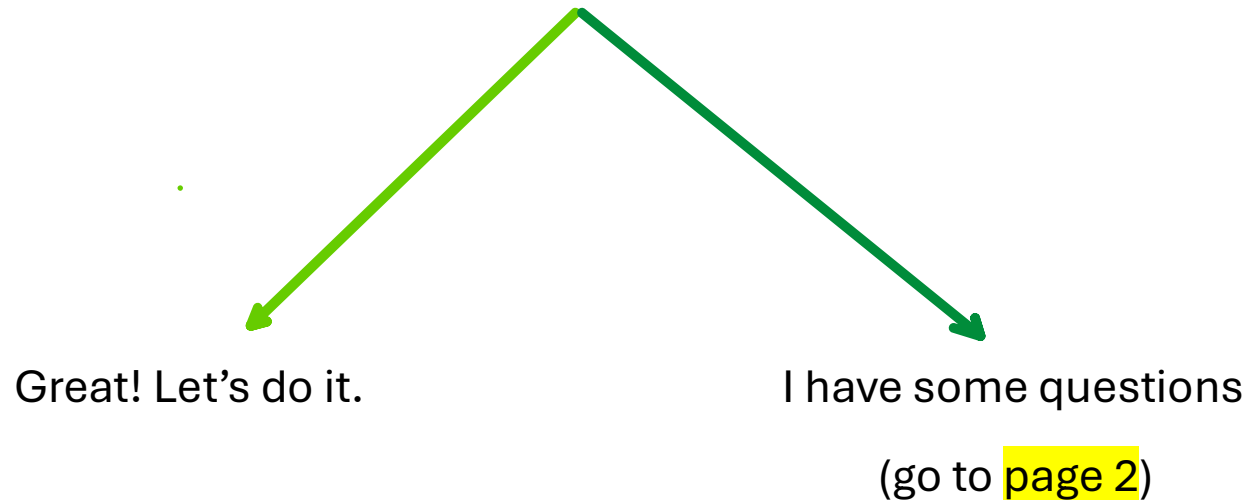


Let's Talk Vaccines!

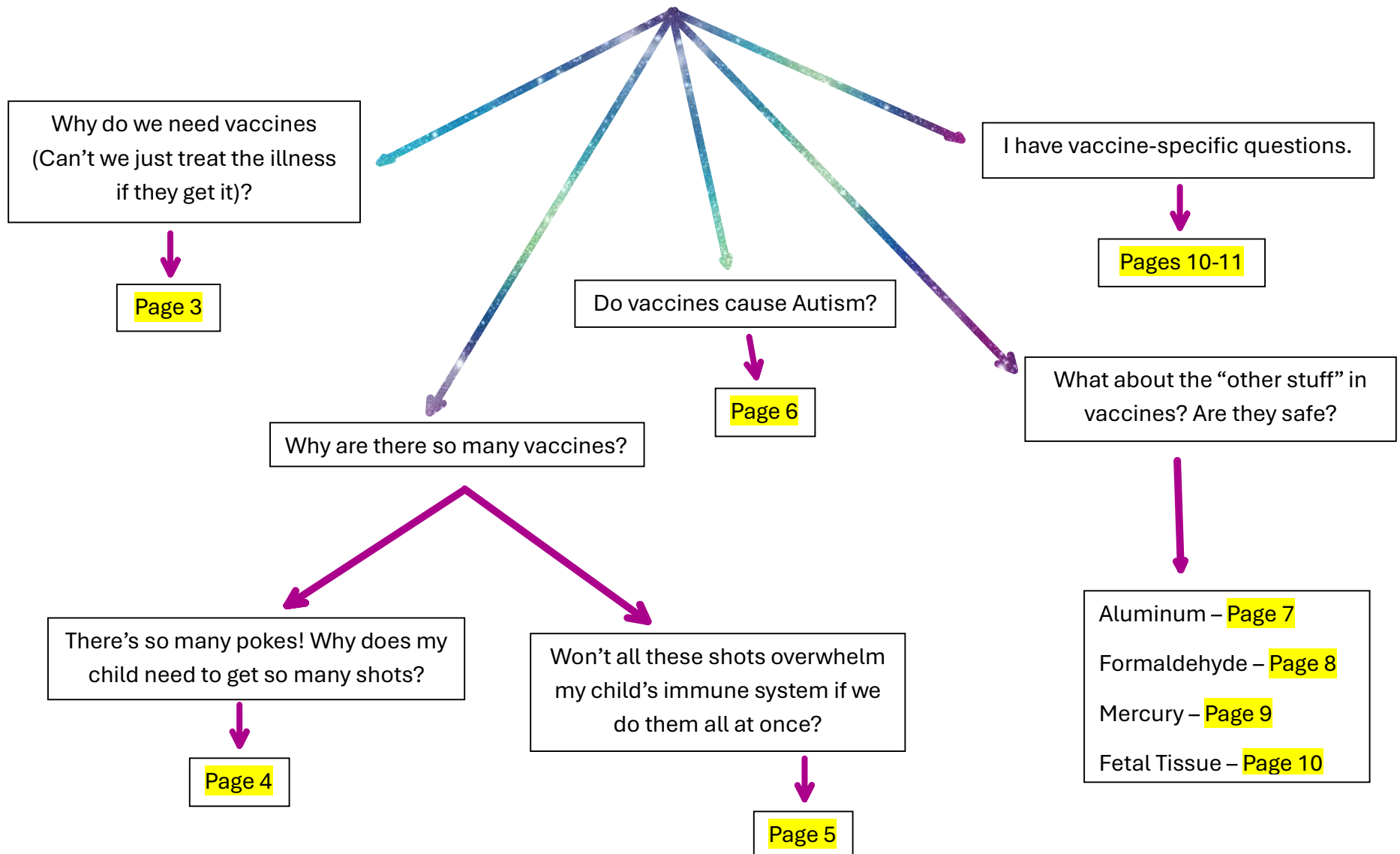
Your child is due for vaccine(s) today.



