

PRODUCT MONOGRAPH

VARILRIX

Varicella virus vaccine, live, attenuated (Oka-strain)

Lyophilized powder for injection

Active immunizing agent against infection by varicella-zoster virus

GlaxoSmithKline Inc.
7333 Mississauga Road
Mississauga, Ontario
L5N 6L4

Date of Revision:
August 14, 2019

Submission Control No: 228245

©2019 GSK group of companies or its licensor
Trademarks are owned by or licensed to the GSK group of companies.

Table of Contents

PART I: HEALTH PROFESSIONAL INFORMATION..... 3
SUMMARY PRODUCT INFORMATION 3
DESCRIPTION..... 3
INDICATIONS AND CLINICAL USE..... 3
CONTRAINDICATIONS 4
WARNINGS AND PRECAUTIONS..... 5
ADVERSE REACTIONS..... 7
DOSAGE AND ADMINISTRATION 10
OVERDOSAGE 12
ACTION AND CLINICAL PHARMACOLOGY 13
STORAGE AND STABILITY 13
DOSAGE FORMS, COMPOSITION AND PACKAGING 13

PART II: SCIENTIFIC INFORMATION 15
PHARMACEUTICAL INFORMATION..... 15
CLINICAL TRIALS..... 15
DETAILED PHARMACOLOGY 16
MICROBIOLOGY 16
TOXICOLOGY 16
REFERENCES 17

PART III: CONSUMER INFORMATION..... 18

VARILRIX

varicella virus vaccine, live, attenuated (Oka-strain)

PART I: HEALTH PROFESSIONAL INFORMATION

SUMMARY PRODUCT INFORMATION

Route of Administration	Dosage Form / Strength	Nonmedicinal Ingredients
Subcutaneous injection	Lyophilized powder for injection / Not less than $10^{3.3}$ plaque-forming units of the varicella-zoster virus per 0.5 mL of reconstituted vaccine	amino acids, lactose, mannitol, sorbitol, and water for injection. Residues: neomycin sulphate.

DESCRIPTION

VARILRIX (varicella virus vaccine, live, attenuated (Oka-strain)) is a live-attenuated varicella vaccine which contains the Oka-strain of the attenuated varicella-zoster virus. VARILRIX has been reformulated through the addition of a stabilizer, without modification of the viral strain, to permit storage at 2 to 8°C.

INDICATIONS AND CLINICAL USE

VARILRIX (varicella virus vaccine, live, attenuated (Oka-strain)) is indicated for:

- the active immunization against varicella of healthy subjects from 12 months of age and up.
- the active immunization against varicella of susceptible high risk patients and their susceptible healthy close contacts.

Patients with acute leukemia

Patients suffering from leukemia have been recognized to be at special risk when they develop varicella, and should receive the vaccine if they have no history of the disease or are found to be seronegative.

When vaccinating patients in the acute phase of leukemia, maintenance chemotherapy should be withheld one week before and one week after immunization. Patients under radiotherapy should normally not be vaccinated during the treatment phase.

Generally patients are immunized when they are in complete hematological remission from the disease. It is advised that the total lymphocyte count should be at least 1,200 per mm³, or that no other evidence of lack of cellular immune competence exists.

Patients under immunosuppressive treatment

Patients under immunosuppressive treatment (including corticosteroid therapy) for malignant solid tumour or for serious chronic diseases (such as chronic renal failure, auto-immune diseases, collagen diseases, severe bronchial asthma) are predisposed to severe varicella.

It is advised that the total lymphocyte count should be at least 1,200 per mm³, or that no other evidence of lack of cellular immune competence exists at the time of vaccination.

Patients with planned organ transplantation

If organ transplantation (e.g. kidney transplant) is being considered, vaccination should be carried out 6-8 weeks before the administration of the immunosuppressive treatment.

Patients with chronic diseases

Other chronic disease, such as metabolic and endocrine disorders, chronic pulmonary and cardiovascular diseases, mucoviscidosis and neuromuscular abnormalities may also predispose to severe varicella.

Healthy close contacts

Susceptible healthy close contacts should be vaccinated in order to reduce the risk of the transmission of virus to high risk patients. These include parents and siblings of high risk patients, medical and paramedical personnel, and other people who are in close contact with varicella patients or high risk patients.

