***. The disease can affect all aspects of one's life, and there is currently no known cure.

Our 2024 campaign highlights:

- **Video Project:** A video series depicting the varied experiences of individuals affected by Parkinson's will be released through April. The project aims to foster a deeper public understanding of the disease.
- **Social Media Campaign:** Educational videos, interviews, and Parkinson's facts will be published across our social media channels (Instagram, Facebook, and YouTube).
- **Radio Partnerships:** Public service announcements (PSAs) have been secured across the province to help shed light on the diversity of symptoms experienced by people with PD, especially in regions boasting substantial listenership and a higher prevalence of Parkinson's.

We invite you to take part in our awareness campaign through:

- **Awareness Contest**

We encourage group members to actively participate by:

- Taking photos of our transit ads, landmark lighting, or library displays.
- Posting the images on Instagram (@parkinsonsbc) or Facebook (@ParkinsonSocietyBritishColumbia) with appropriate tags.
- Alternatively, photos can be emailed to info@parkinson.bc.ca.

Each photo submission is an entry to win a \$50 Save On Foods gift card.

- **Digital Postcard**

A unique initiative for members of the general public, those in virtual support groups, or individuals with writing difficulties. Find the digital postcard at [PD Postcard 2024](#) and encourage the PD community to share their experiences.

- **Story Sharing**

Individuals are also encouraged to share their Parkinson's journey through our story submission form at [Share Your PD Story](#).

Register now for our Annual General Meeting (AGM) 2023

We invite you to join us for our AGM on Saturday, April 20, 2024, featuring guest speaker, Dr. Martin McKeown! Dr. Martin McKeown is the Medical Advisor to the Board of Directors, the Director of the Pacific Parkinson's Research Centre at UBC and a clinical neurologist with an interest in movement disorders, particularly Parkinson's. He will share his expertise and knowledge looking back on the past ten years of advances in therapy and milestone discoveries in research. He will also look forward to some of the promising new therapies and exciting research on the horizon.

Register today at <http://www.parkinson.bc.ca/agm>

Our 2023 Annual Report and financial statements will be available on our website shortly.

Please be advised this is a member-only virtual event. Non-members interested in attending must pay the \$25 membership fee at www.parkinson.bc.ca/membership, or by contacting Susan Atkinson, *Donor & Member Services Coordinator*, at satkinson@parkinson.bc.ca or 1-800-668-3330 ext. 263.

Renew your Membership!

Renew or join as a member! It's that time of the year again. If you haven't already, consider joining or renewing your membership with Parkinson Society BC (PSBC) to take advantage of a variety of benefits and lend your voice to the community. Together, we're better. [[learn more](#)]

DISCUSSION TOPIC: Sensory Changes in Parkinson's

Discussion Questions

1. How have sensory changes, such as alterations in vision, hearing, smell, taste, and touch, impacted your daily life with Parkinson's disease (PD)?
2. What strategies have you found most effective in managing sensory disturbances associated with PD? Have you discovered any techniques or resources that have helped alleviate symptoms or improve your overall quality of life in relation to sensory changes?
3. How do you navigate discussions about sensory changes with your healthcare providers, and do you feel adequately supported in addressing these issues within

your treatment plan? Additionally, what improvements or additional resources would you like to see available to better address sensory alterations in the context of PD management?

Parkinson's disease (PD) presents not only with motor symptoms but also with a spectrum of sensory alterations that significantly impact individuals' daily lives. Among these sensory changes, alterations in vision, hearing, smell, taste, and touch pose substantial challenges for those living with PD. Understanding the nature and implications of these sensory changes is essential for developing effective management strategies to improve the quality of life for affected individuals.