At TAPAC, we pride ourselves as being a trusted source of medical support and information for you to keep your family healthy. We always welcome questions you may have, so that you feel confident in understanding our recommendations.

That being said, we do have an obligation to keep all of our patients safe, and to provide all of our patients with evidence-based medicine. **That is why we have an immunization policy.** Please see [page 15](#) to review our immunization policy in more detail.

I have questions about vaccines...



“The flu shot doesn’t work – I ended up getting the flu anyway!
So what’s the point?”

Why do we need vaccines?

“Why does my child need all of these shots when they aren’t really a thing anymore?”

These are just some of the questions we receive every day with regards to vaccines.

It is important to remember why vaccines were developed in the first place: *the whole idea of vaccines was TO DECREASE SEVERITY OF ILLNESS from diseases that posed particular risk to the general population*. The goal was to keep people off of ventilators, out of hospitals, and prevent lifelong issues from these diseases.

So, the goal wasn’t prevention of these illnesses altogether. With that being said, when a certain number of the population gets vaccinated, it creates something called **herd immunity**: enough people are vaccinated that it is difficult for the illness to spread, and protects the people who are not eligible for vaccination.

Unfortunately, with rising numbers of people refusing vaccinations, we can’t always depend on herd immunity to protect our children. That means we are starting to see rising number of these vaccine-preventable illnesses, and they are more of a threat to your child’s health than they have ever been.

Okay, so what is the big deal if my child gets sick? Can’t we just treat the illness with a medicine?

It is important to remember that for a lot of vaccine-preventable conditions, THERE IS NO TREATMENT, and we can only provide supportive care. Additionally, once infected, some of these viral illnesses can live in nerve endings and flare at any time in their lives (Shingles after Chicken Pox, or subacute sclerosing panencephalitis after Measles). Some other conditions, like meningitis, progress to ICU-level illness incredibly quickly – so yes, there is a treatment in the form of antibiotics, but by the time your child is diagnosed, it may be too late to prevent life-changing consequences (such as brain damage or amputation).

Why do you give so many shots? Can't we spread them out more?

