

Dear Friendly Pines Camp parents:

Since we chose to require measles vaccination from all campers this year, we have had many expressions of support for our decision, but also a few parents who strongly questioned our reasons for doing so. I would like to take a moment to discuss the background of this issue, and explain our actions.

Measles is a contagious, potentially deadly viral infection. In most cases, it causes nothing more serious than fever and rash, but in about 1 in every 1000 cases, it is fatal. In 2005, it killed more than 325,000 people worldwide. In the United States, before the measles vaccine was invented, measles typically killed about 400 to 500 children per year. For each child killed, several others suffered serious complications such as encephalitis, meningitis, or pneumonia, sometimes leading to permanent injuries such as brain damage or blindness.

Since its invention in 1963, the vaccine for measles has eradicated the disease in most developed countries, but it remains widespread in the Third World. Individual cases of infection are occasionally brought here by foreign travelers and immigrants. However, these outbreaks soon die out, because the vast majority of people are vaccinated, and the infection cannot easily spread from person to person.

The vaccination is typically given in two doses in early childhood, in the form of the MMR (measles-mumps-rubella) combined vaccination. It can cause side effects such as a mild fever or rash in a small percentage of the children who receive it, and very rarely a more serious allergic reaction. According to the Centers for Disease Control, in the ten years from 1997 to 2006 there were a total of six cases in which a child died shortly after receiving the vaccination, without some other cause of death being known. These deaths were not necessarily proven to have been caused by the vaccination, and in any case they are a tiny fraction of the deaths from measles infection that routinely occurred before the vaccination was discovered.

Unfortunately, the vaccination is only 95% effective, as there are some children whose immune systems are not strong enough to mount a response to the challenge. In particular, there is a high risk to children whose immune systems are damaged by HIV/AIDS infection or chemotherapy treatment for cancer. Fortunately, like unvaccinated children, they are protected by the so-called "herd immunity" of the vaccinated children around them, which causes measles outbreaks to die out before they can spread to those more vulnerable.

Measles vaccination has been one of the major success stories in modern medical science. Why, then, does it remain controversial? The answer lies in the unhappy tale of a single poorly designed scientific study, which purported to find a link between the MMR vaccination and another serious childhood illness known as autism. This condition is a neurological disorder characterized by marked disturbances in social interactions and behavior. Autism has become much more frequently diagnosed in recent years. It remains controversial whether this increase is because of improvements in doctors' diagnostic capabilities, changes in the way the disease is defined, or a true increase in the incidence of the disorder, but nobody disputes that the number of autism diagnoses has increased significantly.

In 1998, a British researcher named Andrew Wakefield published a paper in the prestigious medical journal *The Lancet* that suggested a connection between the MMR vaccination and childhood autism. This result was immediately seized upon as gospel truth by grieving and desperate parents of autistic children. The news flashed around the world at the speed of e-mail, amplified by media hype and ill-informed celebrities, egged on by certain alternative practitioners who stand to profit if trust in mainstream medical science is undermined, and hailed as manna from heaven by a circle of plaintiff's attorneys who specialize in suing companies in the medical industry.

The number of vaccinated children fell off dramatically after the Wakefield paper was published, especially in

England but also in the US and other developed nations. Many lawsuits were filed, and many sensationalist news stories alarmed parents worldwide about the supposed risks of the vaccine. England's rates of vaccination fell so low that the "herd immunity" effect was mostly lost, and measles epidemics recurred at ten times their previous rates. Similar epidemics occurred in other European countries including Holland and Ireland. A number of children suffered permanent damage, and at least seven children died from the disease, the first measles deaths in England in more than a decade.

The public-health establishment reacted appropriately to the scare and the resulting loss of confidence in the vaccine. Dozens of large studies were performed around the world. Tens of thousands of vaccinated and unvaccinated children were examined for evidence of a link between autism and the MMR vaccine, and absolutely none was found. Dr. Wakefield's study, on the other hand, consisted of only 12 children. His conclusions were so flimsy that ten of his twelve co-authors eventually repudiated the paper's findings, and published a retraction in the pages of *The Lancet*.

Even more disturbingly, evidence came to light in 2006 that suggests that the entire affair may have been an intentional conspiracy by unscrupulous lawyers and a crooked doctor to loot money from blameless vaccine makers. *The Times* of London reported that two years before the *Lancet* paper was published, Dr. Wakefield received under-the-table payments totaling more than 450,000 pounds (close to a million dollars) from plaintiff's lawyers hired by parents of autistic children looking for deep-pocketed defendants to sue. He did not disclose this conflict of interest, and as a result, he is now being investigated by the British medical authorities, who are likely to revoke his license.

As evidence against Wakefield's findings mounted, some anti-vaccination activists suggested that the vaccine preservative thimerosal, rather than the vaccine itself, was to blame for causing autism. However, this substance has been removed from all childhood vaccine preparations for many years now, with no resulting decrease in the number of autism cases. There is no reliable evidence that it was ever responsible for autism or any other illness. While it is true that the diagnosis of autism often occurs shortly after childhood vaccinations are given, this is because autism is commonly diagnosed in young children around the age when they would ordinarily receive the vaccine, whether or not they do in fact get it. It would make about as much sense to say that autism is caused by toilet-training or watching *Sesame Street*.

As the safety and appropriateness of measles vaccination continues to be confirmed by multiple large research studies, the medical community has made a strong stand for universal vaccination. The Centers for Disease Control, the American Academy of Pediatrics, the American Medical Association, the American Society for Microbiology, the Institute of Medicine of the National Academy of Sciences, the American Academy of Family Practice, and the British National Health Service have all continued to recommend MMR vaccination. Fortunately, it appears that the scare is passing and common sense is taking hold. Vaccination rates in the developed world are returning to their normal high levels.

Some parents still question the safety of vaccinating their children, despite all the scientific evidence, or may have religious or philosophical objections to doing so. In some localities, these parents have been able to get waivers or affidavits that allow their children to continue attending public school without immunization. While we respect their right to raise their children as they see fit in this great free country, we would remind them that Friendly Pines is a private institution that is under no obligation to accept all applicants. If their actions placed only their own children's health at risk, we would be happy to allow them to come to camp, and face whatever consequences might occur. However, there are three reasons that their refusal to vaccinate their children unreasonably endangers the other campers at Friendly Pines:

1. There is currently an outbreak of measles in Arizona, with 21 confirmed cases. This is the largest outbreak of measles in the US for the past seven years.
2. Friendly Pines receives campers and staff from around the world, including countries where measles is endemic.
3. At the end of the regular camp season, Friendly Pines hosts Camp Rainbow, a special camp for children who are battling cancer. We cannot take the risk that their fragile immune systems would succumb to an infection that spread to them via an unvaccinated child.

We strongly encourage our camp parents to follow the advice of the scientists who know this issue best. Please ignore the hucksters and shysters and publicity hounds whose ill-informed beliefs and unfounded allegations are causing children to die unnecessarily from an illness that should have been eradicated decades ago. If you have not yet done so, immunize your children against this dreadful disease, and join us for all the fun this year at camp!

Sincerely,

Christopher C. May, M.D.
Vice-President, Friendly Pines Camp, Inc.

Note: We can accept DOCUMENTED proof of prior measles infection in lieu of vaccination. We will also accept the measles-only version of the vaccine instead of the MMR combined vaccination.