Vision

Approximately 75% of people with Parkinson's disease (PD) experience oculomotor symptoms, which pertain to the movement of the eyes, along with changes in vision and eyelid function (Armstrong, 2019). These changes can significantly impact the quality of life and increase the risk of falls (Oppo et al., 2020). Vision changes can range from reduced contrast sensitivity to difficulties with depth perception, making tasks like reading, driving, and navigating crowded spaces challenging for individuals with PD. Furthermore, individuals may experience visual disturbances, such as hallucinations and illusions, often due to medication side effects or changes in brain chemistry (Oppo et al., 2020).

It is crucial for individuals with PD to discuss all eye-related problems with their neurologist, as vision issues may relate to inadequate medication management. Regular examinations by an ophthalmologist, preferably one specializing in neurological disorders, are also recommended to monitor any changes in vision over time. It's essential to refrain from making any changes to medications without consulting a healthcare professional.

It's important to note that PD itself does not cause blindness or loss of vision. However, similar to other motor functions, such as walking or writing, movement of the eyes can be affected by a

lack of dopamine in the brain. Rather than being smooth and effortless, eye movements can become jerky and require extra effort (Armstrong, 2019).

To mitigate visual challenges in PD, optimizing lighting conditions in the home environment can improve contrast sensitivity and reduce the risk of falls. Occupational therapy interventions focusing on visual perception and safety awareness can also be beneficial in helping individuals adapt to changes in their vision and navigate their surroundings more effectively.

Hearing

Research indicates that PD may lead to difficulties in processing auditory information, resulting in challenges with speech comprehension and sound localization—a condition known as auditory processing disorder (APD) (Armstrong, 2019). Symptoms of APD can include difficulty differentiating between similar words, frequent requests for repetition, or appearing confused after others speak. Communication difficulties stemming from hearing impairments can contribute to social isolation and reduced quality of life, underscoring the importance of regular hearing assessments to identify any deficits early on.

Studies have shown that changes in specific brain regions contribute to APD in individuals with PD (Armstrong, 2019). Additionally, dopamine depletion is believed to play a role in sensory processing, suggesting the potential benefits of early intervention with dopaminergic medication for individuals with PD.

Recent research has highlighted an elevated risk of various hearing impairments in people with PD, often exacerbated by age-related changes (Armstrong, 2019). This emphasizes the necessity of evaluating hearing issues to enhance overall quality of life. Treatment for APD typically involves a multidisciplinary approach, including consultation with audiologists, ear nose and throat (ENT) specialists, and speech-language pathologists (Armstrong, 2019). Occupational therapists can also offer valuable support through exercises, listening devices, and environmental modifications to optimize auditory function and communication abilities.

While auditory processing issues may not be widely discussed in PD conversations, understanding the link between sensory processing and neurological dysfunction empowers individuals with PD to access appropriate resources and therapies for effectively managing auditory symptoms.

Smell

Not all individuals with a reduced sense of smell will develop Parkinson's disease (PD), but it is noteworthy that most individuals with PD experience some degree of olfactory impairment. In fact, studies have reported rates of smell impairment in PD range from 75% to 95%, compared to 25% in the general population (Haehner et al., 2019). Reduced sense of smell, known as hyposmia, often serves as an early indicator of Parkinson's disease (Haehner et al., 2009; Doty, 2012). Olfactory impairment is associated with a 10% increased risk of future PD (Ponsen et al., 2004). Although the exact mechanisms underlying olfactory dysfunction in PD are not fully understood, recent research has indicated that individuals with Parkinson's may have a smaller olfactory bulb, the brain region responsible for processing smells.

Moreover, in healthy individuals, the combination of hyposmia and impaired DaTscan (a non-invasive, FDA-approved test to assess the presence of Parkinsonian syndrome) is shown to be highly predictive of PD (Jennings et al., 2017). It also aids in distinguishing PD from other conditions associated with PD, such as essential tremor (ET) and atypical parkinsonian disorders like multiple system atrophy (MSA), progressive nuclear palsy (PSP), and corticobasal degeneration (CBD) (Busenbark et al., 1992).

