

UK VACCINE SCHEDULE AND INGREDIENTS GLOSSARY

8 weeks	6 in 1. INFANRIX HEXA Rota virus. ROTARIX MenB. BEXSERO
12 weeks	6 in 1. INFANRIX HEXA Pneumococcal. PREVNAR 13 Rota virus. ROTARIX
16 weeks	6 in 1. INFANRIX HEXA Men B. BEXSERO
1 year	Hib/Men C. MENITORIX MMR. PRIORIX or MMRVAXPRO Pneumococcal. PREVNAR 13 MenB. BEXSERO
3 years & 4 months	MMR. PRIORIX or MMRVAXPRO 4 in 1. REPEVAX
12- 13 years	HPV. GARDASIL
14 years	3 in 1. REVAXIS MenACWY. NIMENRIX
Pregnancy	4 in 1. BOOSTRIX

Aluminium – INFANRIX HEXA, GARDASIL

Aluminium salts are among the oldest adjuvants that are commonly used. They slow the escape of the antigen from the site of injection, thereby lengthening the duration of contact between the antigen and the immune system (i.e. macrophages and other antigen-receptive cells). Aluminium is an experimentally demonstrated neurotoxin and the most commonly used vaccine adjuvant. Despite almost 90 years of widespread use of aluminium adjuvants, medical science's understanding about their mechanisms of action is still remarkably poor. There is also a concerning scarcity of data on toxicology and pharmacokinetics of these compounds. In spite of this, the notion that aluminium in vaccines is safe appears to be widely accepted. Experimental research, however, clearly shows that aluminium adjuvants have a potential to induce serious immunological disorders in humans. In particular, aluminium in adjuvant form carries a risk for autoimmunity, long-term brain inflammation and associated neurological complications and may thus have profound and widespread adverse health consequences.

Aluminium Hydroxide – BOOSTRIX, BEXSERO, REVAXIS

Aluminium hydroxide is an antacid, it is used to treat heartburn, upset stomach, sour stomach, or acid indigestion. Aluminium hydroxide is also used to reduce phosphate levels in people with certain kidney conditions.

Aluminium Phosphate – PREVNAR 13, REPEVAX

Aluminium Phosphate is an odourless, white crystalline solid which is often used in liquid or gel form. It is used in ceramics, dental cements, cosmetics, paints, paper and pharmaceuticals.

Amino Acids – ROTARIX, PRIORIX, REVAXIS, GARDASIL

Amino acids are organic compounds composed of nitrogen, carbon, hydrogen and oxygen, along with a variable side chain group. Amino acids, often referred to as the building blocks of proteins, are compounds that play many critical roles in your body. They're needed for vital processes like the building of proteins and synthesis of hormones and neurotransmitters.

Bovine – BOOSTRIX, REPEVAX

Bovine is derived from cattle.

Modified Latham medium derives from bovine casein is a compound made of polypeptone (peptone is a mixture of peptone made up of equal parts of pancreatic digest of casein and peptic digest of animal tissue), bovine (cattle) heart extract, glucose (a simple sugar), sodium chloride (salt), magnesium sulfate (mineral to control low blood levels of magnesium), cystine (a compound which is an oxidized dimer of cysteine and is the form in which cysteine often occurs in organic tissue), calcium pantothenate (calcium salt of the water-soluble vitamin B5. Found in plants and animal tissues with antioxidant property), uracil (a compound found in living tissue as a constituent base of RNA. In DNA its place is taken by thymine), nicotinic acid (a vitamin of the B complex which is widely distributed in foods such as milk, wheat germ, and meat and can be synthesized in the body from tryptophan), thiamine (a vitamin of the B complex found in unrefined grains, beans, and liver), riboflavin (a yellow vitamin of the B complex which is essential for metabolic energy production. It is present in many foods, especially milk, liver, eggs, and green vegetables and is also synthesized by the intestinal flora), pyridoxine (a colourless weakly basic solid present chiefly in cereals, liver oils and yeast and important in the metabolism of unsaturated fatty acids), biotin (a vitamin of the B complex found in egg yolk, liver and yeast. It is involved in the synthesis of the fatty acids of glucose), vitamin B12 (any of a group of substances which are essential for the working of certain enzymes in the body and although not chemically related, are generally found together in the same foods. They include thiamine, riboflavin, pyridoxine, and cyanocobalamin), folic acid (a form of folate that everyone needs. Folic acid protects unborn babies against serious birth defects), iron III (inorganic compound. It is one of the three main oxides of iron. Main source of the steel industry. Readily attacked by acids. Often called rust), chloride, iron sulfate.