The *immune system* is the term we use for the collection of cells, organs and proteins that fight invaders to the body. When a germ like a bacteria or virus enters the body, the immune system is alerted (like an alarm going off). If the body has been exposed to this germ before, it already has circulating proteins (called **Antibodies**) that recognize particular **Antigens** on the germ and “flag” it to be attacked and broken down by other “security” cells of the body. You can be exposed to a germ, and therefore get protection in the form of antibodies, by either 1) getting sick from the wild type germ, or 2) by getting vaccinated against this germ.

The thing is, if you just get sick once, the antibodies in your body start to decrease over time and your body loses the memory of how to fight that germ. We've found the same to be true of vaccines - one shot for any infection rarely imparts lasting immunity – in order to achieve that, your body needs a few “reminders” in the form of booster shots. Scientists have worked for decades to determine the fewest shots possible while still imparting the ability to protect your child from infection.

Over the years, great strides have been made in combining some vaccines (ex; DTaP-Hib-IPV in the Pentacel vaccine) to decrease the total number of “pokes” your child receives (instead of giving 9 shots over 6 months, it's only 3)! We cluster vaccines together because we want to protect children from these diseases as early as possible. Each day they go without vaccination is another day they are unnecessarily at risk.

It is also important to consider that getting multiple shots at once will actually decrease their pain and stress response to those shots. Spacing the shots out over multiple visits will lead to more individual painful events, stress hormone (cortisol) surges and negative associations with the office.

We do recognize that there are indications for spacing out vaccines and are happy to talk to you more about specific concerns (such as a previous reaction to a vaccine, etc) and different options for administration.

Won't my child's immune system be overwhelmed?

The way vaccines work are by presenting a very small amount of **Antigen** into a person's body – this acts a “red flag” to the body and so the body begins making **Antibodies** to fight the **Antigen**. Many parents today recognize that there are more vaccinations offered today than there were when they were kids, which makes them wonder...**is my child being exposed to too many antigens?**

No! Our children today are receiving *FAR LESS* antigens and getting protected for *FAR MORE* illnesses.

In 1986, there were only 7 vaccines on the childhood vaccination schedule compared to 17 vaccines that are in the AAP vaccination recommendations as of 2026 – but it is important to remember that the medicine that went into creating vaccines 30+ years ago was completely different, and much less refined, than it is today! In the 1980s, there were ENTIRE BACTERIAL or VIRAL matter in some vaccines – the DTP vaccine *alone* had 3,000 antigens in it! Today, the antigen load ranges from 1 to 70 antigens per vaccine. Below is a direct comparison of antigen exposure IN TOTAL over the entirety of the childhood vaccination schedule:

Year	# of Vaccines	# of Antigens
1986	7	~10,000
2026	17	165

Also, it is important to mention that a child is exposed to *literally thousands of new antigens per day* (that pacifier that dropped on the ground and went right back in the mouth, or that friend that coughed right in your child's face). So, in the grand scheme of things, the few vaccinations that your child is getting today is a “drop in the bucket” of antigens that they were exposed to in the last day alone!

Do Vaccines Cause Autism?

Nope.

There have been thousands of studies over the last 20 years (most recently one published in late 2025) that consistently show that there is *no link between vaccines and autism or developmental delay.*

So where did this concern even come from?

In 1998, Andrew Wakefield published a study suggesting that vaccines cause developmental regression in children, based on a study of only 12 children. Upon further review, the study was retracted and widely discredited due to flawed methodology and scientific misconduct (fudged data). What is more, Andrew Wakefield had his medical license removed and was banned from practicing medicine. The damage had been done, however, in planting seeds of doubt in vaccine efficacy and safety for our most vulnerable population – our children.

Another component to this story that you may have heard before is that “**vaccines are a victim of their own success.**” To put it differently, vaccines were so incredibly effective that the younger parenting generations now do not remember – or never even experienced - how serious, terrible and deadly these vaccine-preventable illnesses can be.

What about all the “other stuff” in vaccines?

Aside from the antigens themselves, often we hear about concerns regarding what else is in vaccines. See below for more information, but the bottom line for all of these substances is “THE POISON IS IN THE DOSE”

ALUMINUM

Aluminum is the most prevalent metal on Earth and therefore is prolific in our world.

Adults typically ingest 7-9 mg of aluminum per day.