CONTRAINDICATIONS

VARILRIX (varicella virus vaccine, live, attenuated (Oka-strain)) is contraindicated in:

- subjects having shown signs of hypersensitivity after a previous administration of varicella vaccine dose, including anaphylactic reaction.
- subjects with known hypersensitivity to neomycin or any component of the vaccine. A history of contact dermatitis to neomycin is not a contraindication.
- subjects with severe humoral or cellular immunodeficiency (see INDICATIONS AND CLINICAL USE) such as:

- subjects with primary or acquired immunodeficiency states with a total lymphocyte count less than 1,200 per mm³;
 - subjects presenting other evidence of lack of cellular immune competence (e.g. subjects with **active** leukemias, lymphomas, blood dyscrasias, clinically manifest HIV infection);
 - subjects receiving immunosuppressive therapy including high dose of corticosteroids.
- pregnant women. Pregnancy should be avoided for one month after vaccination.

WARNINGS AND PRECAUTIONS

General

As with other vaccines, the administration of VARILRIX should be postponed in subjects suffering from acute severe febrile illness. In healthy subjects the presence of a minor infection, however, is not a contraindication for vaccination.

As with any parenteral vaccine, appropriate medication (e.g. epinephrine 1:1000) and supervision should be readily available for immediate use in case of anaphylaxis or anaphylactoid reactions following administration of the vaccine.

VARILRIX must not be administered intravascularly or intradermally.

Alcohol and other disinfecting agents must be allowed to evaporate from the skin before injection of the vaccine since they can inactivate the attenuated virus in the vaccine.

Limited protection against varicella may be obtained by vaccination up to 72 hours after exposure to natural disease.

As with any vaccine, a protective immune response may not be elicited in all vaccinees. As for other varicella vaccines, cases of varicella disease have been shown to occur in persons who have previously received VARILRIX. These breakthrough cases are usually mild, with a fewer number of lesions and less fever as compared to cases in unvaccinated individuals.

Transmission of the Oka vaccine virus has been shown to occur at a very low rate in seronegative contacts of vaccine recipients with rash. Transmission of the Oka vaccine from a vaccinee who does not develop a rash to seronegative contacts cannot be excluded.

VARILRIX (varicella virus vaccine, live, attenuated (Oka-strain)) can be administered at the same time as any other vaccine. Different injectable vaccines should be administered

at different injection sites.

Inactivated vaccines can be administered in any temporal relationship to VARILRIX.

If a measles vaccine cannot be administered at the same time as VARILRIX, it is recommended that an interval of at least one month be allowed between the administration of the two vaccines as it is recognized that measles vaccination may lead to short lived suppression of the cell mediated immune response.

Syncope (fainting) can occur following, or even before, any vaccination as a psychogenic response to the needle injection. It is important that procedures are in place to avoid injury from faints.

Immune

There are limited data on the use of VARILRIX in immunocompromised subjects, therefore vaccination should be considered with caution and only when, in the opinion of the physician, the benefits outweigh the risks.

Immunocompromised subjects who have no contraindication for this vaccination (see CONTRAINDICATIONS) may not respond as well as immunocompetent subjects, therefore some of these subjects may acquire varicella despite appropriate vaccine administration. Immunocompromised subjects should be monitored carefully for signs of varicella.

Very few reports exist on disseminated varicella with internal organ involvement following vaccination with Oka varicella vaccine strain mainly in immunocompromised subjects.

Skin

The mild nature of the rash in the healthy contacts indicates that the virus remains attenuated after passage through human hosts.

Special Populations

Pregnant Women: Pregnant women must not be vaccinated with VARILRIX. Pregnancy should be avoided for one month after vaccination. Women who intend to become pregnant should be advised to delay pregnancy.

Adequate human data on the use of VARILRIX during pregnancy are not available and animal studies on reproductive toxicity have not been conducted.

Nursing Women: It is not known whether VARILRIX is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when VARILRIX is administered to a nursing woman.

High risk patients

VARILRIX should not be administered at the same time as other live attenuated vaccines. Inactivated vaccines may be administered in any temporal relationship to VARILRIX given that no specific contraindication has been established.

Different injectable vaccines should always be administered at different injection sites.

ADVERSE REACTIONS

VARILRIX (varicella virus vaccine, live, attenuated (Oka-strain)) is a vaccine of low overall reactogenicity in all age groups.

Clinical Trial Adverse Drug Reactions

Because clinical trials are conducted under very specific conditions the adverse reaction rates observed in the clinical trials may not reflect the rates observed in practice and should not be compared to the rates in the clinical trials of another drug. Adverse drug reaction information from clinical trials is useful for identifying drug-related adverse events and for approximating rates.

Healthy subjects

More than 7,900 individuals have participated in clinical trials evaluating the reactogenicity profile of the vaccine administered alone or concomitantly with other vaccines.