Bovine serum albumin is a protein derived from cows.

Calcium Carbonate – ROTARIX

Calcium carbonate is a chemical compound found in rocks as the minerals calcite and aragonite and is the main component of pearls and the shells of marine organisms, snails, and eggs. Calcium carbonate is the most commonly used filler in the plastics industry and is a keystone building material in the construction industry, largely leveraged in cement production. It is also a medication used to prevent or treat low blood calcium levels in people who do not get enough calcium from their diets.

Chick embryo cells – PRIORIX, MMRVAXPRO

Chick embryo cells.

Deoxycholate – BEXSERO

Deoxycholic acid is a bile acid. Deoxycholic acid is one of the secondary bile acids, which are metabolic by-products of intestinal bacteria. In the human body deoxycholic acid is used in the emulsification of fats, for the absorption in the intestine.

Dextran – ROTARIX

High-molecular weight dextran is a plasma volume expander made from natural sources of sugar (glucose). It works by restoring blood plasma lost through severe bleeding.

Disodium Phosphate – INFANRIX HEXA

Disodium phosphate plays a number of roles. It can help regulate the acidity of food, thicken it, stabilize it and maintain it at the proper moisture level. Disodium phosphate also helps keep oil-based and water-based ingredients, which would otherwise separate, mixed together. The single largest use for disodium phosphate is as an emulsifying aid for pasteurized process cheese. Disodium phosphate has non-food applications, too. It can be used in water treatment and as a flame retardant. In water treatment, it retards calcium scale formation. It is also found in some detergents and cleaning agents.

Dulbecco's Modified Eagle Medium – ROTARIX

Dulbecco's Modified Eagle's medium (DMEM) is a modification of Basal Medium Eagle (BME) that contains a four-fold higher concentration of amino acids and vitamins, as well as additional supplementary components. DMEM (Dulbecco's Modified Eagle Medium) is widely used to support the growth of many different mammalian cells.

Escherichia coli – BEXSERO

E. coli is a type of bacteria common in human and animal intestines, and forms part of the normal gut flora (the bacteria that exist in the bowel). There are a number of different types of E. coli and while the majority are harmless some can cause serious food poisoning and serious infection.

Formaldehyde – INFANRIX HEXA, BOOSTRIX, REPEVAX, REVAXIS

Formaldehyde is a colourless, flammable, strong-smelling chemical that is used in building materials and to produce many household products. The EPA (Environmental Protection Agency) has classified formaldehyde as a "probable human carcinogen." National Cancer Institute researchers have concluded that, based on data from studies in people and from lab research, exposure to formaldehyde may cause leukaemia, particularly myeloid leukaemia, in humans.

Glutaraldehyde – INFANRIX HEXA, BOOSTRIX, REPEVAX

Glutaraldehyde is a disinfectant, medication, preservative and fixative. Glutaraldehyde is used for industrial, laboratory, agricultural, medical, and some household purposes, primarily for disinfecting and sterilization of surfaces and equipment. For example, it is in waste water treatment, x-ray processing, embalming fluid, leather tanning, paper industry, and it is used in select goods, such as paint and laundry detergent.

Glycine – INFANRIX HEXA

Glycine is an amino acid, or a building block for protein. Glycine is used for schizophrenia, stroke, and memory and thinking skills (cognitive function)

Histidine – BEXSERO, GARDASIL

Histidine is an amino acid. Amino acids are the building blocks of protein in our bodies. Histidine is used for rheumatoid arthritis, allergic diseases, ulcers, and anaemia caused by kidney failure or kidney dialysis.

Human Albumin – MMRVAXPRO

Human albumin (HA) is a protein produced by the liver and is the most abundant circulating protein in the plasma of healthy individuals.

Hydrochloric Acid – MMRVAXPRO

Hydrochloric Acid is naturally made in your stomach to help digest food. It's used industrially to process steel and is also used in the production of batteries, photoflash bulbs and fireworks. Hydrochloric acid has a sharp, irritating odour and is highly corrosive.

Hydrolysed Gelatin – MMRVAXPRO

Hydrolysed Gelatin is made by boiling skin or connective tissue, typically from a pig and is commonly used as a gelling agent in food, medications, drug and vitamin capsules, photographic films and papers, and cosmetics.

Kanamycin – BEXSERO

Kanamycin is used to treat serious bacterial infections in many different parts of the body. Kanamycin belongs to the class of medicines known as aminoglycoside antibiotics. It works by killing bacteria or preventing their growth.