Aluminum is found in:

- food (fruits, vegetables, cereal, flour, dairy products, formula, breast milk)
- storage containers (like soda cans)
- cookware like pots and pans
- health products (antiacids, antiperspirants)

In vaccines, aluminum is used as an adjuvant – it’s a component that helps boost the immune response to the antigen in any given vaccine so that it is more effective. Infants receive less aluminum via vaccines than they will consume in their daily diet. To put it in numbers, see the table below:

Based on average consumption over 6 months, infants in the first 6 months of life are estimated to receive...

4 mg of aluminum	From all of the routine vaccines combined
~10 mg of aluminum	From breast milk
~40 mg of aluminum	From cow’s milk based formula
~120 mg of aluminum	From soy based formula

FORMALDEHYDE

Formaldehyde is a substance that naturally is found in the environment, including in the human body.

Formaldehyde is necessary in our bodies to make important things like DNA as well as other important proteins! In high doses, however, it can also mutate DNA and lead to cancer – so understandably, parents often wonder what it is doing in vaccines.

During the vaccine making process, formaldehyde is used to neutralize viruses and inactivate toxins so that our immune systems can recognize these diseases without making us sick in the process. While the vaccine goes through multiple purification steps, because this is science, it cannot be 100% guaranteed to be completely washed off. That being said, the minimal amount of formaldehyde left is WAY less than what would be in our bodies at baseline.

Generally speaking, each human body has about 2.5 micrograms of formaldehyde per milliliter of blood. So, if the average 2 month old baby weighs 5 kg (~11 pounds), he/she would have about 1.1 milligrams (mg) of formaldehyde in his/her body at a time. In contrast, in the first 2 years of life, children will receive **AT MOST ~0.7 mg** of formaldehyde *in total* from vaccines.

We come in contact with more formaldehyde daily in the food we eat (apple = 6-20 mg, cooked beef = 4.5 mg, spinach 3.3-7.3 mg), the air we breathe (0.02-0.4 ppm indoors, higher in more urban places with more automobile exhaust or nearer to factories) and various things in the environment that we touch (carpet, plywood, cigarettes/vapes, paints/varnishes).

So you see, the total amount of formaldehyde from every vaccine a child receives in 2 years is still less than what is in their bodies at baseline every single day of their lives!

THIMEROSAL & MERCURY

Thimerosal has been used as a preservative in all manner of things since the 1930s. In vaccines specifically, it helps prevent bacterial or fungal growth in multi-dose vaccine vials. It contains a derivative of mercury.

First of all, it is important to recognize that not all mercury is the same. **Ethylmercury** is the type of mercury in thimerosal, and **Methylmercury** is what accumulates in our fish/lakes/rivers and in the environment. Methylmercury is what people are referring to when they discuss the dangers of mercury.

“**Ethyl**” components can be dangerous in high doses but generally are easily broken down and removed by the body, while “**methyl**” products cannot be safely processed by the body and therefore cause big issues in small doses. Another way to think of this is by comparing ethanol (alcohol like beer or wine) and methanol (used in some fuels) – of course alcohol is dangerous in large doses, but humans can process it in limited quantities, while ingesting even a little bit of methanol is incredibly dangerous.

Multiple studies have been conducted proving the safety of thimerosal, but despite this, the FDA felt it prudent to remove it from almost all of vaccines since most of them were moving to single-use vials and therefore the risk of bacterial and fungal introduction became less of a concern.

Today, the only vaccine that contains thimerosal in the United States is the multi-use vials of influenza vaccine. There are also single-use vials of the influenza vaccine, which is what TAPAC uses.

So the bottom line is this: while thimerosal has been proven to be safe as a preservative,

TAPAC does not administer any vaccines that contain thimerosal.

FETAL TISSUE

There is no fetal tissue in vaccines. Period.

This misunderstanding comes from the fact that three vaccines (Rubella, Varicella and Hepatitis A)* are derived by growing viruses in human cell cultures. Viruses cannot grow in just any environment - many viruses that infect humans can only be grown in the laboratory within human cells, since that is where these viruses reproduce. These cell cultures that are used in the development or production of the above vaccines are laboratory-grown cells that originally came from tissue donated from two pregnancies that ended in the 1960s. The cells used today are not new tissue samples — they are laboratory-grown descendants of those original cells that have been continuously replicated for decades. No ongoing collection of fetal tissue is involved in maintaining these cell lines. The vaccines themselves do not contain fetal tissue.

