Parkinson's Patients Support Groups, Inc.

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New Technology Helps Parkinson's Patients Speak Louder

ScienceDaily (Aug. 26, 2009) — Researchers have developed a new technology that helps Parkinson's patients overcome the tendency to speak too quietly by playing a recording of ambient sound, which resembles the noisy chatter of a restaurant full of patrons.

"People with Parkinson's disease commonly have voice and speech problems," said Jessica Huber, an associate professor in Purdue's Department of Speech, Language and Hearing Sciences. "At some point in their disease they will have some form of voice or speech disorder that generally occurs a little later in the disease."

Parkinson's affects 1.5 million people in the United States and is one of the most common degenerative neurological diseases. About 89 percent of those with Parkinson's have voice-related change, which is related to how loudly they speak, and about 45 percent have speech-related change, or how clearly they speak.

"A major therapy is to get people to speak louder, which also may cause them to articulate more clearly," Huber said.

The most common therapy, the Lee Silverman voice treatment program, trains patients to speak louder in one-hour sessions four days a week for a month.

"Some Parkinson's patients do great with this approach, but others do not," Huber said. "They forget to keep speaking louder the minute they have left the therapy room." Lee Silverman tends to work less for people with later stages of disease or those who have some cognitive decline. So I wanted to know whether there was an easier way to cue people during therapy, rather than telling them, 'Try to be twice as loud,' or 'Try to focus on this sound meter and achieve this loudness.'"

Huber used a new approach: The patients were asked to speak louder while a recording of background "multitalker babble noise" was played. The noise is essentially the sound of a restaurant full of patrons, but without the clattering silverware and clinking glasses.

"They had an easier time getting louder when I had the noise in the room," she said. "Ordinarily, when I asked them to be twice as loud they would say they couldn't. They couldn't speak 10 decibels louder, but when I turned on the babble noise, they spoke over 10 decibels louder."

The background sound elicits a well-known phenomenon called the Lombard effect, a reflex in which people automatically speak louder in the presence of background sound.

"You go into a loud room at a party and you talk louder without even realizing it," Huber said. "We've all had the experience where the room suddenly gets quiet and you're still shouting but you didn't know you were."

Huber created a new electronic technology using this principle. The voice-activated device automatically plays the background babble when the person begins to speak. A sensor placed on the neck detects that the person has begun to speak and tells the device to play the babble through an earpiece worn by the patient.

"I got the idea that if we train them with a natural cue in their everyday environment, we will probably get better results," she said. "We ask them to wear the system for about four hours a day as they go about their daily routine."

A critical part of the research is to integrate the voice-detection sensor, called an accelerometer, developed in work led by biomedical engineering doctoral

students Matias Zanartu and Julio C. Ho and biomedical engineering professor George Wodicka, head of Purdue's Weldon School of Biomedical Engineering.

"This sensor is crucial because it is essential that the background babble noise only turn on when the subject talks," Huber said.

The device prototype was built by engineering resources manager Jim Jones and senior research engineer Kirk Foster, both in the Weldon School. An earlier prototype had been built by Scott Kepner, manager of technical services, and Derek Tully, assistant manager of technical services, both in the Department of Speech, Language and Hearing Sciences.

Six patients wore the portable system for eight weeks. Data collected showed the system effectively prompts Parkinson's patients to speak louder and more clearly.

"Their speech changes significantly," said Huber, who is working with Meghan Darling, a doctoral student in Speech, Language and Hearing Sciences. "There have been times where I have called patients and they've had the device on and I didn't really recognize them. And these are patients I've known for a long time. This is beneficial also because it trains them in their everyday environment - in their homes, with their spouses, in their churches, in their social groups."

Huber determined the system works by measuring how much louder patients talked while on the device and without the device after eight weeks of training.

The researchers also are interested in examining the physiological changes elicited by the device. Patients wear a mask and sensors in elastic bands placed around the rib cage to precisely record respiratory, laryngeal and articulatory data.

"We know the lung volume, and we know the pressure and the airflow they generate during speech, which tells us not only whether they are talking louder but how they are talking louder," Huber said. "For example, maybe they are using solely the respiratory system to get louder, or maybe it's all about the larynx."