Lactose (Anhydrous) – PRIORIX

Lactose is a kind of sugar found naturally in dairy products such as milk, cheese and cream. Lactose consists of two different sugars: glucose and galactose, which are chemically linked together. Anhydrous lactose is lactose that has no water in it.

Mannitol – PRIORIX

Mannitol is a type of sugar alcohol that is a diuretic that is used to reduce swelling and pressure inside the eye or around the brain. Mannitol is also used to help your body produce more urine. Mannitol is used in people with kidney failure, to remove excess water and toxins from the body.

Medium 199 – MMRVAXPRO, REVAXIS

Medium 199 was originally designed for nutritional studies to promote continuous growth of primary chick embryo heart and fibroblast cells without serum supplementation. This medium is also useful with serum for growth of a wide array of cell types including non-transformed Human, Monkey and Chicken cells.

Minimum Essential Medium, Eagle – MMRVAXPRO

Eagle's minimal essential medium. Minimal Essential Medium (MEM) is a synthetic cell culture medium developed by Harry Eagle that can be used to maintain cells in tissue culture.

Monopotassium Phosphate – INFANRIX HEXA

Monopotassium Phosphate is a soluble salt of potassium and the dihydrogen phosphate ion which is used as a fertilizer, a food additive and a fungicide.

Monosodium L-glutamate – MMRVAXPRO

Monosodium glutamate (MSG) is a flavour enhancer commonly added to Chinese food, canned vegetables, soups and processed meats. MSG has been called an "excitotoxin," which is a term used to describe a class of chemicals (usually amino acids) that over-stimulate neuron receptors in the brain, causing them to die.

MRC-5 – PRIORIX

MRC-5 (Medical Research Council cell strain 5) is a diploid human cell culture line composed of fibroblasts, originally developed from research deriving lung tissue of a 14 week old aborted Caucasian male fetus.

Neomycin – INFANRIX HEXA, PRIORIX, MMRVAXPRO, REPEVAX

Neomycin is an antibiotic used to reduce the risk of infection during surgery of the bowel. Neomycin is also used to reduce the symptoms of hepatic coma.

Phenol Red – MMRVAXPRO

Phenol red is an additive that allows for the visual assessment of pH often in cell culture.

Phenoxyethanol – REVAXIS, REPEVAX

Phenoxyethanol is used as a preservative in cosmetic products to limit bacterial growth. Exposure to phenoxyethanol has been linked to reactions ranging from eczema to severe, life-threatening allergic reactions.

Porcine circovirus type 1 – ROTARIX

PCV-1 is a virus that affects pigs and is a single stranded DNA genome.

Potassium Chloride – INFANRIX HEXA

Potassium Chloride is a metal halide salt composed of potassium and chlorine. Potassium chloride is used to prevent or to treat low blood levels of potassium. The majority of the potassium chloride produced is used for making fertilizer, called potash. Potassium chloride is used in some de-icing products and was once used as a fire extinguishing agent.

Potassium Phosphate – MMRVAXPRO

This medication helps control the amount of calcium in the body and urine. It works by making the urine more acidic. It is used to prevent calcium kidney stones.

Polymyxin B – INFANRIX HEXA, REPEVAX

Polymyxin B is a medication used to treat bacterial infections (such as blepharitis, conjunctivitis) of the eye. It contains 2 antibiotics.

Polysorbate 20 – INFANRIX HEXA

Polysorbate 20 is used as a surfactant, emulsifier and fragrance ingredient in cosmetic creams, lotions, cream deodorant, baby oil, sun lotion, etc. It is used to help mix oil and water.

Polysorbate 80 – INFANRIX HEXA, BOOSTRIX, PREVNAR 13, REVAXIS, REPEVAX, GARDASIL

Polysorbate 80 is a non-ionic surfactant and emulsifier often used in foods and cosmetics. This synthetic compound is a viscous water-soluble yellow liquid. Polysorbate 80 is used as an emulsifier or defoamer in foods, vitamins, medicines, and vaccines. It is used as a defoamer for the fermenting process of some wines, and also to bind some ice-creams and other 'puddings', to keep their creamy texture without separating. It is also as a solubilizer – helping to dissolve ingredients so that they can more easily blend together. It makes products look creamier and more attractive. The MSDS (Material Safety Data Sheet) states Polysorbate 80 may cause adverse reproductive effects based on animal test data. No human data found. May cause cancer based on animal test data. No human data found. May affect genetic material (mutagenic). Studies done on rats show that most anticancer drugs cannot cross the blood brain barrier including doxorubicin, one of the most important anticancer drugs. After binding to poly(butyl cyanoacrylate) nano particles and coating with polysorbate 80 very considerable doxorubicin concentrations were detected in the brain after intravenous injection.