The safety profile presented below is based on a total of 5369 doses of VARILRIX administered in monotherapy to children, adolescents and adults.

Very Common $\geq 10\%$

General disorders and administration site conditions: pain, redness

Common $\geq 1\%$ and $< 10\%$

Skin and subcutaneous tissue disorders: rash

General disorders and administration site conditions: swelling at the injection site*, fever (oral/axillary temperature $\geq 37.5^{\circ}\text{C}$ or rectal temperature $\geq 38.0^{\circ}\text{C}$)*

Uncommon $\geq 0.1\%$ and $< 1\%$

Infections and infestations: upper respiratory tract infection, pharyngitis

Blood and lymphatic system disorders: lymphadenopathy

Psychiatric disorders: irritability

Nervous system disorders: headache, somnolence

Respiratory, thoracic and mediastinal disorders: cough, rhinitis

Gastrointestinal disorders: nausea, vomiting

Skin and subcutaneous tissue disorders: varicella-like rash, pruritus

Musculoskeletal and connective tissue disorders: arthralgia, myalgia

General disorders and administration site conditions: fever (oral/axillary temperature > 39.0°C or rectal temperature > 39.5°C), fatigue, malaise

Rare ≥ 0.01% and < 0.1%

Eye Disorders: conjunctivitis

Gastrointestinal disorders: abdominal pain, diarrhea

Skin and subcutaneous tissue disorders: urticaria

* Swelling at the injection site and fever were reported very commonly in studies conducted in adolescents and adults. Swelling was also reported very commonly after the second dose in children under 13 years of age.

A trend for a higher incidence of pain, redness, and swelling after the second dose was observed as compared to the first dose in children under 13 years of age.

The reactogenicity after the second dose in adolescents and adults was not higher than after the first dose. No difference was seen in the reactogenicity profile between initially seropositive and seronegative subjects.

High risk patients

Reactions at the site of injection (redness, swelling and pain) of VARILRIX are usually mild.

Papulo-vesicular eruptions, rarely accompanied by mild to moderate fever, have appeared a few days up to several weeks after immunization. Such reactions have occurred in less than a quarter of leukemic patients. These eruptions were generally mild and short lived.

Eruptions tend to occur in the more immunocompromised leukemic patients such as those still in the maintenance phase of chemotherapy. The appearance of these eruptions did not influence the clinical management of the patients. There is no evidence that immunization may have an adverse effect on the course of the disease.

Post-Market Adverse Drug Reactions

Following widespread use of the vaccine, the following events have been rarely reported in temporal association with VARILRIX vaccination.

Infections and infestations: herpes zoster

Blood and lymphatic system disorders: thrombocytopenia

Immune system disorders: hypersensitivity, anaphylactic reactions

Nervous system disorders: encephalitis, cerebrovascular accident, cerebellitis, cerebellitis like symptoms (including transient gait disturbance and transient ataxia), convulsions

Vascular disorders: vasculitis (including Henoch Schonlein purpura and Kawasaki syndrome)

Skin and subcutaneous tissue disorders: erythema multiforme

DRUG INTERACTIONS

Drug-Drug Interactions

In subjects who have received immune globulins or a blood transfusion, vaccination should be delayed for at least three months because of the likelihood of vaccine failure due to passively acquired varicella antibodies.

Salicylates should be avoided for 6 weeks after varicella vaccination, as Reye's Syndrome has been reported following the use of salicylates during natural varicella infection.

Drug-Food Interactions

Interactions with food have not been established.

Drug-Herb Interactions

Interactions with herbal products have not been established.

Drug-Laboratory Interactions

If tuberculin testing has to be done it should be carried out before or simultaneously with

vaccination since it has been reported that live viral vaccines may cause a temporary depression of tuberculin skin sensitivity. As this anergy may last up to a maximum of 6 weeks, tuberculin testing should not be performed within that period after vaccination to avoid false negative results.

DOSAGE AND ADMINISTRATION

Recommended Dose and Dosage Adjustment

One immunizing dose contains 0.5 mL of reconstituted vaccine.

Children (12 months to 12 years of age, inclusive) should receive 2 doses (0.5 mL each) of VARILRIX to ensure optimal protection against varicella (see CLINICAL TRIALS) with a minimum interval of 6 weeks between doses. If official recommendations prescribe, children in this age group may receive a single 0.5 mL dose of VARILRIX.

Adolescents and adults (13 years of age and older) should receive two 0.5 mL doses with a minimum interval of 6 weeks between doses.

For high risk patients additional doses of vaccine may be required.

Administration

VARILRIX (varicella virus vaccine, live, attenuated (Oka-strain)) should be administered by subcutaneous injection in the deltoid region.

