



Twin Registry Update

After **12 years**, the SRI Northern California Twin Registry (NCTR) is still growing. Check out the statistics below:

Membership Statistics. The Registry currently has 2,339 active members; 82% are adults and 18% are under age 18.

The age range of all Registry members is from less than 1 year to 94!

Adult members: The statistics for adult members are unchanged since our last newsletter.

- 64% are identical; 31% are fraternal, and 5% are unsure
- 70% are female; 30% are male

Under age 18 members:

- 34% are identical; 57% are fraternal; and 9% are unsure
- 54% are female; 46% are male

Most Registry members live in California (81%). A few twins live as far away as Australia, Cyprus, England, Scotland, and Singapore.

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A note to twins who have recently turned 18: We will be sending you a form to update your information so that you can qualify for participation in adult research studies. Initially, your parents submitted a registration form. Please help us by completing the adult registration form, signing the consent form and returning it to SRI as soon as possible.

Moving On?

Please help us stay in touch with you by notifying us of any address, telephone, email, or name changes. Just email us at sri.twin@sri.com with your changes and we will update your file. You can also call our toll free twin line at 1-800-SRI-TWIN.

Recent Publications from SRI Twin Research

Benowitz NL, Swan GE, Jacob P III, Lessov-Schlaggar CN, Tyndale RF (2006). CYP2A6 genotype and the metabolism and disposition kinetics of nicotine. *Clinical Pharmacology and Therapeutics*, 79:480-484.

Hamilton AS, Lessov-Schlaggar CN, Cockburn MG, Unger JB, Cozen W, Mack TM (2006). Gender differences in determinants of smoking initiation and persistence in California twins. *Cancer Epidemiology, Biomarkers & Prevention*, 15:1189-1197.

Mwenifumbo JC, Lessov-Schlaggar CN, Zhou Q, Krasnow RE, Swan GE, Benowitz NL, Tyndale RF (2007). Identification of novel CYP2A6*1B variants: the CYP2A6*1B allele

is associated with faster in vivo nicotine metabolism. *Clinical Therapeutics and Pharmacology*, 83:115-121.

Swan GE, Lessov-Schlaggar CN, Krasnow RE, Wilhelmsen KC, Jacob P III, Benowitz NL (2007). Genetic and environmental sources of variation in heart rate response to infused nicotine in twins. *Cancer Epidemiology, Biomarkers & Prevention*, 16:1057-1064.

Referrals-R-Us

Our **referral reward program** is still in effect—\$25 for each set of twins who join the Registry. If you know twins (of any age), who you would like to refer to the Registry, please call Jill at **1-800-605-3645** and she will walk you through the process.

More Fun Twin Facts

- From 1980 to 1997, the number of twin births in the US rose by 52%. This rise can at least partly be attributed to the increasing popularity of fertility drugs, procedures like IVF, plus it may also be linked to the increase of growth hormones in our food supply.
- A recent study found that vegan mothers are five times less likely to have twins than those who eat animal products.
- Cryptophasia is when twins have their own “twin language” that only they understand. Many twins appear to use this language when they are babies.
- Not all identical twins look identical. While they have the same exact DNA, they can look a little different due to weight and height differences. Identical twins also have their own individual personalities and preferences.
- **Fraternal twins** are more common for older mothers, with twinning rates doubling in mothers over the age of 35. With the advent of techniques to assist women in

getting pregnant, the rates of fraternal twins have increased remarkably. For example, in New York City Upper East Side there were 3,707 twin births in 1995; there were 4,153 in 2003; and there were 4,655 twin births in 2004. Triplet births have risen from 60 in 1995 to 229 in 2004.

- **Identical twins** have identical DNA but differing environmental influences throughout their lives affect which genes are switched on or off. This is called *epigenetic modification*. A study of 80 pairs of human twins ranging from age 3 to 74 showed that the youngest twins have relatively few epigenetic differences. The number of epigenetic differences between identical twins increases with age. Fifty-year-old twins have over three times the epigenetic difference of three-year-old twins.

The Value of Medical Research

Medical research has been shown to be beneficial to the quality of our lives—we live longer and have the opportunity to live healthier lives. It has brought us life-saving medications and diagnostic equipment like the ECG, X-ray, and mammogram to name a few. Being a member of an investigational medical research study is safe, interesting, and rewarding. Our children, the next generation, will benefit from what work is done now, as you or someone you know is benefitting now from those who have participated in the past.

Current research study opportunities here at SRI are funded by the National Institute of Health. Two studies that may be of interest to you are described below:

- Our ongoing study, *The Impact of Smoking Cessation on Sleep*, is looking for smokers who are willing to quit for **40 hours**. It involves spending three non-consecutive nights in the SRI Sleep Lab so that sleep patterns can be monitored before and after quitting smoking. Volunteers are paid **\$400**. If you would like more information or

would like to volunteer, please call **Jill at 800/605-3645**. Both twins do not have to participate.

- We are partnered with Stanford University School of Medicine to conduct a study investigating sensitivity to pain. The study will enroll twin volunteers and will examine the genetic and familial aspects of pain sensitivity. It is known that there is large individual variation in response to pain medication which hampers the ability of physicians to treat pain. Having a better understanding of how to produce pain relief will help to improve patient care. It will be important to have both fraternal and identical twin pairs to be able to sort out the influences of genetics vs. environment.

We will begin recruitment for this study in the next several months. In the meantime, if you would like to volunteer and/or get more information, give Jill a call at **800/605-3645**. She has already started a call list of interested twins.

Of the first 20 callers, two will be randomly selected to receive a mouse pad with this penguin cartoon.



"I think they're identical twins. But I'm not sure."

How to Contact Us

- ❖ You can visit our Website at <http://www.sri.com/twin/> to learn about what we're doing. Adult twins interested in registering can do so on this website.
- ❖ You can email us at sri.twin@sri.com to ask questions, update us with a new address or telephone number, or just to check in with us.
- ❖ You can call **1-800-SRI-TWIN (1-800-774-8946)**
- ❖ We check for messages daily, and we will do our best to return your call as soon as possible.
- ❖ If you would like information about study opportunities, you can call our twin line at **1-800-774-8946** or you can call Jill at **1-800-605-3645**.

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