

BPPV: The One Visit Wonder!

Dizziness accounts for the primary complaint that necessitates 5.6 million clinic visits in the United States per year. Between 17% and 42% of these patients with vertigo received a diagnosis of benign paroxysmal positional vertigo (BPPV).¹

Benign paroxysmal positional vertigo (BPPV) is a disorder caused by problems in the inner ear. It is the most common cause of vertigo (spinning sensation) in adults. BPPV is benign, which means that it is not life-threatening, nor generally progressive. It is characterized by dizziness, nausea, and nystagmus (uncontrolled eye movements). The primary symptoms are caused by changes in body and head position. BPPV results from loose or dislodged crystals (Otoconia) that collect within a part of the inner ear.

The inner ear (Figure 1) specifically has two functions: 1) hearing, and 2) balance. It is a labyrinth of fluid-filled tubes encased within the temporal bone in the skull,

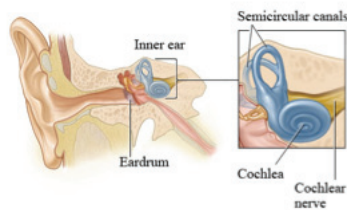


Figure 1

comprised of three sections: 1) cochlea – responsible for hearing; 2) semicircular canals – associated with balance; 3) vestibule – connects these two and contains

two other structures for balance and equilibrium, the Utricle and Saccule. The Semicircular canals respond to rotational movements (angular acceleration), are fluid-filled and contain motion sensors. The Utricle and Saccule, also known as the Otolith organs, respond to changes to the position of the head in relation to gravity (linear acceleration). Inside these organs are the Otoconia, which are calcium carbonate crystals that are embedded in the membrane bed.

Possible Causes of BPPV:

- 1) Minor to severe blow to the head – especially in people under the age of 50
- 2) Disorders that damage the inner ear
- 3) Rarely, damage during inner ear surgery
- 4) Prolonged positioning on your back
- 5) Long periods of inactivity
- 6) Most commonly idiopathic – unknown cause

BPPV is diagnosed by physical examination, medical

history, ear tests (e.g. Caloric Testing and Rotational Chair test) and sometimes lab work to rule out other possible conditions. The test used by physical therapists to assess for BPPV is called the Dix-Hallpike Maneuver (Figure 2) where observing eye movements (nystagmus) and

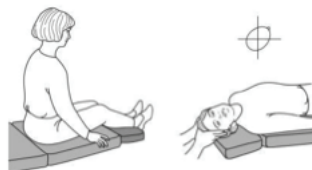


Figure 2

reproduction of symptoms during a specific position determines the diagnosis of BPPV.

Canalith repositioning procedure (CRP) is the standard treatment for a

patient diagnosed with BPPV.^{2,3} It is empirically proven and is also known as the Epley Maneuver (Figure 3). It has been said to be more effective than medications or other forms of exercise-based therapy.⁴ Some patients respond to this maneuver quickly, in just one physical therapy visit. However, even with success in treatment, BPPV can recur in approximately 1/3 of the patients within 1 year and about 50% within 5 years.⁵

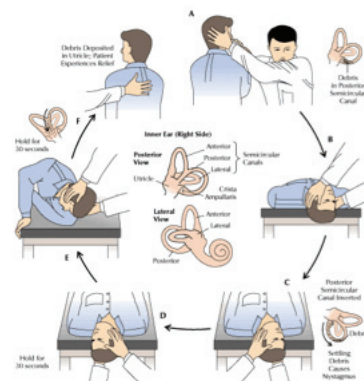


Figure 3. Epley Maneuver

Another technique, known as Semont Maneuver, is also considered. However, additional studies are still needed in order to determine its effectiveness.

Depending on the severity of the condition, the Otoliths can also be dislodged into the other parts of the semicircular canals. With this, the Lempert maneuver can be used. There are also the Reverse Epley, Reverse Semont, Gufoni and Vannucchi-Asprela Liberatori maneuvers. A major difference with these techniques is the positioning and sequence of movement. All of these treatments still need to be researched for their efficacy.

After successful treatment, symptoms of BPPV can linger for the next 3 months. There are certain restrictions directly following treatment which may include, but are not limited to, sleeping in an upright position for 1-2 days, wearing a cervical collar, avoiding certain head positions, and avoiding sleeping on the affected side for 1 week.

Home exercise program is also recommended, which involves repeated vertigo-inducing movements 2-3x per

About the Author: Alreen Day L. Alfonso, PT, CIMT, OCS



"Day" has been with KPT since 2011. She completed her Bachelor's Program at Manila, Philippines and has been practicing PT since 2004. She earned her Manual Therapy Certification (CIMT) in Dec 2012 and became an APTA board certified Orthopedic Clinical Specialist (OCS) in June 2013. Day just gave birth to another girl this past April 2013. She currently has 2 beautiful daughters ages 2 ½ and 8 months.



day for up to 3 weeks. With adherence to the prescribed schedule, Brandt-Daroff exercises have been reported to reduce vertiginous responses to head movements in 95% of cases.⁶

The most significant consequence of untreated BPPV, especially in older adults, would be increased likelihood of falls due to a decreased sense of equilibrium. Falls with increasing age have negative consequences, including fractures, brain injury, and institutionalization, which can lead to significant costs for both the individual and society.¹ Thus, it is clear why prompt, appropriate diagnosis and treatment of BPPV is crucial.