VARILRIX must not be administered intravascularly or intradermally.

Directions for Reconstitution

The diluent (sterile water for injection) and the reconstituted vaccine should be inspected visually for any foreign particulate matter and/or variation of physical aspect prior to reconstitution or administration. In the event of either being observed, do not use the diluent or the reconstituted vaccine.

VARILRIX is presented as a slightly cream to yellowish or pinkish coloured powder in a monodose glass vial.

Due to minor variations in pH, the colour of the reconstituted vaccine may vary from clear peach to pink coloured solution. This is normal and does not impair the performance of the vaccine. In the event of other variation being observed, do not use the vaccine.

Instructions for reconstitution of the vaccine with diluent presented in ampoules

VARILRIX must be reconstituted by adding the entire contents of the supplied ampoule of diluent to the vial containing the powder. The mixture should be well shaken until the powder is completely dissolved in the diluent.

After reconstitution, the vaccine should be used promptly.

Withdraw the entire contents of the vial.

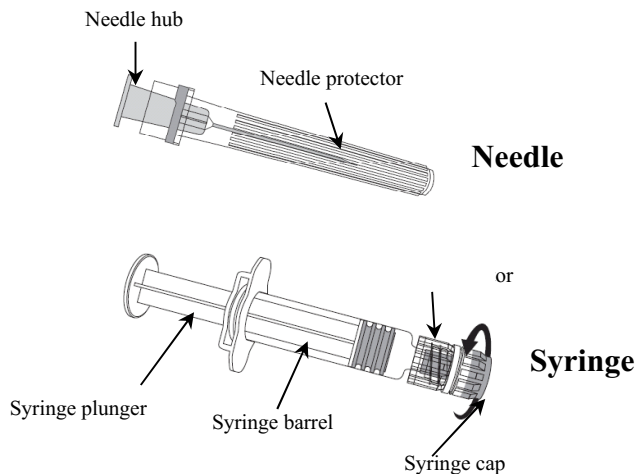
A new needle should be used to administer the vaccine.

Instructions for reconstitution of the vaccine with diluent presented in pre-filled syringe*

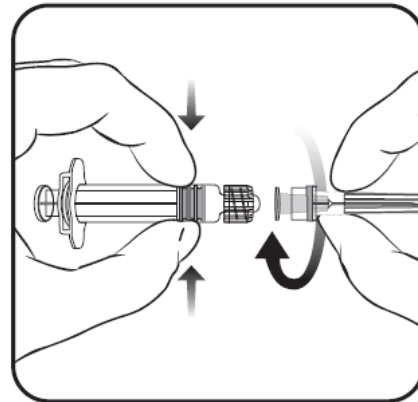
VARILRIX must be reconstituted by adding the entire contents of the pre-filled syringe of diluent to the vial containing the powder.

To attach the needle to the syringe, carefully read the instructions given with pictures 1 and 2.

Note: The syringe provided with VARILRIX might be slightly different (without screw thread) than the syringe illustrated. In that case, the needle should be attached without screwing.



Picture 1



Picture 2

Always hold the syringe by the barrel, not by the syringe plunger or the Luer Lock Adaptor (LLA), and maintain the needle in the axis of the syringe (as illustrated in picture 2). Failure to do this may cause the LLA to become distorted and leak.

During assembly of the syringe, if the LLA comes off, a new vaccine dose (new syringe and vial) should be used.

1. Unscrew the syringe cap by twisting it anticlockwise (as illustrated in picture 1).
2. Attach the needle to the syringe by gently connecting the needle hub into the LLA and rotate a quarter turn clockwise until you feel it lock (as illustrated in picture 2).
3. Remove the needle protector, which may be stiff.
4. Add the diluent to the vial of powder. The mixture should be well shaken until the powder is completely dissolved in the diluent.

After reconstitution, the vaccine should be used promptly.

5. Withdraw the entire contents of the vial of reconstituted vaccine.
6. A new needle should be used to administer the vaccine. Unscrew the needle from the syringe and attach the injection needle by repeating step 2 above.

Alcohol and other disinfecting agents must be allowed to evaporate from the skin before injection of the vaccine since they may inactivate the virus. VARILRIX should not be mixed with other vaccines in the same syringe.

After reconstitution, it is recommended that the vaccine be injected promptly. However, it has been demonstrated that the reconstituted vaccine may be kept for up to 90 minutes at room temperature (25°C) and up to 8 hours in the refrigerator (2 to 8°C). If not used within these timeframes, the reconstituted vaccine must be discarded.

