

# Vaccination: *Helping Clients*

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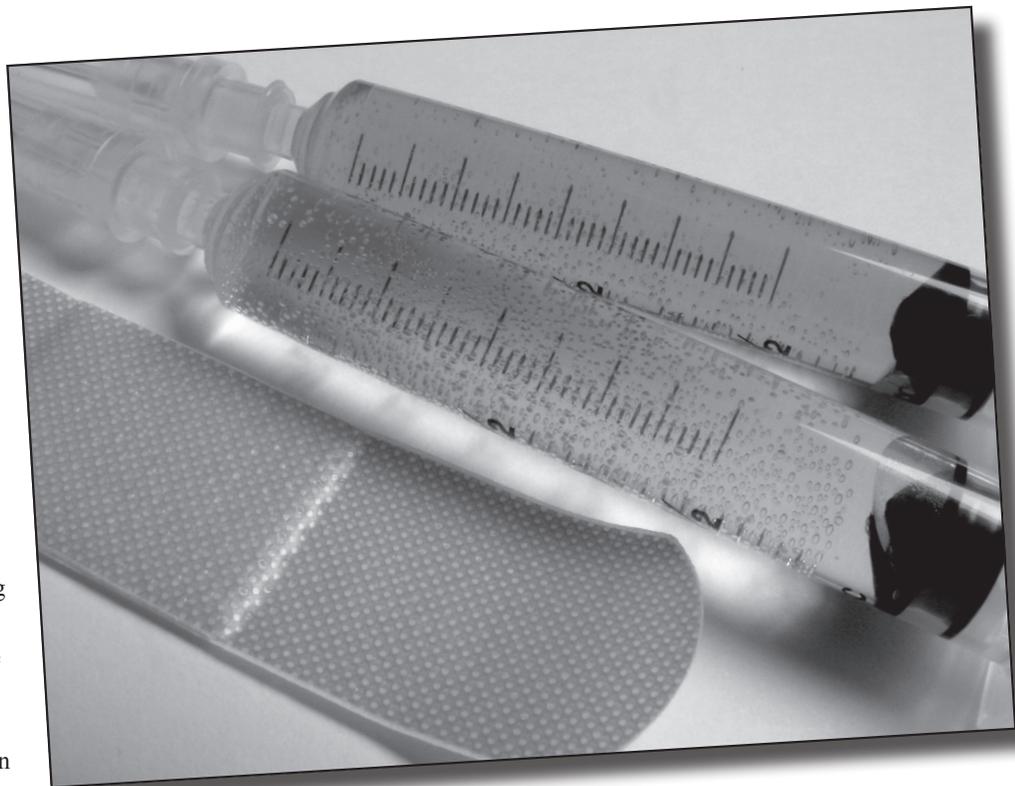
**W**ith cases of autism on the rise and no cause or cure in sight, many parents are questioning whether vaccinations could play a role. In 1998, Andrew Wakefield, MD, published an article in *The Lancet* claiming that there was a causative link between the MMR vaccine and autism. However, his data was falsified and it was discovered that a group of anti-vaccine lawyers had paid for his research. Investigations into his fraudulent research resulted in a full retraction published in 2010 by *The Lancet* and revocation of Wakefield's license.<sup>1,2</sup>

Many studies have been conducted looking at the link between vaccines and developmental delay, especially autism. Studies have consistently shown no link between vaccines and autism.<sup>3-5</sup> Furthermore, cases of autism have continued to increase despite a reduction in vaccinations and a removal of mercury from vaccines.<sup>6,7</sup>

You have probably encountered questions from your clients regarding autism or other vaccination-related topics. The following evidence-based information may be helpful in explaining vaccines' benefits and efficacy.

