

# UW TODAY

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## Twins, especially male identical twins, live longer

Hannah Hickey  
News and Information



Twins not only have a bestie from birth — they also live longer than singletons. And those two factors may be related, according to new University of Washington research.

While twins have been subjects in countless studies that try to separate the effects of nature from nurture, a recent study in PLOS ONE is the first to actually look at what being a twin means for life expectancy. Analysis shows that twins have lower mortality rates for both sexes throughout their lifetimes.

“We find that at nearly every age, identical twins survive at higher proportions than fraternal twins, and fraternal twins are a little higher than the general population,” said lead author David Sharrow, a UW postdoctoral researcher in aquatic and fishery sciences.

The results suggest a significant health benefit for close social connections.

The data comes from the Danish Twin Registry, one of the oldest repositories of information about twins. The authors looked at 2,932 pairs of same-sex twins who survived past the age of 10 who were born in Denmark between 1870 and 1900, so all subjects had completed their lifespan. They then compared their ages at death with data for the overall Danish population.

For men, they found that the peak benefit of having a twin came in the subjects’ mid-40s. That difference is about 6 percentage points, meaning that if out of 100 boys in the general population, 84 were still alive at age 45, then for twins that number was 90. For women, the peak mortality advantage came in their early 60s, and the difference was about 10 percentage points.

The authors believe their results reflect the benefits of social support, similar to the marriage protection effect. Many studies have suggested that being married acts as a social safety net that provides psychological and health perks.

But one question surrounding the so-called marriage protection hypothesis, Sharrow said, is whether marriage really makes you healthier, or whether healthier people are just more likely to get married (or join a community group or have a large circle of friends, which also are tied to better health).

“Looking at twins removes that effect, because people can’t choose to be a twin,” Sharrow said. “Our results lend support to a big body of literature that shows that social relationships are beneficial to health outcomes.”

A social network can boost health in many ways, he said. Friends can provide healthy outlets and activities, and encourage you to give up bad habits. Just having a shoulder to cry on, a caregiver during an illness, or a friend to vent with can be healthy over the long term.

“There is benefit to having someone who is socially close to you who is looking out for you,” Sharrow said. “They may provide material or emotional support that lead to better longevity outcomes.”

Sharrow is a statistician who specializes in demographics and mortality. He and co-author James Anderson, a UW research professor in aquatic and fishery sciences and an affiliate of the UW Center for Studies in Demography and Ecology, were looking to tune a mortality model using the data from twins. But when they ran the numbers they stumbled upon an unexpected discovery.

Their model separates acute causes of death, such as accidents or behavior-related causes, from natural causes in old age. Female twins only had lower mortality for the earlier, acute causes. Male twins got a bigger overall longevity boost than women because they had lower mortality rates both for acute causes during their early years and from so-called natural causes past the age of 65. Sharrow believes these reflect the immediate and cumulative effects of male twins making healthier choices.

“Males may partake in more risky behaviors, so men may have more room to benefit from having a protective other — in this case a twin — who can pull them away for those behaviors,” Sharrow said.

The lifespan was also extended more for identical rather than fraternal twins, which may reflect the strength of the social bond.

“There is some evidence that identical twins are actually closer than fraternal twins,” Sharrow said. “If they’re even more similar, they may be better able to predict the needs of their twin and care for them.”

The authors would like to make sure that the findings are replicated in other datasets, to ensure that it’s not just that Danish twins who survived past the age of 10 in the 19<sup>th</sup> century had other advantages that had the effect of extending their lifespan.

If the findings hold up, they have implications far beyond twins.

“Research shows that these kinds of social interactions, or social bonds, are important in lots of settings,” Sharrow said. “Most people may not have a twin, but as a society we may choose to invest in social bonds as a way to promote health and longevity.”

The study was funded by the National Institutes of Health’s National Institute on Aging.

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For more information, contact Sharrow at 206-543-7848 or dsharrow@uw.edu.