Any unused product or waste material should be disposed of in accordance with local requirements.

**Format not available in Canada*

OVERDOSAGE

For management of a suspected drug overdose, contact your regional Poison Control Centre.

Cases of accidental administration of more than the recommended dose of VARILRIX have been reported. Amongst these cases, the following adverse events were reported: lethargy and convulsions. In the other cases reported as overdose there were no associated adverse events.

ACTION AND CLINICAL PHARMACOLOGY

Mechanism of Action

Varicella (chickenpox) is caused by primary infection with the varicella-zoster virus (VZV). VARILRIX (varicella virus vaccine, live, attenuated (Oka-strain)) produces an attenuated clinically inapparent varicella infection in susceptible subjects.

VARILRIX stimulates antibodies directed against varicella-zoster virus. The presence of antibodies is accepted to be an indication of protection.

Canadian epidemiological data are available on the Public Health Agency of Canada website: <http://www.phac-aspc.gc.ca/im/vpd-mev/varicella-eng.php>

STORAGE AND STABILITY

The lyophilized vaccine should be stored in a refrigerator at 2 to 8°C. The diluent (sterile water for injection) may be stored in the refrigerator or at ambient temperature (maximum 25°C). The lyophilized vaccine is not affected by freezing.

The reconstituted vaccine may be kept for up to 90 minutes at room temperature (25°C) and up to 8 hours in the refrigerator (2 to 8°C). If not used within these timeframes, the reconstituted vaccine must be discarded.

Do not use beyond the expiry date printed on the label.

DOSAGE FORMS, COMPOSITION AND PACKAGING

Dosage Form

VARILRIX (varicella virus vaccine, live, attenuated (Oka-strain)) is supplied as a sterile powder and diluent (sterile water for injection) (prefilled syringe* or ampoule) for subcutaneous injection. The vaccine must be reconstituted and shaken to ensure a uniform mixture before administration.

Composition

A 0.5 mL dose of the reconstituted vaccine contains not less than $10^{3.3}$ plaque-forming units (PFU) of the varicella-zoster virus. The reconstituted vaccine also contains amino acids, lactose, mannitol, sorbitol and water for injection. Residues: neomycin sulphate.

VARILRIX is presented as a slightly cream to yellowish or pinkish coloured powder and the diluent, sterile water for injection (WFI), presents as a clear and colourless solution.

Packaging

VARILRIX is supplied in package sizes as follows:

- 1) As a single monodose vial packaged with prefilled syringe with diluent (sterile WFI) with or without a separate needle.*
- 2) In packages of 10 monodose vials with ampoules of diluent (sterile WFI) available in a separate container in packages of 10.

Vials/prefilled syringes* are made of neutral type I glass.

**Format not available in Canada*

PART II: SCIENTIFIC INFORMATION

PHARMACEUTICAL INFORMATION

Drug Substance

Proper name: varicella virus vaccine, live, attenuated (Oka-strain)

Physicochemical properties: After reconstitution, the pH of the VARILRIX is between 6.9 and 7.4

Product Characteristics

VARILRIX (varicella virus vaccine, live, attenuated (Oka-strain)) is a live-attenuated varicella vaccine which contains the Oka-strain of the attenuated varicella-zoster virus. VARILRIX has been reformulated through the addition of a stabilizer, without modification of the viral strain, to permit storage at 2 to 8°C.

CLINICAL TRIALS

Study results

Healthy subjects

In children aged 11-21 months the seroconversion rate, when measured by ELISA (50 mIU/mL) after vaccination, was 89.6% after one vaccine dose and 100% 6 weeks after the second vaccine dose.

In children aged 9 months to 12 years, the overall seroconversion rate when given VARILRIX (varicella virus vaccine, live, attenuated (Oka-strain)) was > 98% when measured by Immunofluorescence Assay (IFA) at 6 weeks post-vaccination. In children vaccinated at 12-15 months of age, antibodies persisted for at least 7 years after vaccination with one dose.

In children aged 9 months to 6 years the seroconversion rate, when measured by IFA 6 weeks after vaccination, was 100% after a second vaccine dose. A marked increase of antibody titres was observed following administration of a second dose (5 to 26-fold GMT increase).

In subjects aged 13 years and above, the seroconversion rate when given VARILRIX was 100% when measured by IFA 6 weeks after the second vaccine dose. One year after vaccination, all subjects tested were still seropositive.