Despite being considered a supportive criterion for PD diagnosis (Postuma et al., 2015), many individuals with PD have asymptomatic smell loss that does not progress over time (Katzenschlager et al., 2004). Interestingly, people with PD are often unaware of their smell impairment, contributing to its under-recognition (White et al., 2016).

This olfactory dysfunction can significantly impact one's ability to detect and differentiate odors, leading to diminished enjoyment of food and a reduced appetite. In some cases,

olfactory impairment can have significant impacts on mood and relationships, and pose safety risks, such as being unable to detect food burning or fire.

As a non-dopaminergic PD manifestation, there are currently no effective pharmacological treatments for smell impairment. However, certain strategies can help manage this symptom. These include incorporating aromatic herbs and spices into meals to enhance flavor perception, practicing good oral hygiene to maintain a sense of taste, and using scented products to stimulate the olfactory system.

Taste

Taste impairment, characterized by a diminished ability to perceive sweet, sour, bitter, and salty flavors, has been observed in individuals with Parkinson's disease (PD) (Cecchini et al., 2014). Although less studied compared to olfactory impairment, taste dysfunction is recognized as a notable aspect of PD pathology. Taste perception, mediated by taste buds, plays a crucial role in food acceptance or rejection (Scott, 2005).

Unlike olfactory impairment, which is recognized as an early biomarker of PD, taste impairment is less frequently observed in those with early-stage disease. Taste dysfunction in PD is more commonly reported in older people and may be associated with PD dementia, psychosis, and mild cognitive impairment (Cecchini et al., 2019). Evidence regarding the clinical relevance of taste impairment in PD remains inconclusive due to limited data.

Touch

While sensory changes in touch are less frequently reported in Parkinson's disease compared to other senses, some individuals may encounter alterations in tactile perception. These changes can include either a decrease or increase in sensitivity to touch.

For those experiencing decreased sensitivity, detecting sensations such as pain, pressure, and temperature may become challenging. Consequently, individuals with PD may face an increased risk of injuries and skin breakdown, especially in areas susceptible to pressure ulcers.

Individuals with reduced sensitivity must remain vigilant and take proactive measures to prevent injuries, such as regularly inspecting their skin and using protective padding in vulnerable areas.

Conversely, some individuals with PD may experience heightened sensitivity to touch, leading to sensations of discomfort or pain. This heightened sensitivity, often associated with conditions like peripheral neuropathy, may require targeted management strategies. Exploring techniques to alleviate discomfort, such as gentle massage, topical analgesics, or wearing soft, non-restrictive clothing, can help improve comfort and quality of life.

Peripheral neuropathy, characterized by nerve damage typically affecting the feet and legs, is more prevalent among individuals with PD (Doty and Hawkes, 2019). However, further research is necessary to fully understand the underlying mechanisms and develop targeted interventions.

Parkinson's disease is a multifaceted condition that can impact various aspects of sensory function, including vision, hearing, smell, taste, and touch. These sensory changes can significantly affect the quality of life, independence, and social participation of individuals living with PD. By understanding the nature of these sensory disturbances and implementing appropriate management strategies, individuals with PD can better navigate the challenges posed by altered sensory perception and enhance their overall well-being. Ongoing research into the underlying mechanisms of sensory changes in PD is crucial for the development of targeted interventions aimed at improving sensory function and quality of life for affected individuals.