The researchers also will test how well the system works by having people who are not speech pathologists listen to the patients pronouncing words that could be easily confused with other words.

Researchers will work in the future with patients at the Rehabilitation Institute of Indianapolis. Further research is needed to determine whether patients continue speaking louder when they are not wearing the device. The system could be further developed to use rechargeable batteries, Huber said.

The research is funded by the National Institutes of Health. Purdue has filed a provisional patent on the concept.

Body's Own Antioxidant May Slow Parkinson's Decline, Study Says

Nicole Ostrow

Bloomberg.com - Higher concentrations of a natural antioxidant in the body may slow the progression of Parkinson's disease in patients with early stages of the illness, a study from Harvard researchers found.

Those in the study with the highest amounts of antioxidant urate in their blood were 36 percent less likely to need treatment within two years for early Parkinson's symptoms than those with the lowest levels, research online today in the Archives of Neurology showed.

Raising the amount of urate is one of the "more promising" strategies in development, said senior study author Michael Schwarzschild. About one million Americans have Parkinson's, which starts with trembling and stiffness that can eventually hamper walking and talking, according to the National Parkinson Foundation.

Today's study "suggests a new approach in slowing down the rate of the disease," said Schwarzschild, an associate professor of neurology at Harvard Medical School, in an Oct. 9 telephone interview. "People live with Parkinson's disease for decades. We want to make those decades much more manageable and keep people much more mobile."

Urate occurs naturally in the blood. Schwarzschild cautioned that people shouldn't try to raise levels of the antioxidant on their own through diet or supplements because high amounts can lead to gout and kidney stones and may also contribute to heart disease.

Testing Safety

A trial testing the safety of raising urate in patients who were recently diagnosed with Parkinson's is under way at 10 centers around the country, he said. Researchers are using the dietary supplement inosine, a precursor to urate, in the study.

Antioxidants can protect against some cell damage that may contribute to the impairment or death of nerve cells that occur in Parkinson's disease, according to the authors.

In the U.S., about 60,000 new cases of Parkinson's are diagnosed each year, according to the National Parkinson Foundation. Most of the time, the disease develops after age 65. Symptoms include shaking, slowness of movement, stiffness and difficulty with balance.

The researchers, from the MassGeneral Institute for Neurodegenerative Disease and Harvard School of Public Health, first turned up evidence of urate's potential of slowing down the progression of Parkinson's in a study last year of 800 people that showed similar results.

Older Data

The researchers then looked at data on urate levels from early Parkinson's patients who had been part of a two-year trial in the late 1980s. Blood urate levels were available on 774 patients and the scientists also were able to analyze the antioxidant levels in frozen spinal fluid from 713 patients.

Overall, 369 people, or almost 48 percent of the 774 patients, had their disease progress enough to require drug therapy, the study said. The chance of needing medication decreased the higher their blood urate levels were, the authors said. Similar findings were seen for urate levels in spinal fluid.

"These results were critically important," said Alberto Ascherio, the study's lead author and a professor at the Harvard School of Public Health, in a statement. "Only now we can be reasonably sure that the slower rate of progression in patients with higher concentrations of urate is real and not a chance occurrence."

In the study, 162 people, or 39 men and 123 women, were in the lowest blood urate level group, while 158 people, or 138 men and 20 women, were in the highest blood urate level group.

Other Factor

Schwarzschild said the researchers are unsure if it's the urate itself or some other factor that helps slow the progression of Parkinson's disease.

The study also found unexpectedly that higher urate levels didn't slow the progression of Parkinson's in study participants who were receiving vitamin E, another powerful antioxidant. Researchers said it wasn't clear whether vitamin E at high doses might have a "pro-oxidant" rather than antioxidant effect.

The study was sponsored by the National Institutes of Health, the Department of Defense, the Parkinson Disease Foundation and the Parkinson Study Group and others.

