



## Bringing Back Baby Jason: To Clone or Not To Clone?



by  
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Ted McMasters sat alone in the overly warm waiting area of the Green Spring Valley shock trauma unit. It had been an hour since the state police marched into his law office on Calvert Street to tell him his wife, Julie, and two-year old, Jason, had been in a serious car accident and were enroute via helicopter to the shock trauma unit. "It's the best shock trauma unit on the coast," he remembered hearing one of the officers say...like that mattered.

Ted knew that Julie was on her way home from the babysitter's when the accident happened. Ironically, she left work early because she wasn't feeling well. They both hoped she was pregnant again. The state police told him she was stopped at a red light when an 18-wheel flatbed carrying a load of bricks slammed into the passenger side of her Audi A6 station wagon. She and Jason had been rushed to shock trauma within an hour of the accident. Both were in critical condition during the helicopter transfer and they were rushed immediately into surgery upon arrival.

Ted stood shaking in the waiting room of the fourth floor surgical unit. He felt cold and wondered if it was the room temperature or the shock of the accident. Not knowing the status of Julie and Jason's health was too painful for words. As he waited for news he reflected on his life.

*Ted and Julie wanted a child from the day they were married. They both came from large families and having children just seemed like the natural thing to do. It was such a long road trying to get pregnant with Jason ... ten years and countless miscarriages had finally produced their son. Ted knew this baby would be their last chance for the "typical American" family. Of course he blamed himself. He should have frozen more sperm after his testicular cancer. Who knew that the radiation therapy would be so devastating to his ability to have children? It hadn't been easy for them, but Jason was well worth the wait! He was a healthy, bright child with big brown eyes and a sprinkling of freckles across his nose. He loved to climb and always had scuffmarks on his knees. "I wonder if this new baby will be like Jason." Ted wondered...*

"Mr. McMasters?" the sound of a doctor's voice interrupted his musings. "I am Dr. Wilcox. I have been attending to your wife. She is in stable condition in the Intensive Care Unit. We managed to repair her punctured right lung and broken femur. Right now her prognosis is good. Ummm, sir, did you know that your wife was pregnant?"

"She just had a pregnancy test yesterday. We are still waiting on results, why?"

"Please sit down Mr. McMasters," the doctor said gently, "I am so sorry. The stress from the accident caused your wife to hemorrhage. She lost the baby. Fortunately, the damage to her uterus is insignificant, so you will be able to have more children."

Stunned and devastated, Ted answered in a quavering voice: “I’m sterile.”

“Oh, I am so sorry. Please forgive my assumption.”

“Doctor, my baby boy was also in the accident with his mother. The pediatrician said they thought he had some internal bleeding, but they were taking him up to surgery and didn’t have any further information.”

“There is no easy way to tell you this. I’m sorry. Jason’s injuries were quite substantial. His heart stopped beating while he was on the operating table. We were unable to revive him.”

Ted McMasters slumped in his chair, silent tears streaming down his face. How could this be? How could Jason be gone? His big, brown-eyed baby boy, gone?

“Mr. McMasters, I know this may not be the best time to mention this, but...”

“Yes, my wife and I are organ donors, we would...”

“Oh, I’m not suggesting organ donation. I am suggesting you contact a friend of mine, Dr. Bossilier. She is the director of Clonaid, the first human cloning company.”

“What are you saying, doctor?”

“I am saying that you and your wife could have Jason back, alive and healthy, by making a clone of him from his cells. He would be Jason’s identical twin, a chance for you to continue your family tree.”

“Whaaaaat? I’m not sure I understand what you’re saying.”

“I’m saying that it may be possible for you to clone your son. I realize this all comes as quite a shock right now and you have to discuss your options with your wife. If you are interested, here’s my card.”

Ted watched the doctor walk from the room and contemplated what he should do.

### *Can you help Ted make his decision?*

#### **Learning Questions:**

1. What is cloning? From a scientific standpoint, what procedures would be used to clone a human?
2. Is cloning humans different procedurally from cloning animals? Are there any physiological risks to cloning humans? Are these risks different for animals? Why or why not?
3. What is imprinting? What role does imprinting play in cloning humans? Animals?
4. How does cloning differ from sexual reproduction?
5. What role do meiosis and mitosis play in maintaining the integrity of the genetic code during cloning? Sexual reproduction?
6. Will Jason II be “identical” to Jason I? Why or why not?
7. What is the difference between a somatic cell and a sex cell?

## Information Resources:

### Books:

- Griffiths, J. F., Gelbart, W.M., Miller, J.H., Lewontin, R.C. (1999). *Modern Genetic Analysis*. New York: WH Freeman Publishers

### Websites:

- Human cloning:
  - <http://www.clonaid.com>
  - <http://www.usnews.com>
  - <http://www.websciencenews.com>
  - <http://www.cnn.com>
  - <http://www.nationalacademies.org>
  - <http://www.rdi.gpo.or.th/NetZine/V3N43/cloning.htm>
  - <http://www.ornl.gov/hgmis/elsi/cloning.html>
  - <http://www.humancloning.org/>
- Ethics of cloning:
  - [http://bioethics.georgetown.edu/nbac/cloning\\_letter.pdf](http://bioethics.georgetown.edu/nbac/cloning_letter.pdf)
  - <http://www.bioethics.net>
  - <http://www.gene-watch.org/>
- Genetics links:
  - <http://www.biology.arizona.edu/>
  - <http://www.nature.com/nsu/010712/010712-1.html>
  - <http://library.thinkquest.org/3037/Lesson1.htm>
  - <http://www.whfreeman.com/MGA>
  - <http://www.kumc.edu/gec/>
- In the news:
  - <http://www.pbs.org>
  - <http://www.washingtonpost.com>
- Search engines:
  - <http://www.google.com>