References

- Armstrong, R. A. (2011). Visual Symptoms in Parkinson's Disease. *Parkinson's Disease, 2011*, 1–9. <https://doi.org/10.4061/2011/908306>
- Busenbark, K. L., Huber, S. J., Greer, G., Pahwa, R., & Koller, W. C. (1992). Olfactory function in essential tremor. *Neurology, 42*(8), 1631–1631. <https://doi.org/10.1212/wnl.42.8.1631>
- Cecchini, M. P., Federico, A., Zanini, A., Mantovani, E., Masala, C., Tinazzi, M., & Tamburin, S. (2019). Olfaction and taste in Parkinson's disease: the association with mild cognitive impairment and the single cognitive domain dysfunction. *Journal of Neural Transmission, 126*(5), 585–595. <https://doi.org/10.1007/s00702-019-01996-z>
- Cecchini, M. P., Osculati, F., Ottaviani, S., Boschi, F., Fasano, A., & Tinazzi, M. (2013). Taste performance in Parkinson's disease. *Journal of Neural Transmission, 121*(2), 119–122. <https://doi.org/10.1007/s00702-013-1089-7>
- Doty, R. L. (2012). Olfactory dysfunction in Parkinson disease. *Nature Reviews Neurology, 8*(6), 329–339. <https://doi.org/10.1038/nrneurol.2012.80>
- Doty, R. L., & Hawkes, C. H. (2019). Chemosensory dysfunction in neurodegenerative diseases. *Handbook of Clinical Neurology, 164*, 325–360. <https://doi.org/10.1016/b978-0-444-63855-7.00020-4>
- Haehner, A., Boesveldt, S., Berendse, H. W., Mackay-Sim, A., Fleischmann, J., Silburn, P. A., Johnston, A. N., Mellick, G. D., Herting, B., Reichmann, H., & Hummel, T. (2009). Prevalence of smell loss in Parkinson's disease – A multicenter study. *Parkinsonism & Related Disorders, 15*(7), 490–494. <https://doi.org/10.1016/j.parkreldis.2008.12.005>
- Haehner, A., Masala, C., Walter, S., Reichmann, H., & Hummel, T. (2019). Incidence of Parkinson's disease in a large patient cohort with idiopathic smell and taste loss. *Journal of Neurology, 266*(2), 339–345. <https://doi.org/10.1007/s00415-018-9135-x>
- Jennings, D., Siderowf, A., Stern, M., Seibyl, J., Eberly, S., Oakes, D., & Marek, K. (2017). Conversion to Parkinson Disease in the PARS Hyposmic and Dopamine Transporter–Deficit Prodromal Cohort. *JAMA Neurology, 74*(8), 933. <https://doi.org/10.1001/jamaneurol.2017.0985>
- Katzenschlager, R. (2004). Olfactory function distinguishes vascular parkinsonism from Parkinson's disease. *Journal of Neurology, Neurosurgery & Psychiatry, 75*(12), 1749–1752. <https://doi.org/10.1136/jnnp.2003.035287>

- Oppo, V., Melis, M., Melis, M., Tomassini Barbarossa, I., & Cossu, G. (2020). "Smelling and Tasting" Parkinson's Disease: Using Senses to Improve the Knowledge of the Disease. *Frontiers in Aging Neuroscience*, 12. <https://doi.org/10.3389/fnagi.2020.00043>
- Ponsen, M. M., Stoffers, D., Booij, J., van Eck-Smit, B. L. F., Wolters, E. Ch., & Berendse, H. W. (2004). Idiopathic hyposmia as a preclinical sign of Parkinson's disease. *Annals of Neurology*, 56(2), 173–181. <https://doi.org/10.1002/ana.20160>
- Postuma, R. B., Berg, D., Stern, M., Poewe, W., Olanow, C. W., Oertel, W., Obeso, J., Marek, K., Litvan, I., Lang, A. E., Halliday, G., Goetz, C. G., Gasser, T., Dubois, B., Chan, P., Bloem, B. R., Adler, C. H., & Deuschl, G. (2015). MDS clinical diagnostic criteria for Parkinson's disease. *Movement Disorders*, 30(12), 1591–1601.
- Scott, K. (2005). Taste Recognition: Food for Thought. *Neuron*, 48(3), 455–464. <https://doi.org/10.1016/j.neuron.2005.10.015>
- White, T. L., Sadikot, A. F., & Djordjevic, J. (2016). Metacognitive knowledge of olfactory dysfunction in Parkinson's disease. *Brain and Cognition*, 104, 1–6. <https://doi.org/10.1016/j.bandc.2016.01.004>