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# The Perks of Being a Twin May Include a Longer Life

By Cari Nierenberg, Live Science Contributor | August 29, 2016 01:58pm ET

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Identical twins  
Credit: MJTH | Shutterstock.com

Being a twin may add a few extra years to your life, a new study suggests.

Researchers found that [identical twins](#) in Denmark tended to live longer than fraternal twins in that country, while both types of twins typically outlived men and women in Denmark who were not twins. The findings were published in [May in the journal](#)

[PLOS ONE](#), and the researchers announced their findings with a [statement last week](#).

The findings show that twins have a survival advantage over the general population at nearly every age, and between the two types of twins, identical twins have a survival advantage over [fraternal twins](#), said David Sharrow, the lead author of the study and a demographer and postdoctoral researcher at the University of Washington in Seattle.



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The researchers said they suspect that the longevity boost in twins results from the social bonds between the two siblings, Sharrow said. The close relationships often shared by twins could act as a buffer against engaging in risky behaviors over their life spans, or provide a source of emotional or financial support, he suggested. [[8 Fascinating Facts About Twins](#)]

In the study, the researchers evaluated data from the Danish Twin Registry, one of the longest-running databases on twins in the world. The scientists looked at data on more than 2,900 same-sex pairs of twins who were born in Denmark between 1870 and 1900, limited to pairs in which both twins had survived to at least the age of 10.

All of these twins have since died, so the length of their lives is known. Slightly more than one-third of the Danish twins in the study were identical, while the rest were fraternal.

## Longer lives

The researchers found that for both men and women, the average length of life for identical twins in Denmark who were born within the 30-year span around the turn of the 20th century was 4 to 5 years longer than that of the general Danish population from this same time period, Sharrow told Live Science.

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When analyzing the data by gender, the researchers found that female [identical twins](#) lived, on average, about 63.4 years, whereas female fraternal twins lived about 61.4 years and the general Danish female population lived about 58.8 years, Sharrow said.

In comparison, male identical twins in the study lived, on average, about 60.6 years, while male fraternal twins had a life expectancy of 59.1 years and males in the general Danish population lived about 57.5 years, Sharrow said.

It's not entirely clear why identical twins of both sexes may have slightly longer life spans than fraternal twins, but this is one of the study's most intriguing findings and deserves further investigation, Sharrow said. Previous studies have offered some clues, suggesting that identical twins may be more similar than fraternal twins in lifestyle habits that can influence health, or there may be differences in the closeness of the relationship between identical and fraternal twins, he said. [[Extending Life: 7 Ways to Live Past 100](#)]

Some limitations of the study are that it looked only at twins in one country born more than a century ago, so future research needs to determine if the findings hold up in other locations and time periods, Sharrow said. In addition, little information was available about the quality of the relationship between the twins, or about their [health behaviors and lifestyles](#), he said.

## Twin protection effect

[Longevity studies](#) that look at twins are often done to tease out the contributions of genetics (nature) and environmental factors (nurture) on life span. This new study, however, considered whether simply being a twin influenced the length of survival compared with people who are not twins, Sharrow said.

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The findings suggest that being a twin offers social, psychological and physiological benefits that could improve health and extend longevity, Sharrow said. The researchers called this concept a "twin protection effect," he added.

The "twin protection effect" is a similar concept to the "[marriage protection effect](#)," which is the idea that married people generally have better health and live longer than unmarried adults, Sharrow said. But one of the criticisms of the "marriage protection effect" is that the health benefits observed could be caused by a selection effect, meaning that healthier men and women who tend to avoid risky behavior also tend to get married, while less healthy individuals might choose not to, he explained.

However, a selection bias would not apply to twins, because they don't choose to be twins and, therefore, don't select themselves into a healthier group, Sharrow said.

Moreover, people don't need to be twins to reap the health rewards of social relationships. There's a wide body of evidence that many different kinds of [social relationships also offer a protection](#) effect that could help people experience better health and longevity outcomes, Sharrow suggested. These relationships can range from having formal ties to a religious group to being part of other social networks.

*Originally published on Live Science.*

## Editor's Recommendations

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# Average Lifespan Longer for Twins

| Aug. 23, 2016, at 12:00 p.m.