"ECG for the Mind" Could Diagnose Depression in an Hour

October 15, 2009 An innovative diagnostic technique invented by a Monash University, in Australia, researcher could dramatically fast-track the detection of mental and neurological illnesses.
Monash biomedical engineer Brian Lithgow has developed electrovestibulography which is something akin to an "ECG for the mind." Patterns of electrical activity in the brain's vestibular (or balance) system are measured against distinct response patterns found in depression, schizophrenia and other Central Nervous System (CNS) disorders.

The vestibular system is closely connected to the primitive regions of the brain that relate to emotions and behaviour, so Lithgow saw the diagnostic potential of measuring and comparing different patterns of electrovestibular activity.

Working with psychiatry researchers at Monash University's Alfred Psychiatry Research Centre (MAPrc), he tested volunteers and found distinct response patterns, or "biomarkers", that distinguished different CNS diseases from each other and from regular electrovestibular activity.
Monash has teamed up with corporate partner Neural Diagnostics to develop and patent electrovestibulography, or EVestG™. It is hoped the simple, quick and inexpensive screening process for CNS diseases will eventually become standard practice in hospitals around the world.
"The patient sits in a specially designed tilt chair that triggers electrical responses in their balance system. A gel-tipped electrode placed in the individual's ear canal silences interfering noise so that these meaningful electrical responses are captured and recorded," the Monash researcher said. "The responses are then compared to the distinct biomarkers indicative of particular CNS disorders, allowing diagnosis to be made in under an hour."

Neural Diagnostics CEO Dr Roger Edwards said the implications of the new technique were huge.

"This could be one of the most significant inventions ever to come out of Monash. CNS disorders cost upwards of $US2 trillion globally and affect one in four people sometime in their lifetime. At present,

diagnosing these conditions is done almost exclusively by qualitative measures, through questions and interviews, and it can take many years for sufferers to be correctly diagnosed," Dr Edwards said.

The technique is already attracting international interest and, if further testing goes to plan, it could be adopted in Australian and overseas hospitals within a few years.

"We are doing the necessary research and development and getting independent expert reports done, but results so far are cause for great optimism," Dr Edwards said.
MAPrc Director Professor Jayashri Kulkarni said, "Engineering and psychiatry are two disciplines that do not usually work together, but here at MAPrc, through our collaboration, we are at the forefront of translating biotechnology into clinical tools for psychiatric practice. While there is more work to be done, electrovestibulography could provide a major breakthrough in the diagnosis of serious mental illnesses." **www.monash.edu.au/news/newsline/story/1527**

Gait and Balance Classes at the PI

The Gait and Balance Classes at the Parkinson's Institute are great and fun. Come check them out!
The **Beginning Classes** run on **Thursdays** and the **Intensive Classes** run on **Wednesdays.** Both classes run from **10:30 to 12 noon**. A donation of **$10.00 per session** is suggested. The classes are held at The Parkinson's Institute, at 675 Almanor Avenue, Sunnyvale, CA 94085. Please call **408.734.2800** if you have any questions.

PPSG Board Meetings

You are welcome to drop by our board meetings and share ideas with us! We meet on the **3rd Monday** of the month between **1:00 and 3:00 PM** at the Parkinson's Institute, at 675 Almanor Avenue, Sunnyvale, CA 94085. To confirm meeting dates and time, please call us at **408.542.5610**. If you are planning to attend, please call Charmaine Eng at 408.723.8116 (dial *82 before the number).

This newsletter is assembled by the Morgan Center. Thank you!

Genes That Influence Parkinson's Onset Identified

MEDIndia - Researchers from Boston University School of Medicine (BUSM) report that the genes, which may influence the onset age of Parkinson's Disease (PD) have been identified.The findings are the first to identify genes contributing to the variation in onset age and may help identify mechanisms and therapeutic targets capable of delaying symptoms.

PD is the second most common neurodegenerative disorder usually occurring late in life and is characterized by debilitating symptoms of tremor, rigidity, and slowed ability to start and continue movements.

The BUSM researchers performed analyses using genotypes generated with the Illumina HumanCNV370Duo array in a sample of 857 unrelated, familial PD cases.

Then they performed a meta-analysis of imputed Single Nucleotide polymorphisms (SNPs) by combining the familial PD data with that from a previous genome-wide associated study (GWAS) of 440 idiopathic PD cases.