## Can a vaccination make me sick?

Vaccines contain either live or dead protein, called antigens. Live, attenuated vaccines contain a version of the living microbe that has been weakened in the lab so it shouldn't cause disease, but there is a small possibility that the attenuated microbe *could* revert to a virulent form and cause disease. Thus, you may get sick after being vaccinated with live vaccines. People with weakened or damaged immune systems should not receive live vaccines. Additionally, vaccines with live protein render you minimally infectious immediately after you receive the vaccine, therefore people who have received live vaccines should avoid people who have compromised immune systems. There are live vaccines on the market for influenza, rubella, measles, and mumps. Scientists produce inactivated or "dead" vaccines by killing the disease-causing microbe with chemicals, heat, or radiation. Such vaccines are more stable and safer than live vaccines: The dead microbes



can't mutate back to their disease-causing state. However, they are weaker than live vaccines.<sup>8</sup>

## How safe are vaccines?

Vaccines must go through testing and clinical safety and efficacy trials regulated by the Food and Drug Administration (FDA). Once on the market, they are monitored for adverse events through the Vaccine Adverse Event Reporting System (VAERS). This system depends on clinicians reporting adverse events. Ninety percent of adverse events are non-serious, but serious adverse events include anaphylaxis and nervous system reactions such as seizure, paralysis, and permanent brain damage.<sup>9-10</sup> To report an adverse event, visit the VAERS Web site at <http://1.usa.gov/aYZV7i>. You do not need to prove that a vaccine caused the adverse event.

## Is there mercury (thimerosal) in vaccines?

Chemicals are added to vaccines in minute amounts to enhance effectiveness and prolong shelf life. The most controversial of the preservatives is a mercury-based preservative called thimerosal. According to the US Centers for Disease Control and Prevention (CDC), since 2001, with the exception of some influenza (flu) vaccines, thimerosal is not used as a preservative in routinely recommended childhood vaccines.<sup>5,11</sup>

# Understand Myths vs. Facts

## Should I get a flu shot if I'm pregnant?

ACNM, CDC, the American College of Obstetricians and Gynecologists (ACOG), the Association of Women's Health, Obstetric, and Neonatal Nurses (AWHONN) and other organizations recommend all pregnant women receive the annual influenza inactivated (or "dead") vaccine during pregnancy. Pregnant women who contract influenza face serious risks, including severe illness, premature delivery, and even death.<sup>12-14</sup>

However, pregnant women should not be given the live influenza vaccine or the MMR vaccine. Vaccines that are safe and recommended to be given during pregnancy can be found at [www.vaccines.gov](http://www.vaccines.gov).

## Aren't all the diseases that require vaccination nearly eliminated?

No—for example, pertussis (whooping cough) has been on the rise since 2007, and preliminary figures show that in 2010 incidences topped 21,000 in the United States. In 2010, California saw its worst outbreak of pertussis since 1947: Approximately 9500 people became ill, and 10 infants died, according to the California Department of Public Health. Other states, such as Michigan and Ohio, have seen smaller outbreaks.<sup>15-16</sup> The CDC recommends the pertussis vaccination for all postpartum mothers and adults caring for newborns.<sup>17</sup> In June 2011, the Advisory Committee on Immunization Practices voted to recommend pertussis immunization for pregnant women who previously were not vaccinated. The vaccine,

which does not use live bacteria, would be given in the third trimester or late second trimester.<sup>18</sup>

## CDC and ACNM Recommendations

The CDC publishes recommendations routinely on vaccines, with lists for specific populations (pregnant women, infants, children, adolescents, adults, those over age 65, and those traveling abroad). Breastfeeding women and their children can receive most vaccines.

It is the position of ACNM that primary health care responsibilities of the certified nurse-midwife (CNM) and certified midwife (CM) include:

- Assessing immunization status of all clients.
- Providing clients with current information regarding the control of communicable diseases by vaccination, the risks and benefits of immunizations, current immunization guidelines, and locations where immunizations are available in the community.
- Offering immunizations in the clinical setting when feasible.
- Maintaining currency in evidence-based information regarding the risks and benefits of available vaccines.<sup>19</sup>

Vaccines that are appropriate for midwives to administer in-office include but are not limited to: Seasonal Influenza; Hepatitis A; Hepatitis B; Human Papilloma Virus; measles, mumps, and rubella (MMR); and tetanus, diphtheria, and acellular pertussis (Tdap).

For more about how to order, store, and administer vaccines, visit the Immunization Action Coalition at [www.immunize.org](http://www.immunize.org). 

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