

## Nancy Segal: *Twin Mythconceptions: False Beliefs, Fables, and Facts about Twins*

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True or False? Consumption of white yams increases the likelihood of DZ twinning? There have been documented instances of MZ twins who differ in sex? 10–15% of us may have had a twin in utero that vanished before birth? Twins are more likely to be abused as children than non-twins?

If you answered “False” to any or all of these you might be surprised to learn that they are all in fact true. They are also just a tiny sample of the many fascinating true—and false—facts about twins that Nancy Segal writes about in her latest book: *Twin Mythconceptions: False Beliefs, Fables, and Facts about Twins*.

This is Segal’s fifth book about twins: her earlier ones being *Entwined Lives: Twins and what they tell us about Human Behavior* (1999); *Indivisible by two: Lives of Extraordinary Twins* (2005); *Someone Else’s Twin: The True Story of Babies Switched at Birth* (2011); and *Born Together-Reared Apart: The Landmark Minnesota Twin Study* (2012). As in her previous books, Segal’s *Twin Mythconceptions* presents an exhaustive and scholarly, but very readable review of a vast body of literature in a way that will appeal to twins, parents of twins, the general public, and scientists alike.

Segal defines mythconceptions as “the common misunderstandings, mistakes, and miscommunications that have permeated beliefs about twins...(which) are evident in scientific circles, as well as in the popular media and in public conversation” (p. xix). Following two introductory chapters which discuss different types of twins and ways to establish zygosity or twin type (and the importance of doing so), and

different approaches to studying twins, Segal’s remaining 11 chapters delve into these mythconceptions. The format of these chapters is to present a series of misconceptions about different topics, each of which is followed by a “short answer” and then a section labelled “more of the story”. The short answers are sometimes quite long but typically briefly summarize information about the topic; the “more of the story” sections provide more detailed scientific information, and these will likely be of the most interest to behavioral geneticists and other scientists who work with, or who are interested in twins. Each chapter concludes with numerous citations for readers who wish to learn more.

Chapters 3 and 4 cover misunderstandings about twin conceptions: examples include the notion that identical twinning does not run in families (it is likely that it does in some families) and that DZ twinning skips generations (it doesn’t). Chapter 5 explores ways to establish twins’ zygosity: don’t try to prove that twins are monozygotic by their identical fingerprints because these won’t be. It’s also not the case that twins are always born on the same day (the current record difference in birth dates is 87 days) or even in the same country. Chapter 6 describes such biological complexities about twins as polar body twinning and twin-to-twin transfusion syndrome, and explains how it is possible (albeit rare) for MZ twins to differ in sex.

Chapter 7 looks at such topics as telepathy between twins (unlikely, despite many MZ twins and others who believe that twins can read each other’s mind), and also describes the intelligence and expert performance of twins. Chapter 8 provides a very well-reasoned coverage of issues surrounding twins’ education, such as whether they should or should not be placed in different classrooms or even in different schools, and also looks at twins’ language development. This chapter should be of particular interest

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to parents of twins and to educators who make decisions about such important issues.

In Chapter 9, Segal discusses sex differences and explodes myths such as that half of all twins are gay. This chapter also describes the value of male–female DZ twins for research on sex-related behavioral development and includes a section on the misuse of such terms as “heritability” and “fraternal twins”.

Chapter 10 looks at such myths as that every pair of twins has a “good twin” and an “evil twin,” or that twins are more likely to get divorced than non-twins (they’re not, but their parents might be). In Chapter 11, Segal discusses twins, clones, and other extraordinary pairs. This chapter also looks at IVF and other assisted reproductive techniques.

In Chapter 12, Segal discusses twin spouses and a fascinating study (that she conducted) of unrelated look-alikes, who correlate near zero on measures of personality. In Chapter 13, the book’s final chapter, Segal describes some unresolved issues in twin research, such as who conducted

the first twin study (it might not have been Galton), and offers ideas about current twin research and where it might fruitfully go in the future. Following this chapter there are five appendices which explain Hellin’s Law and Weinberg’s Differential Rule, polar body twins, a glossary of terms and abbreviations used throughout the book, and Segal’s Top ten classic books about twins: cleverly arranged in alphabetical order so we don’t know which is her number 1!

This brief review has deliberately not provided an in-depth coverage of all the topics that Segal addresses. My goal was to illustrate a sampling of the topics and to pique the reader’s interest. If this goal has not been achieved then let me conclude by saying that *Twin Mythconceptions* will be of interest to any reader of this review and they are encouraged to read the book for themselves: they are certain to learn something new about twins and about research on twins.