

Hepatitis B

A Disease for the Generation Next
Saving Asian Americans from a Silent Killer

By Rita Yoon

Within one year, Leslie Hsu, 27, lost half of her family to hepatitis B. First, hepatitis B took away her brother John. He was 17 years old when he was diagnosed with hepatitis B-related liver cancer. The hepatitis B virus had already ravaged his entire liver. After a year of chemotherapy and a liver transplant, John died of complications related to surgery in 1993.

Next, it was Leslie's mother, Auxilia. One month after her son passed away, the hepatitis B virus began to actively replicate within Auxilia's body. The virus would also devastate her liver and result in





terminal liver cancer. Within twelve months of her son's death, the cancer had spread throughout her abdomen. Auxilia passed away at the age of 51.

Leslie's story is a tragic example of a disease that passes silently from one generation of Asian Americans to the next.

"It was something we were completely unprepared for. Just one day out of the blue, my brother had a pain in his abdomen and the next day we knew it was liver cancer," says Leslie, a second-generation Chinese American. "I never thought that I would lose both of them . . . and it's all because of this thing called hepatitis B, which we never even heard about until they had liver cancer."

Hepatitis B is a viral infection of the liver. The disease is a major risk factor for *cirrhosis*, a scarring of the liver and liver cancer.

Hepatitis B is similar to HIV/AIDS in many respects. Both diseases are transmitted by blood, body fluids and sexual contact. Both diseases can remain dormant and cause death many years after infection.

But the hepatitis B virus is 50 to 100 times more contagious than HIV, the virus that causes AIDS. The hepatitis B virus can survive outside the body for at least seven days, increasing the chances of infection.

There are five different types of hepatitis—hepatitis A, B, C, D and E. Only hepatitis B disproportionately affects Asian and Asian Americans.

Asians are not genetically predisposed to developing hepatitis B. The reason Asians and Asian Americans are at high risk for contracting hepatitis B is that the disease is

endemic in Asia. As a result, many Asians who immigrate to the United States are already infected from their native countries. They carry the virus to the United States and may pass the disease on to their children.

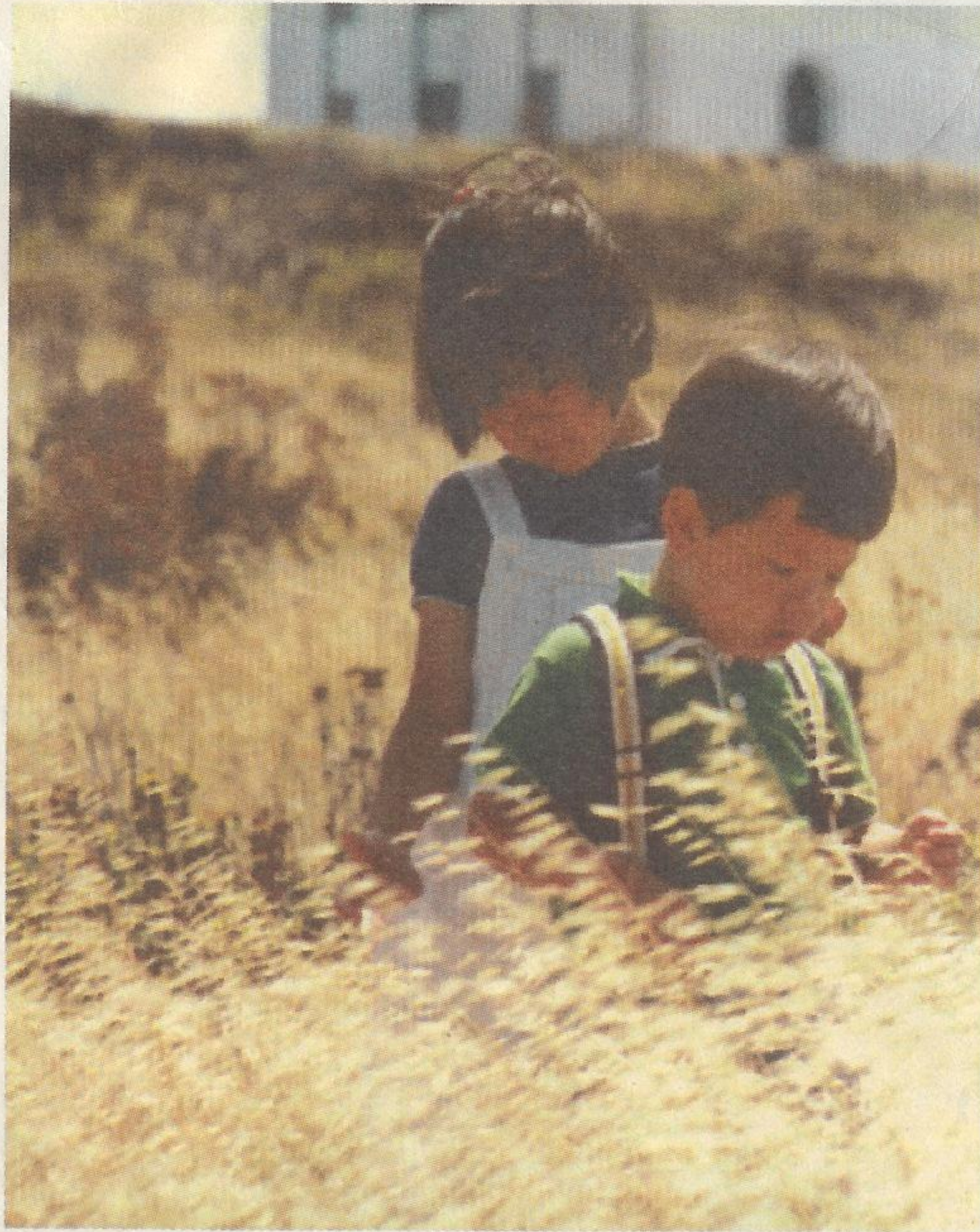
This is a major mode of transmission among Asian Americans because the population is composed of a high proportion of immigrants. It is estimated that up to 15 percent of Asian immigrants are hepatitis B carriers compared to less than one percent among the general American population.