And they identified the 15q26.2 region as well as the gene AAK1 related to the previously observed PD susceptibility gene, GAK, as areas that would benefit from further examination.

"Important distinctions can be made between those genes that influence susceptibility for developing disease, and the genetic modifiers that influence onset age," said joint lead author Dr. Jeanne C. Latourelle, from the department of neurology at BUSM.

Latourelle said that the findings highlight the importance of continuing the study of onset age of PD that could provide insight into the disease mechanisms and processes for delaying onset with implications for novel treatments.

PD Dance: Poetry in Motion

Date: Tuesdays, restarting on December 1, 2009
Time: 10:30 am- 12 noon
Location: The Parkinson's Institute
These ongoing classes in movement to music are designed for persons with Parkinson's disease. Emphasis is not on disability but on current ability, enjoyment of music, recreation, exercise, and socializing.
Dance and movement instructor, Damara Ganley, has had PD/Dance training.
Admission free - Caregivers welcome
Students at wheelchair level must bring a care partner.
Call **408.734.2800** to register now!

Heart of the Valley, SERVICES FOR SENIORS, Inc. is a non-profit 501 (c)(3) publicly supported corporation committed to facilitating and supporting independent living for seniors residing in the West Santa Clara Valley by offering services performed by dedicated volunteers.

Many older adults face leaving their personal possessions, social contacts, and their homes behind, because basic needs such as in-home services, transportation, home repair and companionship are not available.

Mowing a lawn, driving a car, shopping for groceries, making a phone call, writing a letter, or keeping their home in order, could be the final straw that pushes an elderly adult into an **institutional facility.**

Even the simplest tasks can be a stumbling block in the path of an older person. At Heart of the Valley, SERVICES FOR SENIORS, Inc. we are committed to extending the independence of seniors through the skills and talents of our volunteers.

Don't Be Shy, Call Heart of the Valley

If you are 59 or older, living independently and live in Santa Clara, Cupertino, Sunnyvale, Saratoga, Monte Sereno, Los Gatos, Campbell or in the West San Jose with zip codes of 95117, 95125,95126, 95128, 95129 or 95130, give us a call today to see how one of our wonderful volunteers can help you. Seniors have been receiving help for 22 years. Call our office and tell us what kind of assistance you would like. We're waiting to hear from you.

Senior Needs Assessment Survey

Since the first of the year, Heart of the Valley has received many calls from seniors who are having trouble meeting just their most basic of needs. In an effort to learn about the financial challenges our seniors are

Facing, we have developed a short survey. We would use the results to find out how we can better serve the seniors living in our community. We also may be able to refer people to much needed supplies and services. Please contact our office to answer a few questions. You don't have to give your name, address or phone number. We'll ask you for your zip code and if you're 59 or older, but that's about it besides the survey questions! Help us help our seniors! Call **408.241.1571**, between 9-1pm M-F.

Adapted from **www.serviceforseniors.org**

Rebuilding Together Peninsula.org

FREE **Home Repairs for Qualified Homeowners**

Rebuilding Together Peninsula is a non-profit, volunteer organization dedicated to repairing the homes and community facilities of those in need. The services provided are FREE and will not affect any other benefits you receive. Volunteers complete all of the repair work. Providing safety, warmth, and independence is their priority. The one-day project is done on National Rebuilding Day, in April, and the applications need to be received in October of the prior year. For information or application, call 650.366.7695 (English/Spanish spoken) or visit their website: **www.RebuildingTogetherPeninsula.org**