Here at Kassimir Physical Therapy, the Therapist will help identify the main cause of a patient's symptoms by performing a thorough evaluation which includes obtaining full history and performing objective evidence-based clinical tests. Based on this evaluation, we can provide a



comprehensive plan of treatment and work with a patient on their personal goals in order to achieve maximum rehabilitation potential and allow return to prior level of activities symptom-free.

References

1. Bhattacharyya N, Baugh RF, Orvidas L, et al. Clinical practice guideline: benign paroxysmal positional vertigo. Otolaryngol Head Neck Surg. 2008; 139:S47–S81.
2. Helminski J, Zee D, Janssen I, Hain T. Effectiveness of particle repositioning maneuvers in the treatment of benign paroxysmal positional vertigo: a systematic review. Phys Ther. 2010;90:663–678.
3. Fife TD, Iverson DJ, Lempert T, et al; Quality Standards Subcommittee, American Academy of Neurology. Practice parameter: therapies for benign paroxysmal positional vertigo (an evidence-based review): report of the Quality Standards Subcommittee of the American Academy of Neurology. Neurology. 2008;70:2067–2074.
4. Herdman SJ, ed. Vestibular Rehabilitation. 3rd ed. Philadelphia: F.A. Davis Co.; 2007.

KPT News Flash:
NEW TREATMENT SHOWING EXCELLENT RESULTS!

In October, KPT hosted a Happy Hour for our Referring Doctors featuring a presentation on Functional Trigger Point Dry Needling, as well as a TDN demonstration performed on one of our guests. Our presenter, Tami Grunitzky DPT, and our demonstrator, Gary Kassimir MS, PT, CHT, both of whom were certified at that time to perform Level 1 TDN, went on to become certified in November in Level 2 TDN: Advanced Level Functional Trigger Point Dry Needling: Applications for Pain Management and Sports Injuries. Already seeing the dramatic results achieved with level one TDN, we're very excited to be able to now offer this highly specialized, Level 2, treatment to our patients. With so many satisfied patients asking about TDN, Therapist Day Alfonso, PT, MS, OCS, is on her way to also becoming TDN certified. KPT is proud to support the continuing education of our Therapists so that we can continually provide our patients with the best, most effective treatments. We encourage anyone with questions about TDN, to go to our website, read the article and give us a call! We'd be happy to meet with you to determine if TDN is an appropriate treatment for your patients.

NEW KPT TEAM MEMBER

We're happy to welcome our new Receptionist, Brandi, who comes to us from the west coast, where she gained several years of experience running PT front office.

TEMPURPEDIC MATTRESSES are available for order through KPT. If your patients are looking for a mattress that will provide the support they need for a healthy spine, their KPT Therapist can recommend the right mattress for their specific needs and help them order right here at KPT, for delivery to their home.

KPT IN THE COMMUNITY

KPT cares about our community and we're proud to have been sponsors of the Annual Race For Our Kids in September, benefitting Pediatric Oncology at the Herman & Walter Samuelson Children's Hospital at Sinai, as well as the Turkey Trot on Thanksgiving morning, benefitting Crohn's & Colitis research.

HAPPY HOLIDAY WISHES! Hard to believe it's almost time to say goodbye to 2013! All of us at KPT want to wish the Happiest of Holiday Seasons to all of you. We are grateful for the trust you place in us when you refer to KPT, and we look forward to providing your patients with Ultimate Rehab in the New Year!

LIKE US ON FACEBOOK if you haven't done so already and get up to date info about KPT and some fun behind the scenes photos of the KPT family enjoying working together at the best Physical Therapy Clinic around!

**KASSIMIR PHYSICAL THERAPY, P.A.**


"Ultimate Rehab . . . through personal committed care"

COMMERCENTRE EAST • SUITE 130
1777 REISTERSTOWN ROAD • PIKESVILLE, MD • 21208
TEL • 410•415•5905 • FAX • 410•415•5906

Monday	8:00 a.m.	–	9:00 p.m.
Tuesday	8:00 a.m.	–	9:00 p.m.
Wednesday	8:00 a.m.	–	6:00 p.m.
Thursday	8:00 a.m.	–	9:00 p.m.
Friday	8:00 a.m.	–	6:00 p.m.
Saturday	8:00 a.m.	–	12:30 p.m.

Call for Updated Provider List and Referral Pads

Many Insurance Plans Accepted

**KASSIMIR**
Physical Therapy
"Ultimate Rehab"

COMMERCENTRE EAST
SUITE 130
1777 REISTERSTOWN ROAD
PIKESVILLE • MARYLAND • 21208

www.kptrehab.com
Don't forget to look us up on the web and tell your patients about it when making a referral.

PRSRT STD
U.S. Postage
PAID
Owings Mills, MD
Permit #38