

**SPECIAL  
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***Alzheimer's Research and Prevention Foundation—proud to be the voice of Mind/Body Medicine in the Alzheimer's Community***

**From the Founder—Dharma Singh Khalsa, M.D.**

**Why Stem Cell Research May Be Irrelevant**

Creating new brain cells was previously thought to be impossible in humans, but not any more. And you don't need to have an injection of stem cells into your brain to do it, either.

As you may know, stem cells are your body's basic building blocks, used for repair and growth. And when it comes to your brain, stem cells turn into new neurons or brain cells. These brainy stem cells then produce a chemical that protects other brain cells, even damaged ones, from deteriorating.

And recent research reveals that they can reverse memory loss, as well as help restore brain function in humans suffering from a wide range of diseases that impair memory, including Alzheimer's.

So why do I say that stem cell research is irrelevant? In a new research study at Columbia University, Scott Small, M.D. unveiled the first

proof that exercise creates new cells in the exact brain area that is affected by age-related memory loss.

When you exercise, you experience an endorphin high and feel great. You also increase your brain's blood supply and create a compound called *brain-derived neurotrophic factor* that induces nerve cells to grow, branch out, and make connections with one another -- all signs of an ageless brain.

Exercise targets a region of the brain within your memory center known as the dentate gyrus, which underlies age-related memory decline. Exercise increases blood flow to this all-important anatomical area and grows new brain cells. Exercise transforms stem cells into fully-grown, functional neurons right where they're needed most.

And the best news? You don't have to run marathons or be an Olympic weight lifter to derive the benefits of

developing higher levels of brain power. Here's all you need to do:

- Exercise at least three times a week.
  - Pick something you enjoy and stick with it.
  - Hill training, brisk walking, cycling, or exercising on an elliptical trainer or treadmill are all fine provided they're done for 30 minutes or more.
  - Finally, don't forget about body-weight exercises or other resistance work, done in combination with your aerobic conditioning.
- Exercise does more than build muscles and help prevent heart disease and keep you trim. This new science suggests that it also boosts your brain power -- and may offer help in the battle against Alzheimer's.
- That's why exercise is one of The 4 Pillars of Alzheimer's Prevention and we encourage you to find a program you enjoy to improve your body and maintain your health.

**WHAT IS THE Alzheimer's Research & Prevention Foundation?**

**We Are . . .**

The Alzheimer's Research and Prevention Foundation (ARPF), founded in 1993 by Dharma Singh Khalsa, M.D., is a 501(c)(3) non-profit organization, based in Tucson, Arizona, that's dedicated to the prevention and early intervention of

cognitive decline and Alzheimer's disease through an integrative or holistic medical program. We do this by **conducting clinical research and providing educational outreach**. We believe that chronic, unbalanced stress is a major cause of

cognitive decline and that an integrative medical program can prevent and reverse memory loss. We are committed to empowering brain longevity, which will ensure an enhanced quality of life for present and future generations.

# ACCOMPLISHMENTS FOR 2008

## Conclusions:

An eight week, 12 minute a day, meditation program was associated with significant differences in both Cerebral Blood Flow and neuropsychological function in subjects complaining of memory problems.

**WORKING  
TOWARDS  
PREVENTION  
SINCE 1993**



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## Research Results

### Assessment of Physiological and Clinical Effects of Kirtan Kriya Meditation in Patients with Mild Dementia – Prepared By Andrew B. Newberg, M.D.

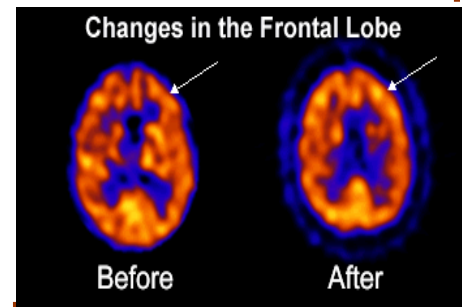
We are very excited about the ongoing relationship between the Center for Spirituality and the Mind at the University of Pennsylvania and the Alzheimer's Research and Prevention Foundation. The primary project as part of the initial grant is the "Assessment of Physiological and Clinical Effects of Kirtan Kriya (KK) Meditation in Patients with Mild Dementia".