In an efficacy study in 10 to 30 month old children during a follow-up of an average of 29.3 months, the protective efficacy was 100% against common clinical cases of varicella (≥ 30 vesicles), after one dose of VARILRIX. Against any cases of varicella (mild case

with at least 1 vesicle or papule) protective efficacy of VARILRIX was 88%. However, cases were mild (median number of vesicles was 1; no fever was reported).

Exposure and occurrence of varicella breakthrough cases were examined in subjects who returned for one-, two-, and three-year follow-ups post vaccination (studies -039, -040, and -041 respectively). In this study-set, the investigational arm received two doses of PRIORIX-TERA™ 6 weeks apart (the control group received PRIORIX + VARILRIX for the first dose and PRIORIX alone for the second dose). Cumulatively, during the three-year follow-up, the overall exposure to varicella or zoster after the second dose, was reported as 41.3% in the PRIORIX-TETRA™ group versus 38.0% in the control group. Breakthrough cases were reported in 0.44% (95% CI: 0.01%-2.5%) of PRIORIX-TETRA™ recipients, as opposed to 5.06% (95% CI: 1.4%-12.5%) of children in the control group.

Data suggest a higher level of protection and a decrease in breakthrough varicella following two doses of vaccine than following one dose. However, the number of breakthrough cases is limited in the study precluding any firm conclusion.

High risk patients

In high risk patients the overall seroconversion rate when given VARILRIX was 80%, however, in leukemic patients the overall seroconversion rate was about 90%. In one study, the incidence of herpes zoster in immunized leukemic patients was lower than that observed in naturally infected non immunized leukemic patients. In highly immunosuppressed patients clinically evident varicella has occurred after immunization and vaccine-like virus has been isolated from vesicles.

In high risk patients, periodic measurement of varicella antibodies after immunization with VARILRIX may be indicated in order to identify those who may benefit from re-immunization.

DETAILED PHARMACOLOGY

Not applicable.

MICROBIOLOGY

Not applicable.

TOXICOLOGY

Not applicable.

REFERENCES

1. Canadian Paediatric Society. Chickenpox: Prevention and Treatments. The Canadian Journal of Paediatrics. 1994; 1(3):88-93.
2. Epidemiologic Reports. Chickenpox in Canada, 1924-87. Canadian Medical Association journal. 1988; 138(2):133-134.
3. Gustafson TL, Lavelly GB, Brawner ER, Jr., Hutcheson RH, Jr., Wright PF, Schaffner W. An outbreak of airborne nosocomial varicella. Pediatrics. 1982; 70(4):550-556.
4. Health Canada. Anaphylaxis: Initial Management in Non-Hospital Settings. Canadian Immunization Guide, Fifth Edition. 1998;9-12.
5. Leclair JM, Zaia JA, Levin MJ, Congdon RG, Goldmann DA. Airborne transmission of chickenpox in a hospital. N Engl J Med. 1980; 302(8):450-453.
6. Moore DA, Hopkins RS. Assessment of a school exclusion policy during a chickenpox outbreak. Am J Epidemiol. 1991; 133(11):1161-1167.
7. Preblud SR. Age-specific risks of varicella complications. Pediatrics. 1981; 68(1):14-17.
8. Preblud SR. Varicella: complications and costs. Pediatrics. 1986; 78(4 Pt 2):728-735.
9. Strassels SA, Sullivan SD. Clinical and economic considerations of vaccination against varicella. Pharmacotherapy. 1997; 17(1):133-139.
10. Takahaski M, Gershon AA. Varicella Vaccine. Vaccines (Second Edition) WB Saunders Company. 1994;387-419.

PART III: CONSUMER INFORMATION

VARILRIX

varicella virus vaccine, live, attenuated (Oka-strain)

This leaflet is part III of a three-part "Product Monograph" published for VARILRIX (varicella virus vaccine, live, attenuated (Oka-strain)) that was approved for sale in Canada and is designed specifically for Consumers. This leaflet is a summary and will not tell you everything about VARILRIX. Contact your doctor or pharmacist if you have any questions about the drug.

ABOUT THIS MEDICATION

What the medication is used for:

VARILRIX is a vaccine against chicken pox (varicella).

What it does:

VARILRIX protects you against chicken pox (varicella) virus. It works by helping the body to make its own antibodies which protect you against the disease.

When it should not be used:

You should not receive VARILRIX if:

- you have previously had an allergic reaction to VARILRIX, neomycin (an antibiotic), or any component contained in this vaccine. Signs of an allergic reaction may include itchy skin rash, shortness of breath and swelling of the face or tongue.
- you have previously had an allergic reaction to any other vaccine against chicken pox (varicella).
- you have any severe illness that weakens the immune system (such as blood disorders, leukemia or infections) (See also Warnings and Precautions).
- you have recently received or are still taking treatment that weakens the immune system (including high dose corticosteroids).
- you are pregnant. Furthermore, pregnancy should be avoided for one month after vaccination. During this time you should use an effective method of birth control to avoid pregnancy.