Hepatitis B causes 5,000 deaths a year in the United States, according to the latest figures from the Centers for Disease Control and Prevention (CDC). There are 250,000 new cases of hepatitis B in the United States annually. One in 20 people will contract hepatitis B some time in their lifetime. Asian Americans make up a significant proportion of these statistics.

Once infected, there is no cure for hepatitis B. However, in most people, their immune systems fight off the virus. They recover without complication and develop lifelong immunity to the disease.

However, in five to ten percent of people who contract hepatitis B, their body is unable to overcome the viral infection. These people become chronically infected. They are called hepatitis B carriers because they have an ongoing infection and can transmit

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Leslie and John Hsu

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the virus to others. According to the CDC, half of the 1.25 million chronic hepatitis B carriers in the United States are estimated to be Asian American.

For chronic carriers, the virus can remain dormant for years and strike during late adulthood or begin to actively replicate at a young age, as was the case with John. The virus then kills off the cells of the liver causing liver cancer, liver failure and death. Liver cancer ranks as one of the top five most common cancers among Asian American men.

"Hepatitis B-associated liver cancer is a major cause of death among Asians," says Dr. Hie-won Hann, director of the Liver Disease Prevention Center at Thomas Jefferson University and professor of medicine at Jefferson Medical College in Philadelphia, Pa. For Asian American men in their "30s, 40s, 50s and 60s, liver cancer is a majority of their suffering and mortality," she adds.

Among Asian Americans, the primary modes of transmission are from child to child and mother to child. A chronically infected mother may pass on the hepatitis B virus to her child during the birth process when the infant comes in contact with infected blood. Children can contract the virus from other children through household contamination and contact with open wounds.

Leslie's mother was a chronic carrier, which is how John contracted the virus. "We're assuming that's a mother-to-child transmission. So somehow, perhaps the whole family got in contact with it at some

point," says Leslie. "95 percent of people develop their own antibodies and they're fine. So my dad and I are fine, but my mom and my brother fell into that five percent."

The pattern of transmission differs for the general U.S. population. Among non-Asians in America, sexual contact and intravenous drug use with contaminated needles are the main modes of transmission of hepatitis B.

Hepatitis B is a masked disease that gives chronic carriers a false sense of security. Half of all people who become infected do not experience symptoms. When there are symptoms, they usually resemble the flu. So many people who are infected may not even realize that they have the disease. Symptoms include loss of appetite, fatigue, diarrhea, vomiting and yellowing of the skin or eyes.

