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### Vaccination Schedules

Vaccinating children and adults is the best way to prevent and eliminate once prevalent and deadly disease. Following the American Pediatric Academy vaccination schedule would be one way to accomplish such a task. Smallpox, a disease which may date back to the ancient Egyptians, is just one example of a disease that was eradicated by an effective vaccine. The World Health Organization (WHO) provides specific details: “Smallpox was fatal in up to 30% of cases. Smallpox has existed for at least 3,000 years and was one of the world’s most feared diseases until it was eradicated by a collaborative global vaccination program led by the World Health Organization. The last known natural case was in Somalia in 1977. Since then, the only known cases were caused by a laboratory accident in 1978 in Birmingham, England, which killed one person and caused a limited outbreak. Smallpox was officially declared eradicated in 1979...Smallpox no longer occurs naturally since it was totally eradicated by a lengthy and painstaking process, which identified all cases and their contacts and ensured that they were all vaccinated. Until then, smallpox killed many millions of people.” (C) For nearly forty years, the world has been free of smallpox due to an aggressive vaccination program with the only exception being an accident in England. Human error is to blame in this one instance. Additionally, the last known incident of smallpox occurred in a developing nation without readily available vaccines. It was eradicated long before this in developed countries of the world. The variola minor form of smallpox is the less deadly of the two; variola major is more

deadly and physically devastating for victims. The 30% fatality rate represents only those deaths due to variola minor; the statistic is certainly higher for variola major. If WHO has encountered such success in eliminating smallpox despite “a lengthy and painstaking process”, then the concept of a routine vaccination schedule is valid and easily provided by American Pediatric Academy.

Preventing disease in children and adults may be accomplished with relative ease through the adoption of a routine vaccination schedule as outlined by the American Pediatric Academy. Following these guidelines has eradicated some of the world’s most frightening diseases, specifically polio, a disease which was prevalent in the United States during the 1940s and 1950s, sweeping through the country in the form of epidemics. It is the disease that crippled President Franklin Delano Roosevelt, forcing him to with the aid of a cane or leg braces. In some cases he was even carried by his assistants. The Center for Disease Control provides the details on the impact of polio before and after the introduction of the Salk vaccine between 1940 and 1965: “An average of over 35,000 cases were reported during this time period. With the introduction of Salk inactivated poliovirus vaccine (IPV) in 1955, the number of cases rapidly declined to under 2,500 cases in 1957. By 1965, only 61 cases of paralytic polio were reported.” (F) It is apparent that the Salk vaccine, named after its creator Jonas Salk, was highly effective within a ten-year period in terms of minimizing the damage the disease might have done had it remained uncontrolled. The United States is not the only country to benefit from the introduction of a polio vaccine. Countries around the globe have seen a marked decrease in the number of cases they have experienced. The Center illustrates the success of the polio vaccine worldwide:

The number of worldwide polio cases has fallen from an estimated 350,000 in 1988 to 407 in 2013—a decline of more than 99% in reported cases. Four regions of the world are certified polio free—the Americas, Europe, South East Asia and the Western Pacific. Only three polio-endemic countries remain—Afghanistan, Nigeria, and Pakistan. January 13, 2014, marked three years since a child was paralyzed by poliovirus in India. The country was once considered the most complex challenge to achieving global polio eradication. On March 27, 2014, the country of India, along with the other 10 countries in the WHO South East Asia Region, was certified polio-free. Eighty percent of the world’s people now live in polio-free areas.” (F) Over a period of 25 years the number of polio cases has diminished considerably to fewer than 500 individuals being diagnosed each year. Vaccinations have eradicated polio from India which had been seen as having the most challenging set of circumstances to overcome. If the World Health Organization (WHO) could accomplish this feat in India, the remaining countries of Afghanistan, Nigeria, and Pakistan could soon follow. In order to save more lives across the globe, it is critical that vaccines be administered according to the recommended schedule of the American Pediatric Association.

Adopting a routine schedule of vaccinations makes sense for both children and adults as such basic medical care can prevent disease. Guidelines set by the American Pediatric Academy ensure that parents raise healthy children who grow into healthy adults. The measles provide a final example of the success of vaccinations across the globe over time. The World Health Organization (WHO) has worked to bring vaccinations to children and adults through its Measles and Rubella Initiative. WHO provides statistics for fatalities between 2000 and 2011: “The number of measles deaths globally decreased by 71% between 2000 and 2011, from 542,000 to 158,000. Over the same period, new cases dropped 58% from 853,500 in 2000 to 355,000 in 2011,

according to new data released in 2013.” (C) WHO’s global initiative has succeeded in cutting death rates and new diagnoses by more than half in both instances, highlighting the tremendous benefits of vaccinations. While these numbers represent a decrease globally, America has long considered the measles eradicated although there are isolated pockets that occasionally spring up. The Center for Disease Control and Prevention explains:

Most people in the United States are protected against measles through vaccination, so measles cases in the U.S. are uncommon compared to the number of cases before a vaccine was available. Since 2000, when measles was declared eliminated from the U.S., the annual number of people reported to have measles ranged from a low of 37 people in 2004 to a high of 667 people in 2014. In 2008, 2011, 2013 and 2014, there were more reported measles cases compared with previous years. CDC experts attribute this to U.S. communities with pockets of unvaccinated people. (F)

Interestingly enough, the isolated cases in which the measles is diagnosed in the United States occur in places where vaccination rates are low due to public sentiment against vaccines. These “pockets of measles” stay relatively contained because so many American do follow the APA’s guidelines for vaccination. By vaccinating children and adults, there are fewer instances of potentially serious or fatal disease thereby reducing the likelihood that people will become ill. The American Pediatric Academy recommends a vaccination schedule because it protects individuals against serious illness and prevents the spread of disease.