It is also important to remember a few key points about how the viruses are grown: 1) They are grown in individual cells – *not groups of cells in the form of organs or tissues*, and 2) these vaccines DO NOT contain any human DNA.

We understand that questions about this topic may be connected to personal or religious beliefs. Religious leaders from all major religions, including Catholicism, have evaluated this very issue and each of these religions' leaders have determined that it is permissible, and even advisable, to receive vaccines derived in this matter because they prevent the spread of deadly diseases and protect human life.

*There was an early COVID-19 vaccine derived in a similar way but that is no longer offered in the US.

VACCINE SPECIFIC QUESTIONS

While we acknowledge that there is no way this document is complete, we are hopeful that it has answered some of the more common questions we frequently hear. Below are a few more questions about specific vaccines that we hear often.

Which vaccines are “required”?

Currently in the state of Michigan, the only vaccines that are not recommended by schools are Influenza, COVID and HPV. As such, while we highly recommend all available vaccines, these 3 are the exceptions that we make in our immunization policy.

Is it too early to get the flu shot? Too late?

We recommend the Flu vaccine anytime from mid-August to, ideally, before Halloween. TAPAC typically receives shipments of flu vaccines in mid-September, but there really isn't a “too early” date. TAPAC always holds **Flu Shot Clinics** in the fall to help your child get quick and easy access to the flu shot. Follow us on social media or call in the fall to see about scheduling. We do offer the flu vaccine through April since this is a definite “better late than never” mindset to the flu shot.

I always get sick from the FLU/COVID shot.

It is physically impossible for inactive vaccines to cause illness. You cannot “catch” the flu or COVID from the immunization. However, *the immune system activation in response to the vaccine can cause you to feel fatigued and sore/achy for 24-36 hours after your vaccine.* Sometimes taking Tylenol or Motrin can help mitigate these symptoms.

Is the COVID vaccine safe?

YES. A recent study has shown that the COVID vaccine decreased hospitalizations by 50%! Much like Influenza, even if you end up getting COVID, your symptoms will be much more mild and your risk of complications after infection (such as pneumonia, chronic fatigue syndrome and/or exercise intolerance) will be much lower if you have had at least the first series of COVID vaccines (not necessarily the annual booster that is now recommended only for vulnerable patients or kids under 2 years old).

Why are you offering the HPV vaccine to my 11 year old? Isn't HPV sexually transmitted?

Human Papillomavirus (HPV) is a sexually transmitted disease that can cause genital warts and cervical cancer. Gynecologists call it the “common cold of the genital-urinary tract”, meaning that be exposed to a strain of HPV in their life REGARDLESS of their sexual choices. The reason it is recommended to be given at such a young age is that the vaccine has been shown to be MUCH MORE EFFECTIVE BEFORE THE ONSET OF SEXUAL ACTIVITY. In fact, for the highest rate of protection, it is recommended that the 2 shot series be completed before 13 years old. If your child does not receive the first dose before 15 years old, then they will need a 3rd HPV shot because of decreased efficacy at older ages.

Why does my son need the HPV shot?

While your son does not have a cervix and so cannot get cervical cancer, he is still at risk for genital warts and/or other types of cancer caused by HPV. Every year, more than 15,000 cases of mouth, throat and penile cancers in men are attributed to HPV. This vaccine will protect him from that. Also, he would not be able to transfer those strains of HPV to any partner in the future.

What's going on with vaccine guidelines?

In the Fall of 2025, the Health and Human Services Secretary, Robert F Kennedy Jr, came out with a revised vaccination schedule without any evidence or explanation for these changes. A few months later, these changes were determined to be unlawful and any decisions made were redacted. Throughout all of this, the American Academy of Pediatrics (with the support of other American medical associations country-wide) has remained dedicated to evidence-based medicine and policies that consistently reflect the best interest of children. For these reasons, TAPAC has followed the guidance of the AAP.

What is the RSV vaccine all about?