By Robert Preidt, *HealthDay Reporter*

TUESDAY, Aug. 23, 2016 (HealthDay News) – Twins live longer than other people, and their close social connection may be a major reason why, a new study says.

Researchers reviewed data from more than 2,900 same-sex twins. They were born in Denmark between 1870 and 1900. The study only included data from twins who lived past age 10. The researchers compared the twins to the general Danish population.



(HEALTHDAY)

At every age, identical twins had higher survival rates than fraternal twins. And, fraternal twins had higher survival rates than people in the general population.

For men, the peak survival benefit of being a twin was at age 45. Male twins' survival rate at that age was 90 percent, compared with 84 percent in the general population. For women, the peak survival benefit of being a twin occurred in their early 60s. About 10 percent more female twins made it to their early 60s than in the general population.

The findings, published recently in the journal *PLoS One*, reflect the health benefits of the close social ties between twins.

"There is benefit to having someone who is socially close to you who is looking out for you. They may provide material or emotional support that lead to better longevity outcomes," study author David Sharrow, a postdoctoral researcher at the University of Washington, said in a university news release.

For example, a close companion can discourage bad habits and encourage healthy behaviors, act as a caregiver during an illness, and provide emotional support.

If the findings are confirmed in other sets of data, they would have implications beyond twins.

"Research shows that these kinds of social interactions, or social bonds, are important in lots of settings," Sharrow said. "Most people may not have a twin, but as a society we may choose to invest in social bonds as a way to promote health and longevity."

### More information

The American Academy of Pediatrics has more about [twins](#).

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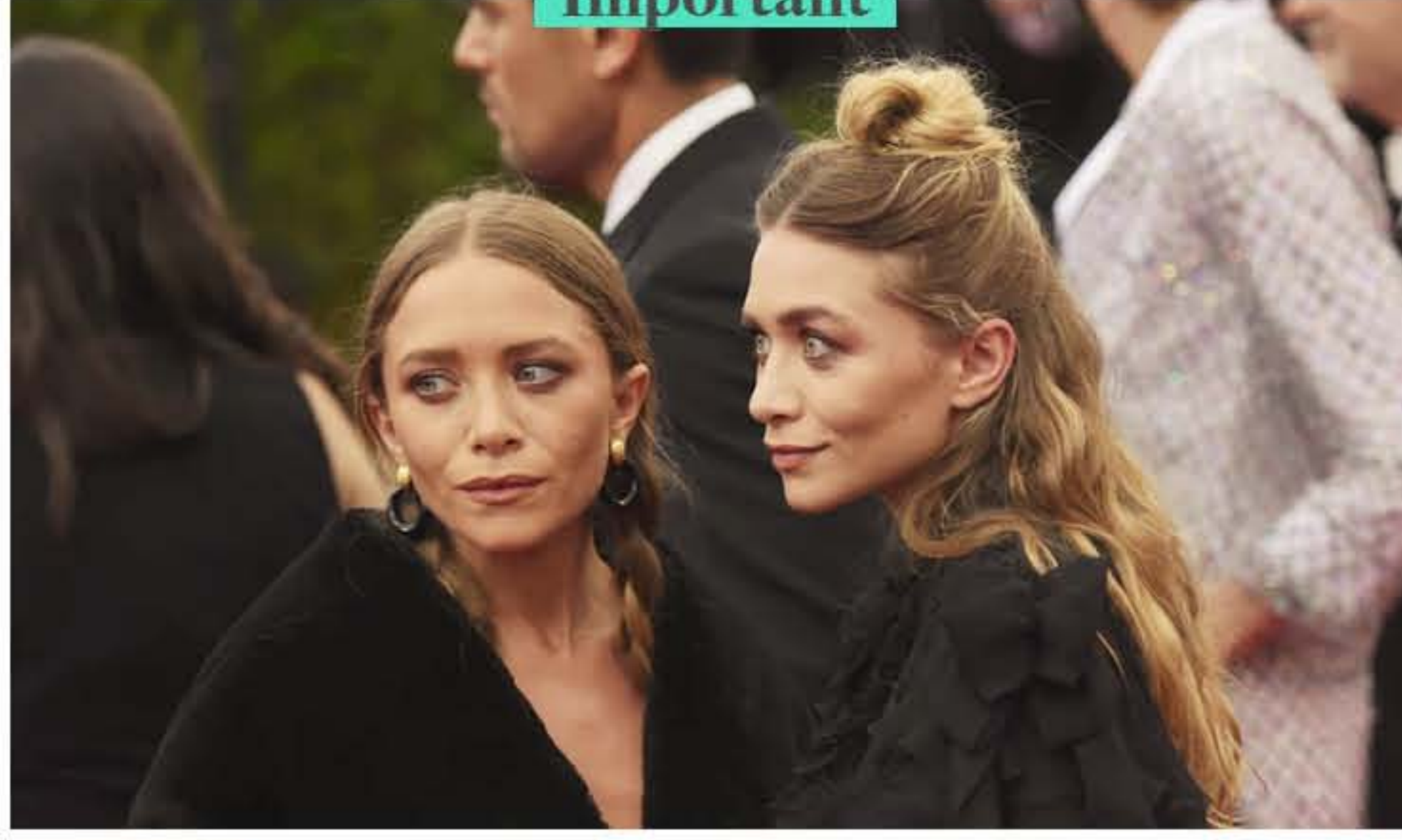
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## Twins Live Longer Than Everyone Else, Study Suggests, Because Companionship Is Important