You should inform your doctor about the above conditions. Your doctor may decide if the vaccine can be given, if the allergy to neomycin is limited to a skin reaction (contact dermatitis) or the low white blood cell count is not evidence of inadequate immune response.

What the medicinal ingredient is:

Each 0.5 mL dose of VARILRIX contains as active ingredient no less than 10^{3.3} plaque-forming units (PFU) of the live attenuated Oka-strain of varicella-zoster virus.

What the nonmedicinal ingredients are:

The reconstituted vaccine contains the following nonmedicinal ingredients: amino acids, lactose, mannitol, sorbitol and water for injection. Residues: Neomycin sulphate.

What dosage forms it comes in:

VARILRIX is presented as a powder and diluent for solution for injection.

The vaccine is provided as slightly cream to yellowish or pinkish coloured powder in a monodose glass vial.

The sterile diluent (0.5 mL) is clear and colourless and presented in ampoules or prefilled syringes*.

The colour of the reconstituted vaccine may vary from clear peach to pink coloured solution.

**Format not available in Canada*

WARNINGS AND PRECAUTIONS

VARILRIX can be administered at the same time as any other vaccine. Different injectable vaccines should be administered at different injection sites.

Inactivated vaccines can be administered at any time in relationship to VARILRIX.

If a measles vaccine cannot be administered at the same time as VARILRIX, it is recommended that at least one month be allowed between the administration of the two vaccines as it is recognized that measles vaccination could effect the effectiveness of VARILRIX.

Different injectable vaccines should always be administered at different injection sites.

BEFORE you use VARILRIX talk to your doctor or pharmacist if:

- you are or think you may be pregnant.
- you have or think you have had an allergic reaction previously to VARILRIX or any of its constituents.
- you have or think you have had an allergic reaction previously to another chickenpox vaccine.
- you have a history or family history of allergies.

- you have a weakened immune system. You should be closely monitored as the responses to the vaccine may not be sufficient to ensure a protection against the illness.
- you are due to have a skin test for possible tuberculosis. If this test is done within 6 weeks after receiving VARILRIX, the result may not be reliable.
- you have a severe infection with a high temperature (over 38°C). It might be necessary to postpone the vaccination until recovery. In healthy subjects the presence of minor infection such as a cold should not be a problem, but talk to your doctor first.
- you are taking any other medicine or have recently received any other vaccine.
- you are breastfeeding.

Fainting can occur following, or even before, any needle injection; therefore, tell the doctor or nurse if you or your child fainted with a previous injection.

High risk patients

VARILRIX should not be administered at the same time as other live attenuated vaccines. Inactivated vaccines may be administered at any time in relationship to VARILRIX given that no specific contraindication has been established.

INTERACTIONS WITH THIS MEDICATION

In subjects who have received immune globulins or a blood transfusion, vaccination should be delayed for at least three months because of the likelihood of vaccine failure due to passively acquired varicella antibodies.

You or your child should not take any aspirin or aspirin-like products (also known as salicylates) for 6 weeks after vaccination with VARILRIX as this may cause a serious disease called Reye's Syndrome which can affect all your body organs.

PROPER USE OF THIS MEDICATION

The vaccine must be administered by a health care professional.

VARILRIX should not be mixed with any other vaccine in the same syringe.

Make sure you finish the complete vaccination course. If not you may not be fully protected against infection.

Usual dose:

VARILRIX will be injected under your skin (subcutaneously).

The upper arm (deltoid region) is the preferred site of injection. Your doctor may wipe the skin with alcohol or other disinfecting agents and will let the skin dry before the injection. VARILRIX **must** not be administered into your blood vessels (intravascularly) or into your skin (intradermally).

The doctor or nurse will inject the recommended dose of vaccine. The appropriate number of injections that will be given to children from the age of 12 months up to and including 12 years of age will be determined by your doctor or nurse on the basis of appropriate official recommendations. Adolescents and adults from 13 years up should receive 2 doses with an interval of at least 6 weeks between each dose. In high risk patients additional doses of vaccine might be required.

It is important to follow the instructions from the doctor/nurse so that you complete the course of injections.

Administration:

If you forget to go back to the doctor/nurse at the scheduled time, ask the doctor/nurse for advice.

Overdose:

In case of drug overdose, contact a health care practitioner, hospital emergency department or regional Poison Control Centre immediately, even if there are no symptoms.