The study included 15 subjects undergoing KK meditation and 5 subjects undergoing a music control group daily for 8 weeks. The data has been prepared into a manuscript and has been submitted to the journal, Alzheimer's and Dementia. Dr. Khalsa is listed as a contributing author on the paper. We are currently awaiting their response. We also have been doing additional analyses on the data with the anticipation that we might write several separate papers including the effect of KK on the subjects' sense of spirituality which was also measured; on the relationship between body mass index and response to KK meditation, and on the effects of music on the brain.

Dr. Khalsa and I have also discussed using

this data as a basis for a review article on the effects of meditation. In addition to the funded project on memory and Kirtan Kriya meditation, we have also collaborated with Dr. Khalsa on an fMRI study in expert meditators and we are close to submitting that paper for publication.

In all, the initial research grant from the Alzheimer's Research and Prevention Foundation has helped to produce ground breaking research papers and has actually spawned other collaborative projects.



## Outreach Report

The foundation continues its work with Senior Companion Programs, Assisted Living Programs, Heathfairs, Conferences, Health Centers, etc. all across the country. Here in Tucson, Arizona, a Foundation board member serves on the advisory council of the local Senior Companion Program. In Connecticut, a Scientific Advisory Council Member works with the Huntington's Disease Association, which

the ARPF's program benefit them as well.

Board Members and volunteers contributed thousands of hours to the foundation doing such things as providing training to the general public on the importance of changes in lifestyle using **The 4 Pillars of Alzheimer's Prevention**, conducting outreach programs, educating SCP coordinators and other health care providers,

reaching out to corporations and cultural groups with education activities, as well as provided international outreach in Brazil, France, Ireland, Mexico, Peru and several tribal nations. And of course, indirect outreach activities is ongoing through our website, other internet sites, television, radio and printed media, which reaches millions of others globally.

## DONORS

We couldn't do what we do without our faithful donors. Our donors come from many walks of life and many sources:

- Corporate Donor Campaigns
- Donations in Memory of Loved Ones Lost to Alzheimer's and other Dementia Diseases
- Sponsors of Events, like our Annual "Memory Screening Day"
- People who come to our events and are compelled to give.
- Bequests



We have once again been approved by the **Federation of Health & Medical Research Charities of America** and the **Combined Federal Campaign**.

The ARPF is also a proud participant in the **State Employee Campaigns for Arizona, Connecticut, Texas and California** as well as a member of the **Best Charities in America**.

## Memory Screening Day

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This year's **5th Annual Tucson Memory Screening Day** was held on November 17, 2008 at the Tucson Jewish Community center. We screened about 60 seniors with the help of volunteers from **Our Family Services and UofA's Alpha Phi Omega Chapter**.

We were especially gratified to have so many sponsors for this year's event,

including:

*Mountain View Care Center, Prescription Lab Compounding Pharmacy, Jorgensen/Brooks Group, Handmaker, Brookdale Senior Living, Aristocrat Printing*

*and Design, Jewish Family & Children's Services, Synergy Homecare, Sunrise Senior Living, Our Family Services, Tucson Jewish Community Center, and Our Family Senior Companion Program.*

Each year this event grows in size and we are able to offer free memory screenings to the residents of Southern Arizona. **THANK YOU TO ALL OF OUR SPONSORS AND VOLUNTEERS.** We are proud to be the only organization in Arizona that has been bringing MSD to our community since it became a national initiative.

## BOARD MEMBERS & STAFF

**Dharma Singh Khalsa, M.D.**  
President/Medical Director

**Randal Brooks, LPC, LISAC, CEAP**  
Vice President

**Carolyn S. Sechler, CPA**  
Treasurer

**Kirti Khalsa**  
Secretary/Chief Operating Officer

**Carolyn Lucz**  
Board Member

**Conni Ingallina**  
Communications Director

## Extraordinary Service

COMMUNITY ADVOCATE – TINA WILSHUSEN

Tina Wilshusen works with seniors - lots of them! Seniors that are in independent living, skilled nursing, Alzheimer's units, both early and late stages, and seniors at community centers who are interested in the prevention of Alzheimer's. The ARPF's work and holistic approach to the prevention and treatment of Alzheimer's disease has inspired her work with seniors as well as inspiring her work with the Dementia Comfort Therapy program at Yoga Phoenix. Tina credits Dr. Khalsa, Founder and President of ARPF, whose work changed her life. "His work in brain longevity has helped me shape a different future for not only myself, but for hundreds of seniors I have come into contact with along the way." Tina has been teaching all over the Valley to many different kinds of groups. She teaches 18 to 20 classes a month and loves it, and so do her students. Tina says she's found her niche in life with this program. We wish her all the very best.