"The problem is most people don't have symptoms. Most people who have hepatitis B will never recall [having] yellow eyes and feeling sick," says Dr. Samuel So, Director of the Asian Liver Center at Stanford University Medical Center in Palo Alto, Calif. "That's why we call it a silent epidemic. People just don't know."

The age of infection is another major factor in determining the outcome of hepatitis B. People with younger ages of exposure have higher rates of chronic, lifelong infection. Asian Americans are usually infected during childhood. Exposure during childhood results in a 90 percent risk of becoming chronically infected. However, exposure

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during adulthood results in a ten percent risk of developing chronic infection.

"Like HIV, the longer you have the viral infection, like lots of Asian patients, the harder it is to get rid of the virus," So describes. As a child, the "risk for [becoming] chronically infected is higher, and the risk of fighting the battle and losing is much higher."

Current treatment for hepatitis B-related liver failure and liver cancer includes surgery, liver transplantation and chemotherapy. Antiviral drugs, called *lamivudine* and *interferon*, are also available.

"The prospect of treatment of hepatitis B is very bright . . . There are at least 20 antiviral therapies in phase I, II and III trials," says Dr. Hann, who is conducting research about antiviral drugs for the treatment of hepatitis B. "The major problem I face is that they have no idea what they have and they come to me with advanced liver cancer. If we do blood screenings and identify infected individuals, there are things we can do. There is plenty of time to intervene had the patient been aware."

But the best cure for any disease is always prevention. Hepatitis B is a vaccine-preventable disease. The vaccine will not cure existing cases of hepatitis, but it is 95 percent effective in preventing chronic, life-long infection, according to the World Health Organization.

It is the first vaccine that has been directly linked to preventing a major human cancer. Studies have shown that immunization results in a direct reduction in rates of liver cancer, according to a Taiwanese cohort study published in the *New England Journal of Medicine* in 1997.

For infants born to carrier mothers, like John, vaccination within 24 hours of birth

receptor of the National Task Force on hepatitis B immunization. "Our goal is to increase to 90 percent vaccination levels for [Asian American] children aged 0 to 18 by the end of 2001 . . . because 90 percent is the level where we can lower transmission."

Federally funded vaccination programs are being implemented nationwide to target this missed generation of Asian Americans. But vaccination still depends primarily on self-identification.

In 1997, while a graduate student at the Harvard School of Public Health, Leslie co-founded the HepB Initiative, a grass-roots organization of medical students and public health students in the Boston area to help reach Asian American youth. With public and private funds, the organization provides free screenings and vaccinations for hepatitis B prevention.

"I guess I was searching for a way to turn my loss into something positive," says Leslie. "This is one of those diseases where if people just know about it early on, and they get the vaccine, then they're safe for life. This is a preventable disease as long as you have a vaccine, and all of this tragedy that happened in my life could have been avoided." ♦

For more information about hepatitis B, contact:

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**Centers for Disease Control
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would have prevented the virus from settling in his liver.

Federally funded hepatitis B vaccination programs are available for Asian Americans who are younger than 18 years of age. The hepatitis B vaccine consists of three injections administered during the span of six months.

The vaccine has been available in the U.S. since 1981. Since 1990, the Public Health Service Advisory Committee on Immunization Practices has recommended that all Asian American children younger than seven years receive hepatitis B vaccinations. It is now standard medical practice in the United States to administer hepatitis B vaccinations to all infants.

As a result, the U.S. Department of Health and Human Services cites that the number of new hepatitis B infections among Asian American children has decreased from approximately 10,000 cases in 1987 to less than 5,000 cases in 1995.

Though new infection rates are decreasing among Asian Americans, the numbers can be misleading. There is still a generation born before national recommendations that have not been immunized against hepatitis B. According to the CDC, most Asian American children eight years and younger have received hepatitis B vaccinations, but less than 50 percent of Asian Americans aged eight to 18 years have been immunized.

Leslie's brother, John, belonged to this missed group, members of generation X and Y. These Asian Americans are still at high risk of contracting hepatitis B and of dying prematurely due to resulting liver failure and liver cancer.

For Asian Americans aged 6 to 18 years who missed state vaccination laws, "we need to catch-up before they become sexually active," says Moon Chen, Executive Di-

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