



Introduction

Welcome to the 5th edition of the Michigan State University Twin Registry (MSUTR) Newsletter! Your participation in our research is invaluable to understanding genetic and environmental influences on a range of behaviors. Thank you for being a part of this important research!

The 5th edition of our newsletter has many exciting features. First, we describe some recent results from our child twin study. Next, we discuss some Disney movies that have twins as the main characters. Lastly, we have included information about college scholarships available for twins.

As always, please feel free to contact us about anything in the newsletter or about our studies in general. We are always eager to hear from past participants and welcome any suggestions for improving our work.

Sincerely,

Drs. Alex Burt and Kelly Klump
(Directors of the MSUTR)

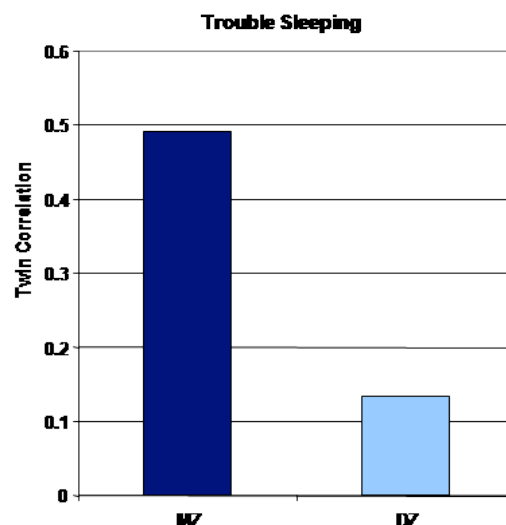
Fun Twin Facts

- Nigeria has the highest rate of multiple births and more identical twins. China has the lowest with the chance for multiple births averaging only one in 300.
- The tallest recorded female twins in the world reach a height of 6'43/4". They were born in Palos Verdes, CA.
- Having fraternal twins is a trait that runs in families. Identical twins are completely random in nature.
- Areas that experience long summer days witness more fraternal twins conceived.
- Eating yams may enhance your chance to conceive twins, as can living in the western versus the eastern part of the world.

Research Findings from Our Studies!

The MSUTR researchers recently examined data from the Twin Study of Behavioral and Emotional Development in Children (TBED-C; includes same-sex twin pairs between the ages of 6 and 10) in order to explore the extent to which genes influence problems with sleep (as indicated by parent report). As seen in Figure 1, there do appear to be large genetic influences on sleep problems. In other words, some children may naturally be more inclined to have trouble sleeping. This conclusion is based on the observation that identical twins (monozygotic: MZ) were more similar to each other on this trait than were fraternal twins (dizygotic: DZ). Because MZ twins share 100% of their genes, while DZ twins share 50% (on average), increased MZ twin similarity for sleep problems is likely due to the larger number of genes that they have in common relative to DZ twins. Environmental influences, by contrast, would be implied if MZ and DZ twins were equally similar on sleep problems. Although this finding therefore indicates that genes contribute to sleep difficulties, additional research is needed to better understand which genes, in particular,

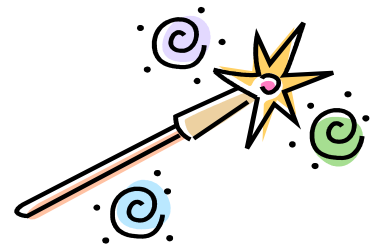
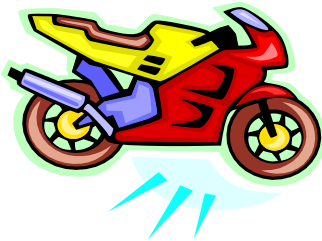
contribute to this trait. Importantly, however, our finding of genetic influence on sleep troubles does not imply that parents cannot help their children overcome these problems. Indeed, parents and children can still learn techniques to help them sleep better. Please let us know if you have any questions about this or other studies being conducted in our laboratory. We look forward to telling you about our newest findings in future Newsletters!



Movies about Twins!

Just as the world seems to be intrigued by the lives and behaviors of twins, the Disney Channel empire also seems to capitalize on the craze over twins. The following are descriptions of movies that are affiliated with Disney and whose story lines focus on identical and fraternal twins as main characters.

- **Motocrossed**, Andrew Carson (Trevor O'Brien) is a motocross star. However, before one of Andrew's races, Andrew breaks his leg. When Andrea (Alana Austin) learns of the news, she takes the opportunity to show everyone her motocross talent by posing as her brother during his races.



- **Double Teamed**, Heather and Heidi (Poppi Monroe and Annie McElwain) are twin sisters with different personalities, but they have one thing in common- their love for basketball. Based on a true story, these twin sisters excel in their sport and become the first twins to play in the WNBA.
- **Twitches**, Tia and Tamara Towry are real life twins that play the role of twins who were separated at birth. Once they learn of each others' existence, they work together to understand their power's true potential while fighting the force of the Darkness. It becomes a race to save the enchanted land of Coventry before it's too late.

Scholarships for Twins

Back by popular demand, we have included information on new college scholarships for twins below:

- **Carl Albert State College in Oklahoma**, Paul Nieto Twin Scholarship
- **Lake Erie College in Painesville, Ohio**, each twin gets the scholarship in alternate years
- **West Chester University of Pennsylvania**, Bonnie Evans Feinberg Scholarship
- **Sterling College in Kansas**, 50% discount for each twin

The Twins day Festival in Twinsburg, Ohio, offers a \$1,000 scholarship to high school seniors to help with upcoming college expenses.

To be eligible, applicants must have registered for and attended three of the last five festivals. Application forms can be requested from www.twinsdays.org.

More information about twin/triplet scholarships can be found at: <http://www.finaid.org/scholarships/unusual.phtml>

Our Current Twin Studies

1 Female Twin Study of Hormones and Behavior: This project investigates changes in ovarian hormone levels and behavior across the menstrual cycle, and whether these associations are influenced by genes, in female twins ages 16-22.

2 Michigan Twins Project: This is a mail-in twin registry for twins between the ages of 3 and 25 living within lower Michigan. Families complete a brief on-line questionnaire that assesses family composition and the health status of both parents and twins.

3 Twin Study of Behavioral and Emotional Development - Child: This study examines relationships among genes, mood, peers, family relationships and acting out behaviors in same-sex twins ages 6-10 years old.

If you are interested in study 1 or know someone who is, please contact us at: msutr@msu.edu or call (517) 432-3665

If you are interested in study 2 or know someone who is, please contact us at: msutr@msu.edu or call (517) 432-5604

If you are interested in study 3 or know someone who is, please contact us at: burtlab@msu.edu or call: (517) 355-6878