SIDE EFFECTS AND WHAT TO DO ABOUT THEM

Like all vaccines, VARILRIX may occasionally cause unwanted effects.

As with all injectable vaccines, there is a risk of allergic reactions. The signs of allergy may include local or widespread skin rash that may be itchy or blistering, swelling of the eyes and face, difficulty in breathing or swallowing which may lead to collapse. These reactions will usually occur before leaving the doctor's office. However, you should seek immediate treatment in any event.

Side effects that occurred during clinical trials with VARILRIX were as follows:

Very common

- Pain and redness at the injection site

Common

- Rash (spots and/or blisters)
- Swelling at the injection site
- Fever of 38°C or more (rectal)

Uncommon

- Upper respiratory tract infection
- Sore throat and discomfort when swallowing
- Swollen glands in the neck, armpit or groin
- Irritability
- Headache
- Sleepiness
- Cough, runny or blocked nose, sneezing (rhinitis)
- Nausea, vomiting
- Chickenpox-like rash
- Itching
- Painful, swollen joints
- Aching muscles, muscle tenderness or weakness, not caused by exercise
- Fever greater than 39.5°C (rectal)
- Tiredness (fatigue)
- Generally feeling unwell

Rare

- Discharge with itching of the eyes and crusty eyelids (conjunctivitis)
- Stomach pain or discomfort
- Diarrhea
- Hives (urticaria)

After the marketing of VARILRIX, the following additional side effects have been reported rarely:

- Shingles (herpes zoster)
- bleeding or bruising more easily than normal due to a drop in a type of blood cell called platelets
- Allergic reactions
- Fits or seizures
- infection or inflammation of the brain, spinal cord and peripheral nerves resulting in temporary difficulty when walking (unsteadiness) and/or temporary loss of control of bodily movements)
- stroke
- narrowing or blockage of blood vessels. This may include unusual bleeding or bruising under the skin (Henoch Schonlein purpura) or fever which lasts for more than five days, associated with a rash on the trunk sometimes followed by a peeling of the skin on the hands and fingers, red eyes, lips, throat and tongue (Kawasaki disease)
- severe condition of the skin that may affect the mouth and other parts of the body

If these discomforts continue or become severe, tell the doctor or nurse.

If you develop any other symptom within days following the vaccination, tell the doctor as soon as possible.

This is not a complete list of side effects. For any unexpected effects while taking VARILRIX, contact your doctor or pharmacist.

HOW TO STORE IT

VARILRIX should be stored in a refrigerator at 2 to 8°C.

The reconstituted vaccine may be kept for up to 90 minutes at room temperature (25°C) and 8 hours in the refrigerator (2 to 8°C). If not used within these timeframes, the reconstituted vaccine must be discarded.

Store all vaccines out of the reach and sight of children.

The expiry date is shown on the label and packaging. The vaccine should not be used after this date.

REPORTING SUSPECTED SIDE EFFECTS

To monitor vaccine safety, the Public Health Agency of Canada collects case reports on adverse events following immunization.

For health care professionals:

If a patient experiences an adverse event following immunization, please complete the appropriate Adverse Events following Immunization (AEFI) Form and send it to your local Health Unit in [your province/territory](#).

For the General Public:

Should you experience an adverse event following immunization, please ask your doctor, nurse, or pharmacist to complete the Adverse Events following Immunization (AEFI) Form.

If you have any questions or have difficulties contacting your local health unit, please contact Vaccine Safety Section at Public Health Agency of Canada:

By toll-free telephone: 1-866-844-0018

By toll-free fax: 1-866-844-5931

By email: caefi@phac-aspc.gc.ca

At the following website:

<http://www.phac-aspc.gc.ca/im/vs-sv/index-eng.php>

By regular mail:

The Public Health Agency of Canada

Vaccine Safety Section

130 Colonnade Road

Ottawa, Ontario

K1A 0K9 Address Locator 6502A

NOTE: Should you require information related to the management of the side effect, please contact your health care provider before notifying the Public Health Agency of Canada. The Public Health Agency of Canada does not provide medical advice.

MORE INFORMATION

This document plus the full product monograph, prepared for health professionals can be found at:

<http://www.gsk.ca> or by contacting the sponsor,

GlaxoSmithKline Inc.

7333 Mississauga Road

Mississauga, Ontario

L5N 6L4

1-800-387-7374

This leaflet was prepared by GlaxoSmithKline Inc.

Last Revised: August 12, 2019

©2019 GSK group of companies or its licensor.

Trademarks are owned by or licensed to the GSK group of companies.