PPSG SUPPORT GROUPS

---NORTHERN REGION--

Berkeley 3rd Wed 1:00PM-3:00PM North Berkeley Senior Center 1901 Hearst Ave Roddy Raikow 510.231.1998 roddy1482@earthlink.net Irene Smythe 510.524.4847 **Brentwood** 4th Tue 6:30PM-8:00PM Eskaton Lodge 450 John Muir Pkwy Karen Fernandez 925.550.0509 btrflynana@yahoo.com **Eureka** 2nd Fri 3:00PM-4:00PM Adorni Center 1011 Waterfront Dr Mary and Bob Kay 707.442.5245 immaryk@suddenlink.net **Fremont** 4th Mon 7PM Fremont Senior Center 40086 Paseo Padre Pkwy Lettie Webb 510.656.6393 **Fremont/Caregivers** 2nd Mon, 4th Mon 1PM-2:30PM City Hall-Bldg B Large Conference Rm 3300 Capitol Ave Nancy Rothschild 510.574.2035 **Mill Valley/Marin County** 4th Tue 1:00PM-3:00PM Redwoods Auditorium 40 Camino Alto Eric Stoelting 415.383.5145 **Oakland** 1st Thu 1:30PM-3:30PM Easter Seals Bay Area 180 Grand Ave Ste 300 Karen & Jim Eagan 510.763.4492 **Petaluma** Fri 1:00PM-3:00PM Petaluma Senior Center (Lucchesi Pk) 211 Novak Dr Pearl Sorenson 707.795.4858 Judy Geri 707.766.8521 **Piedmont Caregivers** 2nd Thu 11:45AM-1:30PM Guild Parlor Piedmont Community Church 400 Highland Ave Rosemary Allen 510.451.7880 allenwr@earthlink.net **Pleasanton Tri-Valley** 2nd Sat 10:00AM-12Noon Pleasanton Senior Center 5353 Sunol Blvd Norman & Jackie Bardsley 925.831.9940 jnbard@pacbell.net **San Leandro** 1st Thu 10:00AM-11:30AM San Lorenzo Community Church 945 Paseo Grande Lona White 510.276.3119 Norma Zeff (emerita) 510.663.6435 **Santa Rosa/ New Caregivers** 2nd Wed 2:00PM-4:00PM Sunrise Center 3250 Chanate Rd Amy Southwick 707.539.2646 **Sonoma County Support Group** 1st Sat (xAug/Dec, then 2nd Sat-no Jan/Jul/Sep) 1:00PM-3:00PM Christ Church United Meth Church 1717 Yulupa Ave Patricia Staudacher 707.575.5331 patdot@sonic.net George Irizary irizary@juno.com **Vallejo Support Group** 1st Sat 10:30AM-Noon Community Presbyterian Church Room 2 2800 Georgia St Theresa Pate 707.642.2173 Molly Leavitt 707.642.3763 **Vallejo/Silent No More Caregivers Group** 3rd Thu 6:00PM-8:00PM Community Presbyterian Church Room 2 2800 Georgia St Theresa Pate 707.642.2173 **Walnut Creek/Mt. Diablo Parkinson's Network** 3rd Sat 10:00AM-Noon Grace

Presbyterian Church 2100 Tice Valley Blvd Ronalee Spear 925.284.2189 Alan Hansell 925.939.0584

---PENINSULA REGION--

Daly City 1st Tue 3:00PM-4:00PM Doelger Senior Center 101 Lake Merced Blvd Leonard Ke 415.587.1285 **Los Altos Hills/Mid Peninsula Caregivers Group** Last Wed 10:30-12:00 TBD Robin 650.949.4207 lotoftravel@aol.com **Los Altos/Young Park. SG** 2nd Sat 10:00AM-12Noon United Methodist Church 655 Magdalena Ave Dean Prescott 408.738.2505 deanp53@yahoo.com **Millbrae/Magnolia-Peninsula** 2nd Thu 1:30PM-3:00PM Magnolia Apartments 201 Chadbourne Ave Van Knight 415.678.8455 millbraesupportgroup@gmail.com **Palo Alto** 2nd Wed 2:00PM-3:30PM Avenidas Senior Center Dining Room 450 Bryant Street Charles Biton 650.391.9339 **Palo Alto/PD Under 50 Group** 2nd Tue 6:30PM Board Rm Lucile Packard Children's Hosp. 725 Welch Rd Martha Gardner 408.257.5152 mgapda@gmail.com **Redwood City** 3rd Fri (x Aug/Nov/Dec) 1:00-2:30PM Sequoia Hospital Health and Wellness Center 749 Brewster Avenue Tom Constantino 650.366.7166 **San Francisco Support Group** 3rd Tue 6:00PM-7:30PM SF VA Bldg 203-PD Center 1st Floor 4150 Clement St Susan Heath, RN MS 415.379.5530 susan.heath@va.gov **San Mateo/Atypical Parkinsonism** Sundays-approx every 6 wks 5:00PM-7:00PM Mimi's Café 2208 Bridgepoint Pkwy Robin Riddle 650.233.9277 rriddle@stanfordalumni.org **Sunnyvale** 2nd Wed 1:00PM-3:00PM First United Methodist Church 535 Old San Francisco Rd Call 408.733.5648