## Scientific Advisory Council

**Ma Gloria Borrás-Boneu, M.D.**  
GRD Health Institute  
Barcelona, Spain

**Sat Bir Singh Khalsa, Ph.D.**  
Asst. Professor of Medicine  
Harvard Medical School  
Sleep Disorders Research Program  
Brigham and Women's Hospital  
Boston, Massachusetts

**Laura Jean Kokoska, RN**  
DNA Yoga Studio  
Old Lyme, Connecticut

**Helen Lavretsky, M.D., M.S.**  
Associate Professor  
UCLA Semel Institute and Resnick  
Neuropsychiatric Hospital  
Los Angeles, California

**Andrew B. Newberg, M.D.**  
Assistant Professor, Radiology and  
Psychiatry, University of Pennsylvania  
Medical Center  
Philadelphia, Pennsylvania

**Michelle Sierpina, Ph.D.**  
Founding Director  
UTMB Osher Inst. for Lifelong  
Learning,  
Univ. of Texas Medical Branch  
Galveston, Texas

**Victor S. Sierpina, M.D.**  
Professor in Integrative Medicine  
Univ. of Texas, Medical Branch  
Galveston, Texas

**Yaakov Stern, M.D.**  
Professor of Clinical  
Neuropsychology, Columbia  
University College of Physicians  
and Surgeons, Taub Institute  
New York, New York

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*"Only a life  
lived in the  
service to  
others is  
worth  
living."*

**Albert  
Einstein**

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CHANGE SERVICE REQUESTED

[www.alzheimersprevention.org](http://www.alzheimersprevention.org)

## Running for Research

We're on the web at  
[www.alzheimerspreventions.org](http://www.alzheimerspreventions.org)

This year we had a very special donation in the form of **MARISSA DOYLE** who chose to RUN in the Walt Disney World Marathan in memory of her beloved grandmother who died of Alzheimers and raised over \$1,400 on our behalf! We have been very impressed with this young woman's passion for preventing Alzheimer's.

This article is a follow-up to our story on **Marissa Doyle** who ran for Alzheimer's Research on January 9, 2009 during the Walt Disney World Marathon in New York City. Here is the account of her run in her own words:

*"The night before, my family and I went out for a pasta dinner so I could load up on carbs to give me energy for the race. I tried to go to bed around 8 pm that Saturday night because I knew I had an early wake up call. I probably drifted off to sleep around 9 which wasn't bad (my mom said she only slept about 45 min she was so nervous for me!). My parents were there with me from 3:30 am when I woke up to go until I crossed the finish line! My uncle and two of my cousins were also there to cheer me on. I was able to spot them around mile 4 but after that, I unfortunately was not able to see*

*them until after the finish. Over 22,000 people participated and about 15,000 finished. When I started, I felt like I was at a rock concert. If you could imagine the crowds and crowds of runners eagerly anticipating the long journey ahead in the dark. When the guns went off and the Disney characters appeared to wish us well with fireworks shooting off in the background, truly an awe inspiring experience for 6:00 am in the morning! It was pure adrenaline in the beginning and I was actually close to walking for the first 6 miles because there were so many people, it was hard to pass them off. After mile 6 though, I was able to run at my own pace and I didn't stop until the end.*

*They had many stops for water, PowerAde, and small snacks towards the end. I probably could've stopped around mile 20, but told myself to keep going. The last 6 miles are all mental and luckily I was in the 'runner's zone' so I knew I could make it.*

*The weather was also perfect, cool in the morning and then it got sunny out and rose to the 70's by the end of the race. People were dressed as Mickey, Minnie, Goofy, princesses, even some guys dressed up as fairies! Also, many people ran with their video cameras and digital cameras so they could take pictures along the way.*

*Many stopped to take pictures with the characters. It was definitely the perfect run for my first marathon! I not only achieved my goal of finishing, but I think I also did very well for my first one. I find it remarkable what you can do once you set your mind on a goal. I told myself I was not going to stop and I never did. I made up my mind that I was going to jog the whole time and I think my grandma was there to help me along the way as well. I think I may be hooked and my family is already asking me if I'm going to run next year again!*

*I'm so happy to have run for such a great cause as well. I had you all in mind (The Alzheimer's Research and Prevention Foundation) throughout the whole race and knowing what I was running for definitely helped push me to the finish line!*

**THANK YOU, MARISSA and we hope to see you run again next year!**