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By **CLAIRE WARNER** Aug 21 2016

If you're one of the privileged few who can use #twinning unironically, I bear glad tidings: According to a study from the University of Washington, [twins live longer](#) than everyone else — not out of some innate genetic superiority, but by virtue of their built-in bestie. For everyone else who spent their childhoods wishing for a [Mary-Kate to their Ashley](#), a Dylan to their Cole, take solace in the fact that at least our loneliness will be literally short-lived.

In a paper [published earlier this summer](#) in *PLOS One*, researchers looked at data from nearly 3,000 same-sex twin pairs in the [Danish Twin Registry](#), which maintains information dating all the way back to 1870. To make sure people who lived an entire lifespan were analyzed, the study only included twins born between 1870 and 1900 and ruled out those who died before age 10. When they compared these twins' mortality rates with those of the general Danish population, researchers turned up a fascinating finding: Twins have lower mortality rates throughout their lives, particularly identical men.

"We find that at nearly every age, identical twins [survive at higher proportions](#) than fraternal twins, and fraternal twins are a little higher than the general population," lead author David Sharrow said, according to Science Daily.



Male and female twins were both "protected" against extrinsic causes of death — accidents, behaviors, and so on — but male, identical twins also had lower mortality rates in old age. They died eventually, of course, but male twins lived longer overall. The effect hit its peak in their mid-40s, when male twins were six percentage points ahead of the rest of the population. (As Science Daily explains, the percentage points mean that "if out of 100 boys [in the general population](#), 84 were still alive at age 45, then for twins that number was 90.") For women, the peak was in their early 60s, with a 10 percentage point advantage.

Sharrow and the paper's co-author, James Anderson, believe it all comes down to social support, which is frequently [implicated in longevity](#). Research has shown that people with quality relationships [aren't just happier](#); they also [live longer](#) than their lonely peers. Most people have to work to form these kinds of relationships, but if you have a twin, you're born with a [best friend](#) ready to pressure you into making healthier life choices.



This could be why identical male twins live longer than other men; as Sharrow explained in Science Daily, "Males may partake in more risky behaviors, so men may have [more room to benefit](#) from having a protective other — in this case a twin — who can pull them away for those behaviors." For everyone else, this usually comes in the form of a spouse; it's well-known that [married people live longer](#) as well.

If you're unmarried *and* twin-less like me, I guess we'll just have to start making friends, stat, or resign ourselves to enjoying our short time on earth. Yay?

Images: Giphy (2)