---SOUTHERN REGION---

Hollister 1st Tue 1:30PM-3:30PM First Presbyterian Church 2066 Cienega Rd Shirley Kennedy 831.637.3839 joy4skennedy@ihollister.net **Monterey** 3rd Mon 2:30PM-4:00PM SHARE Room Hayes School 200 Coe Ave Seaside Kathy Warthan 831.372.7510 Helen Garrett 831.657.4241 **San Jose/Berryessa** 1st Wed 1:00PM-2:30PM Berryessa Community Center 3050 Berryessa Rd Bob & Jane Pomeroy 408.263.8485 **San Jose/Caregivers** 4th Wed 1:30PM-3:30PM St. Francis Episcopal Church 1205 Pine Ave Charmaine Eng 408.723.8116 **San Jose/The Villages** 3rd Tue 2:00PM The Villages Golf and Country Club San Jose CA George Pratte 408.223.8033 Access Pass Required **San Jose/The Villages Caregiver Group** 1st Wed 11:15AM-12:15PM The Villages Golf and Country Club San Jose CA George Pratte 408.223.8033 Access Pass Required **San Jose/Willow Glen** 1st Fri 10:00AM-12Noon St. Francis Episcopal Church 1205 Pine Ave Jane Fox 408.265.3991 Darrell McCleod 831.427.0966 **Santa Cruz** 1st Wed 12:30PM-2:00PM St. Stephen's Lutheran Church 2500 Soquel Ave David Donohoe 831.479.4485 Sally & Darrell McCleod 831.427.0966 **Saratoga** 3rd Tue 2:00PM-4:00PM 1949 Via Real Dr Lois McPherson 408.867.1807

---CENTRAL VALLEY REGION---

Fresno (greater) 2nd Sat 10AM-12Noon The Bridge Evangelical Free Church 3438 E. Ashlan Ave Russ Templeton 559.322.8076 http://www.gfpsg.org **Merced** 3rd Thu (xDec) 10:00AM Mission Gardens 1450 E. 27th St Amie Marchini 209.384.3300 **Modesto** 3rd Wed 1:30PM-3:00PM Fireside Rm Centenary United Meth. Ch. 1911 Toyon Ave David & Joann Ryan 209.529.5643 davejoann@sbcglobal.net **Pine Grove/Amador County** 3rd Thu 10:00AM-12Noon Patio Building Calvary Chapel 18400 Ridge Rd Sarah Johnson 209.296.2575 jani@volcano.net **Roseville/Central** 1st Tue 1:30PM-3:00PM Maidu Community Center 1550 Maidu Dr Tara McCain 916.862.3973 **Sacramento/Parkinson's Assn of N. California** See website for times Regional Headquarters 900 Fulton Ave Suite 100-5 Various 916.489.0226 http://www.parkinsonsacramento.org **San Andreas/Calaveras County** 3rd Tue 10:00AM-12Noon San Andreas Senior Center 956 Mountain Ranch Rd Sarah Johnson 209.296.2575 jani@volcano.net **Stockton/Early Onset** 3rd Sat 1:00PM Old Spaghetti Factory 2702 West March Ln (@I-5) Karen Frank 209.406.9317 **Turlock/Forming** TBA TBA Covenant Village 2125 N. Olive Ave Marianne Johnson 209.634.3157 **Visalia/Central Valley Parkinson's Supp Grp** 1st Fri 10:30AM United Methodist Church 5200 W. Caldwell Ave Donna DeVries 559.627.0798 www.cvpsg.org

