



SRI International

The Northern California Twin Registry Newsletter

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1-800-SRI TWIN (774-8946)

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The Twin Registry is **GROWING**

We are continuing to increase the membership of the Northern California Twin Registry through advertising and word of mouth. Our thanks to many of you who have referred new twin pairs to us.

We are pleased to tell you that the Registry now has more than 750 pairs. We are hoping to have 1,000 pairs by the end of the year.

If you have ideas on ways to increase the Registry membership, *we would like to hear from you*. You can call us at 1-800-SRI-TWIN or send an e-mail to mcelroy@unix.sri.com.

Twins can now learn about us and register on-line by going to our **Web site**: <http://www.sri.com/policy/twin>.

Do know any twins who would like to join the Registry? We're continuing to enroll twins between the ages of 18 and 65 years old who are in good general health

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and at least one twin lives in Northern California. Give them our toll-free number and have them call us. We will ask them how they heard about the Registry, and if your name is mentioned, *you will receive \$25 for the referral once both twins are enrolled.*

Studies We're Conducting

Nicotine Metabolism Study: As many of you know, we are conducting a study that is focusing on how the metabolism of nicotine affects the addiction process. We are finishing up the second year of this 5-year study and have some interesting things to report (see below). To date, a total of 57 twin pairs have participated in the study, and an additional 16 pairs have scheduled appointments to participate in the next few months.

Early results from the first 14 identical twin pairs suggest a high degree of twin similarity for the rate at which nicotine is cleared from the body. The twins were also very similar on the rate at which their bodies eliminated a by-product of nicotine. In contrast, there appeared to be substantial differences from one twin pair to another on nicotine clearance. These findings suggest the influence of genetic factors. However, we will not know for sure until more identical and fraternal twins have been tested.

Studies (Cont'd)

If you would like more information or would like to sign up for the study, you can call **Sharyn** at 650/859-4905, **Michelle** at 650/859-2636, or **Mary** at 650/859-4130. They will describe the procedures, answer your questions, and, if you want to participate, they will ask you questions about your general health. The sign-up process needs to begin at least 6 weeks prior to participating, so it's never too early to call. Each twin will receive \$300 once participation is complete.

Genetic Investigation of Nicotine

Dependence: Studies have shown that 50% of susceptibility to become a smoker is due to genetic factors, while the remaining 50% is due to environmental factors. Most of the research effort to date in twin studies has been focused on the genetic side of the equation. Yet there is much we can learn about the environmental influences from an in-depth study of identical twins' individual smoking histories. We are fascinated by identical twins who are different from each other with respect to smoking (that is, one twin is a smoker and the other one is not). This study uses a new approach to get more information on the development of smoking, nonsmoking, and ex-smoking in twins so that life histories can be compared to determine possible environmental causes for differences in twin smoking behavior. **If you know any identical twins who are discordant for smoking (one smokes and the other doesn't), please ask them to contact us.**

The study involves taking part in a 20-minute telephone interview and then completing a questionnaire. The questions focus on history of nicotine use, starting with the first experience. Each twin will receive \$25 for completing the interview and questionnaire. If you would like to participate or get more information, call **Michelle** or **Mary** at the above numbers.

Famous Twins

We've been checking the Web for well-known twins and found some interesting surprises.

Some sports, entertainment, and public figures who are twins include:

- ✓ *John Elway*, Denver Broncos QB, and his sister Jana.
- ✓ *Jose and Ozzie Canseco*. Both played for the Oakland A's.
- ✓ *Gene and Marv Upshaw*. Gene played football for the Oakland Raiders, and Marv played for the Cleveland Browns and Kansas City Chiefs.
- ✓ *Alanis Morissette*, three-time Grammy winner, and her brother Wade.
- ✓ *Elvis Presley* also had a twin brother, Jesse, who was stillborn.
- ✓ *Mark and Scott Kelly* are NASA astronauts. But the first twin in space was *Charlie Duke*, the 10th man to walk on the moon (Apollo 16, 1972).

Twins Are Unique

The twin birth rate (proportion of twin births to total live births) in the U.S. is about 26.8 per 1,000. In 1996, there were 100,750 pairs of twins born in the U.S.

About one-third of all twin pairs are identical twins. As you probably know, identical (monozygotic) twins are formed from one fertilized egg, which splits after conception into two identical halves that develop separately.

One-third of all twin births result in same-sex fraternal twins, and one-third are different-sex fraternal twins. Fraternal (dizygotic) twins are formed from two fertilized eggs. The likelihood of having fraternal twins is dependent on the woman's carrying a twin gene and can also be affected by other hereditary factors, the woman's age, race, and number of children previously borne.

Although the odds of being born a twin have increased—in the 1960s about one of every 85 births produced a twin or other multiple vs. today's rate of twin births at one in every
you're still special if you are born as a twin.

Do you want to know whether you are identical or fraternal twins? We located a company that offers a twin zygosity test. The cost is \$95.00. You can get additional details from their Web site, www.proactivegenetics.com.

Another benefit of participating in our nicotine metabolism study is that we will obtain a small blood sample to do DNA testing for zygosity. We will give you the test results **at no cost to you.**

SRI Twin Study in the News

Several newspapers across the country, including *USA Today*, cited results of a long-term study of WWII veteran twins that were published in two journals: *Neurology* and the American Heart Association journal *Stroke*. The study showed that high blood pressure and other factors, such as diabetes, smoking, and increased alcohol consumption, were responsible for accelerated aging of the brain.

Frequently Asked Questions about

The Nicotine Metabolism Study

We have talked to hundreds of Registry members about participating in the nicotine metabolism study. Below are some questions that come up repeatedly when twins are in the process of making a decision about participating in the study. In case you are thinking about signing up for the study, we thought it would be helpful to you to have this information now.

How long is the study? We are just now completing the second year of this 5-year study. Twins will have the opportunity to participate through February 2002. **But why wait?**

Do my twin and I have to be smokers? Definitely not! With regard to twins' smoking status, we need a "mixed bag." That is, we need twin pairs who smoke, pairs who don't smoke, and pairs who are discordant for smoking (one smokes and the other doesn't).

How much time does the study take? You would have a 45-minute appointment with one of our staff at your home or workplace to read and sign the consent form, have your blood pressure taken, and have your blood drawn for screening purposes. You would then be asked to spend one 12-hour day at S.F. General Hospital. For four consecutive days following your hospital stay, one of our staff would visit you to obtain a blood sample. These appointments would take 5 minutes each. So, in total, your time

commitment would be about 14 hours.

Will I be able to smoke while at the hospital? Yes, although we would ask you to refrain from smoking until the nicotine infusion procedures are finished, which would be around noon. So, during the afternoon, you would be able to smoke.

How long does it take to be paid? You would be paid \$300 (plus parking fees and bridge tolls) within one week of completing the study.

What will happen during the hospital stay? From the time of your arrival at 7:00 a.m. to around noon, you would be busy with study procedures (you would have an electrocardiogram, a brief physical exam with the project physician, repeated blood pressure measures, and preparation for the nicotine infusion). The infusion takes 30 minutes and once it is done you will be able to order lunch and relax. During the afternoon you would have the option of watching TV or videos, reading, relaxing, etc.

If you have any other questions, please call us at 650/859-4905 or 650/859-4130.