The RSV vaccine is only offered to pregnant women and people older than 65. There is, however, an RSV antigen injection (NOT a vaccine) that imparts immediate and effective immunity for infants through 7 months of age. This has drastically decreased the morbidity and mortality of infants for the past 2 winters – less illness, less hospitalizations, less deaths. If your child is eligible, he/she should get it! As a pregnant mother, if you are eligible for the RSV vaccine, your infant would not need the RSV antibody shot after birth because the RSV antibodies that your body produces will cross the placenta and protect your baby.

Vaccine safety

https://www.healthychildren.org/English/safety-prevention/immunizations/Pages/vaccine-studies-examine-the-evidence.aspx?_gl=1*u7rlry*_ga*MTg3MjQwNTQwMi4xNzc3Mzg4NjA1*_ga_FD9D3XZVQQ*cze3Nzc0MDc4MTgkbzQkZzEkdDE3Nzc0MDc4MjAkajU4JGwwJGgw

<https://www.chop.edu/vaccine-education-center/vaccine-safety/vaccine-ingredients/types-of-vaccine-ingredients>

Delayed Vaccine Schedule

<https://www.chop.edu/vaccine-education-center/vaccine-schedule/altering-the-schedule>

Antigens in Vaccines

<https://www.medpagetoday.com/infectiousdisease/vaccines/116769>

Vaccines do not cause Autism

<https://www.aap.org/en/news-room/fact-checked/fact-checked-vaccines-safe-and-effect-no-link-to-autism/>

<https://www.who.int/news/item/11-12-2025-who-expert-group-s-new-analysis-reaffirms-there-is-no-link-between-vaccines-and-autism>

<https://www.autismspeaks.org/do-vaccines-cause-autism>

Aluminum

<https://www.chop.edu/vaccine-education-center/vaccine-safety/vaccine-ingredients/aluminum>

<https://publications.aap.org/pediatrics/article/157/3/e2025074874/205757/The-Role-and-Safety-of-Aluminum-Adjuvants-in?autologincheck=redirected>

Thimersol

<https://www.chop.edu/vaccine-education-center/vaccine-safety/vaccine-ingredients/thimerosal>

<https://www.cdc.gov/vaccine-safety/about/thimerosal.html>

Formaldehyde

<https://www.chop.edu/vaccine-education-center/vaccine-safety/vaccine-ingredients/formaldehyde>

<https://www.texaschildrens.org/vaccine-education-resource-center/vaccine-safety/understanding-formaldehyde-vaccines>

Fetal Tissues

<https://prod-ss.aap.com.au/factcheck/vaccines-do-not-contain-aborted-fetal-cells/>

Vaccine Guideline Changes/Redaction

<https://publications.aap.org/aapnews/news/34722/AAP-s-historic-victory-in-vaccine-lawsuit-a?autologincheck=redirected>

TAPAC Immunization Policy

It is our expectation that all newborns in our practice as of September 1st, 2015, will receive their 2,4,6-,12-,15- and 18-month vaccines in entirety before their second birthday.

It is also our expectation that older patients transferring in as new to our practice be up to date with their vaccines.

Should a patient who is not up to date with vaccines wish to join our practice, a grace period for catch up may be discussed and carefully planned with our physicians and vaccine nurse coordinator. Exception will only be made for patients with established and documented medical contraindications.

This policy does not dismiss patients from the practice that were established patients prior to September 1, 2015 and have not received their vaccines. It is our hope and expectation that these families use this opportunity to begin a catch-up schedule so that they may become protected from the risks of vaccine preventable diseases. Please understand that unvaccinated children may be asked to take extra precautions in our office to protect our most vulnerable patients. We will insist on your cooperation in this regard.

Finally, if you absolutely refuse to vaccinate your child despite all our efforts, we will ask you to consider finding another health care provider. Please recognize that by not vaccinating you are putting your child at unnecessary risk for life-threatening illness and disability, and even death.

As medical professionals, we feel very strongly that vaccinating children on schedule with currently available vaccines as recommended by the American Academy of Pediatrics is absolutely the right thing to do for all children and young adults. Thank you for your time in reading this policy, and please feel free to discuss any questions or concerns you may have about vaccines with any one of us.

Sincerely,

The TAPAC Providers