EXERCISE CLASSES

Berkeley: North Berkeley Senior Center, Thursday, 10-11:30 Kay Ellyard 510.848.5143 **Berkeley:** Mon. 1030-1200 & Tues 1030-1200, John Argue 510.985.2645 JCC East Bay www.parkinsonsexercise.com **Daly City:** Tue./Wed/Thu 930-1130, Doelger Sr. Ctr. Gym John Pantazy 650.991.8012 **Gilroy:** Gavilan College, Dave Ellis, 408.848.4878 **Hayward:** Kaiser Permanente, Wed. 10-11:30, John Argue 510.985.2645 **Kensington:** Tue. 1:30-3:00, John Argue 510.985.2645 **Los Gatos:** Thu 2-3P Balance Class Community Hosp. of Los Gatos Rehabilitation Ctr. 355 Dardanelli Lane $10/session Samantha 408.866.4022 **Los Gatos:** Mon 2PM/Thu 1PM Parkinson's Lifelong Useful Skills (PLLUS) balance, gait, posture and Tai Chi/Qi Gong The Terraces 8010 Blossom Hill Rd. Kujiweza Healing Arts Jane 408.315.1179 Parkinsons@sjyogataichi.org **Monterey:** Monterey Peninsula College, Mark Clements, 831.646.4231 **Palo Alto:** CAR, Aquatic Therapy, 650.494.1480 **Palo Alto:** Avenidas Sr. Ctr. 450 Bryant St. 650.289.5400 **Palo Alto:** Sat 10-1130 Tai Chi/Qi Gong for Parkinson's Atrium Stanford Hospital Kujiweza Healing Arts Jane 408.315.1179 Parkinsons@sjyogataichi.org **Pleasant Hill:** Thu 1:30-3:30 Tremble Clefs vocal exercise group, Mormon Church, 555 Boyd Rd., Elsie Chapman 925.682.0809 Joan Hodgkin 925.943.7393 www.trembleclefs.com **Redwood City:** Canada College, 4200 Farm Hill Blvd. Barbara McCarthy 650.306.3473 **Salinas:** Hartnell College, Melissa Stave, 831.755.6876 **Saratoga:** Mon. – Fri. 9-12; 1:30-3, West Valley Comm. Coll. Joan 408.741.2420 **San Bruno:** Mon/Wed 1:10-2:30, Tue/Thur. 12:35-1:50, Skyline College Bess 650.738.4286 **San Jose: Camden Community Ctr.** M/W 10:30-11:45 T/TH 10:00-11:15 Adapted Exercise M/W/F 1:00-3:30 Adapted Fitness 408.369.6438, **San Jose: Houge Ctr**. Tue/Thur 10-11:45, **Easter Seals Comm Ctr**. Aquatic Exercise programs, 408.295.0228, **Evergreen Ctr**. Deanna, 408.369.6435, **Evergreen Valley College**, Rich Wagner, 408.274.7900 x 6447 **Southside Community Ctr.** M/W/F 1:00-1:45 Chair Exercises F 9:00-11:30 2:00-3:30 Tai Chi 408.629.3336 **The Villages:** Mon 11:30-12:30 Wed 11:15-12:15 Thu 11:30-12:30 Parkinson's Exercise Program(PEP) Kujiweza Healing Arts Jane 408.315.1179 Parkinsons@sjyogataichi.org **San Mateo:** College of San Mateo, 1700 W. Hillsdale Blvd., John Hogan, 650.574.6469 **San Rafael**: Osher Marin JCC, San Rafael. 415.444.8000 **Santa Rosa:** 151 Sotoyome Street Rehab. Gym Tue 12:30-1:20 Balance Class Linda 707.543.2570 **Santa Rosa:** 151 Sotoyome Street Rehab. Gym Mon/Thu 12:30-1:20 Parkinson's Exercise

Class Linda 707.543.2570 **Sunnyvale:** Tue/Thu 9-10, Sr. Ctr. 550 Remington Dr., 408.864.8885 **Sunnyvale:** Thu. 10:30-12 Beginning and Intermediate Wed 10:30-12 Intensive The Parkinson's Institute, 675 Almanor Ave.,Marilyn Basham 408.542.5685 **Sunnyvale:** 1st and 3rd Thu 12-1 Shakin not Stirred vocal exercise group, the Parkinson's Institute, 675 Almanor Ave., Randy Hoffman 408.542.5658 **Sunnyvale:** Tue 10:30-12:00 pdDANCE The Parkinson's Institute 675 Almanor Ave, Damara Ganley 408.734.2800 to register

Exercise Can Aid Recovery after Brain Radiation

ScienceDaily (Oct. 19, 2009) — Exercise is a key factor in improving both memory and mood after whole-brain radiation treatments in rodents, according to data presented by Duke University scientists at the Society for Neuroscience meeting.