Saccharomyces cerevisiae – GARDASIL

Saccharomyces cerevisiae is a species of yeast (unicellular fungus). It has been instrumental in winemaking, baking, and brewing since ancient times.

Sodium Bicarbonate – MMRVAXPRO

Sodium bicarbonate, also known as baking soda, is used to relieve heartburn, sour stomach, or acid indigestion by neutralizing excess stomach acid. When used for this purpose, it is said to belong to the group of medicines called antacids.

Sodium Borate – GARDASIL

Sodium borate (borax) is a white, powdery mineral used in cleaning, laundry, personal care products and even children's toys as a buffering pH adjuster. Borax is found as an ingredient in all-purpose cleaners, toilet cleaners, laundry detergent, laundry stain removers, air fresheners, dish detergents, glass cleaners, diaper creams, pesticides (to kill ants) and herbicides as well as and some pliable toys like playdough, or silly putty.

Sodium Chloride – INFANRIX HEXA, BOOSTRIX, BXSERO, MENITORIX, GARDASIL, NIMENRIX

Sodium Chloride is a colourless crystalline compound occurring naturally in seawater. Sodium Chloride is the chemical name for salt. Sodium is an electrolyte that regulates the amount of water in your body. Sodium also plays a part in nerve impulses and muscle contractions.

Sodium Hydroxide – MMRVAXPRO

Sodium hydroxide is highly corrosive. Sodium hydroxide is generally used as a solid or diluted in a 50% solution. This chemical is used to manufacture soaps, rayon, paper, explosives, dyestuffs, and petroleum products. It is also used in processing cotton fabric, laundering and bleaching, metal cleaning and processing, oxide coating, electroplating, and electrolytic extracting. It is commonly found in commercial drain/ oven cleaners.

Sodium Phosphate – MMRVAXPRO

Sodium phosphate is a saline laxative that is thought to work by increasing fluid in the small intestine.

Sorbitol – ROTARIX, PRIORIX, MMRVAXPRO

Sorbitol is a sugar alcohol used as a sweetening agent in various foods, including sugar-free sweets, frozen desserts, baked goods and chewing gum.

Soy Peptone Broth – PREVNAR 13

Soy Peptone is obtained by the enzymatic digestion of soya flour. It is widely used for the cultivation of many organisms. Soybeans contain phytoestrogens, which mimic the body's natural oestrogen hormones. For men, this can lead to a testosterone imbalance, infertility, low sperm count, and increased risk of cancers. For women, it can cause oestrogen dominance, which has been linked to infertility, menstrual troubles and cancer.

Streptomycin – REPEVAX

Streptomycin belongs to a class of drugs known as aminoglycoside antibiotics. It is used to treat tuberculosis and bacterial infections. It works by killing the organisms that cause the infection.

Sucrose – ROTARIX, BEXSERO, MENITORIX, MMRVAXPRO, NIMENRIX

Sucrose is the scientific name for table sugar. Sucrose is made up of the simple sugars glucose and fructose. Sucrose, glucose and fructose are found naturally in many foods but also added to processed products.

Trometamol – MENITORIX, NIMENRIX

Trometamol is used in the following products: cosmetics and personal care products, adhesives and sealants, coating products, fillers, putties, plasters, modelling clay, inks and toners, leather treatment products, lubricants and greases, perfumes and fragrances, polishes and waxes and textile treatment products and dyes, laboratory chemicals, coating products, pH regulators and water treatment products.

Vero Cells – ROTARIX, REPEVAX, REVAXIS

Vero cells are derived from the kidney of an African green monkey, and are one of the more commonly used mammalian continuous cell lines in microbiology, and molecular and cell biology research.

WI-38 – MMRVAXPRO

WI-38 is a diploid human cell line composed of fibroblasts derived from lung tissue of a 3-month-gestation aborted female foetus.

Xanthan – ROTARIX

Xanthan gum is found in food, personal care and industrial products because of its stabilizing and thickening properties. It's created when sugar is fermented by a type of bacteria called *Xanthomonas campestris*. When sugar is fermented, it creates a broth or goo-like substance, which is made solid by adding an alcohol. It is then dried and turned into a powder.