"This is the first demonstration that exercise can prevent a decline in memory after whole-brain radiation treatment," said lead researcher and graduate student Sarah Wong-Goodrich of the Duke Department of Psychology and Neuroscience. Whole-brain radiation is sometimes used to treat brain cancers in humans.

"We found that exercise following radiation prevented a decline in erasable memory in mice and this is analogous to the type of memory problems people have after whole-brain radiation for brain tumors," said senior researcher Christina Williams, Ph.D., professor of psychology and neuroscience. "This is the type of short-term memory people use to find their car after they have parked it in a large lot. After radiation, this type of memory becomes impaired in many people."

In the experiment, one group of mice that had brain radiation stayed in their cages under normal conditions, living with other mice, eating and playing as they liked. But a different group of mice that had radiation were given daily access to a cage with a running wheel, which they could use if they wanted to.

The animals were tested for how well they remembered spatial features in their environment for locating a preferred escape hole to exit a well-lit maze and hide. The mice completed tests at the two-week and the three-month mark after their irradiation to get a baseline and then to see how they fared over time.

Mice that had radiation plus access to running did as well at remembering where the hole was as normal mice that didn't exercise. Irradiated mice that had no access to an exercise wheel eventually showed no particular preference for the section of the maze with the escape hole.

"It was remarkable that the irradiated, running mice were just like the normal, non-irradiated mice that didn't exercise," said Wong-Goodrich, who conducted the experiments in the Williams' laboratory. "We were expecting some memory retention issues with a longer delay and there weren't any."

Exercise appears to actually protect against the loss of memory and the increase in depressive-like behaviors, Wong-Goodrich said.

The mice also were tested for depressive-like behavior, using gentle restraints which they worked to escape from. Two weeks after radiation, the irradiated mice gave up sooner than the normal mice. Three months after radiation, the runners that had brain radiation, however, tried just as hard as the normal mice, while their non-running counterparts gave up more readily.

Researcher Lee W. Jones, Ph.D., research director of the Duke Center for Cancer Survivorship and associate professor in the Duke Department of Radiation Oncology, said the findings show "how powerful exercise is and how many benefits it can provide, and even restore, after radiation."

Jones said that he is beginning to look at neurocognitive outcomes for cancer patients at Duke who undergo radiation, in addition to their body health indicators. "Once a patient gets a doctor's clearance, I think exercise is a good thing during whole-brain radiation," he said. "I think telling patients to take it easy is the worst advice we can give, because we know they will become deconditioned physically, and this study shows exercise potentially could provide cognitive and psychological benefits."

Radiation knocks out the ability of the brain to produce new nerve cells, called neurons. Williams said that they were able to measure increases in certain growth factors in the exercising mice that might be necessary to help cells divide.

Exercise might help by increasing blood flow to the hippocampus area of the brain, which is an important structure for learning, memory, and spatial navigation, Wong-Goodrich said.

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Visit our PPSG website: www.ppsg.org for:

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Thank you for your response to our message. The past economy downturn has affected us, and we appreciate your donations, as two of our major expenses are the mailing and printing of the newsletters. Subscribing electronically and canceling unwanted newsletters can be another venue to contribute your on-going support.
PPSG is now in its 28th year. With your help, PPSG's newsletter will continue to provide information and support to our local Parkinson's community.

On behalf of the Board of Directors, I thank you.

Sincerely,

Charmaine Eng
Chairman,
Parkinson's Patients Support Groups, Inc.

10/27-12-8 "Stress Management for Advanced PD,"
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