ANAPHYLAXIS
Sabrina ordered fries at the school cafeteria, after making sure that they were safe.

After lunch, Sabrina began to wheeze - thought she was having an asthma attack, she was sent to the office, by the time she got there, she was in serious respiratory trouble, and kept repeating “it’s my asthma.”

A teacher raced to Sabrina’s locker to get her EpiPen in case it was anaphylaxis; school officials called 911. Sabrina collapsed, lost consciousness, suffered a cardiac arrest before the device could be administered and before the ambulance arrived.

https://youtu.be/JxxYRv2cCi8

(https://allergicliving.com/2010/07/02/sabrinas-law-sara-shannons-journey/)
Why are we here?

• Boards of Education must establish a training strategy according to the Ministry of Education Anaphylaxis Protection Order School Act, amended 2009

• Ministry of Education BC Anaphylactic and Child Safety Framework updated 2013

• Consensus Statement regarding standardized anaphylaxis training: Anaphylaxis in Schools & Other Settings 3rd Edition Revised, 2015
What is an Allergy?

Allergies occur when the immune system becomes unusually sensitive and overreacts to common substances that are normally harmless.

Examples are:

- **Foods** – peanuts, tree nuts, sesame, milk, eggs, fish, crustaceans and mollusks (shellfish), soy, wheat, and mustard
- **Insect bites** – bees, wasps, hornets and some ants
- **Medications** – penicillin, sulfa drugs
- **Exercise**
- **Latex** – gloves/medical devices

Reference: Food Allergy Canada(2019)
What is Anaphylaxis?

• **Most serious type** of allergic reaction
  • Can affect different parts of the body
  • Can happen quickly or can be delayed
  • Can be life-threatening

• **Immediate treatment is necessary**
Most dangerous symptoms

Breathing difficulties

Drop in blood pressure

Food Allergy Canada 2019
Why are Teens at Higher Risk?

“Risk-taking behaviors in teenagers have been studied and are generally attributed to a reduced appreciation of potential dangers and a belief that consequences can be controlled.”

“...social isolation [is] the hardest part of living with a food allergy”

http://www.jacionline.org/article/S0091-6749(06)00652-X/pdf
% of time teens report carrying their Epi

**FIG 1.** Percentage of respondents who “always carry” SIE during various activities.
Why are Teens at Higher Risk?

- Transition from elementary school
- Increased independence

- Increased risk taking, not wanting to appear different
  - Eating unsafe food and eating out
  - Not reading food labels
  - Not carrying auto injector, not wearing medic alert ID
  - Teenage Brain - the last to mature
  - Not telling friends or others, wanting to fit in
  - Alcohol and drug use
Prevention = Having a Plan

- Ensure the medical alert list and epinephrine auto-injectors (ex. Epipen®) are current
- Be aware of students who have allergies
- Review emergency care plans for each student
- Epinephrine must be immediately available, carried by student
- Additional devices to be stored in a central unlocked location
- Know when and how to administer epinephrine
- Prepare for outdoor and off school grounds activities
What should I do?

1) Administer epinephrine auto-injector
2) Call 911
3) Administer second dose after 5 minutes **IF** symptoms do not improve or recur
4) Have ambulance transport student to hospital
5) Notify parent/guardian

**Remember:**
- Epinephrine is the drug to use for an allergic reaction
- Delay in receiving epinephrine is associated with fatalities
- Individuals must go to the closest emergency department

Remember

• When in doubt, administer epinephrine, early use saves lives. Symptoms of anaphylaxis are unpredictable.

• Antihistamines are not appropriate drugs to use during anaphylaxis and must not be given.

• Asthma medication may be given after epinephrine.

• Some symptoms of anaphylaxis can be confusing i.e. breathing difficulties.

• Epinephrine addresses the life threatening symptoms – breathing difficulty and loss of blood pressure.
What are auto-injectors?

A disposable, pre-filled automatic injection device that administers a single dose of epinephrine

Reference: [www.epipen.ca](http://www.epipen.ca)  
[https://www.auvi-q.com/hcp/about-auvi-q](https://www.auvi-q.com/hcp/about-auvi-q)
Using the EpiPen®

1. Hold firmly with ORANGE tip pointing downward.
2. Remove BLUE safety cap by pulling straight up. Do not bend or twist.
3. Place and push ORANGE tip firmly into mid-outer thigh until you hear a “click.”
4. Hold on thigh for several seconds.
5. EpiPen video link

Built-in needle protection
When EpiPen® is removed, the ORANGE needle cover automatically extends to cover the injection needle, ensuring the needle is never exposed.

Reference: www.epipen.ca
**Using Auvi-Q®**

**STEP 1**
- Pull Auvi-Q® up from the outer case
- Pull red safety guard down and off of Auvi-Q®
- Place black end of Auvi-Q® against the middle of the outer thigh, push firmly until you hear a click and a hiss.

**STEP 2**

**STEP 3**

**Hold for 2 seconds.**
- [Auvi-Q video link](https://www.auvi-q.com/about-auvi-q)

Reference: [https://www.auvi-q.com/about-auvi-q](https://www.auvi-q.com/about-auvi-q)
Body Positioning

• When giving epinephrine
  • have student sit or lie down

• After giving epinephrine
  • Lay on back, legs elevated
  • If they feel sick or are vomiting, place in recovery position

Important: Do not have them sit up or stand suddenly


Food Allergy Canada 2019
Conclusion: Follow the three A’s

• **Awareness**
  • Know the students affected by allergy
  • Know the steps of the emergency plan
  • Know the location of the epinephrine auto-injector
  • Know how to use an epinephrine auto-injector

• **Avoidance**
  • Communication
  • Avoid contact with allergens
  • Regular cleaning
  • Handwashing

• **Action**
  • Give the epinephrine auto-injector and call 911.
  • Don’t delay!
Teen Scenario...

What it could look like...

https://youtu.be/msM7zDrex4Q

*** play to 2:07...

Anaphylaxis Campaign 2015
Allergyaware.ca

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LEAP

Allergen

British Columbia Healthlink BC

Severe Allergic Reactions to Food Children and Teens

What is a severe allergic reaction to a food?

- Stomach: vomiting, nausea, abdominal pain or diarrhea

Number 100a
May 2016

Written by Members of Food Allergy Canada's Youth Advisory Panel
Resources

For more information contact your Public Health Nurse and see:

• BC Anaphylactic and Child Safety Framework
• http://foodallergycanada.ca/ (Food Allergy Canada)
• http://www.whyriskit.ca/ (Why Risk It- Teens)
• http://www.epipen.ca/ EpiPen®
• https://www.auvi-q.com/about-auvi-q Auvi-Q®
• https://www.medicalert.ca/ Medic Alert
• www.bchealthguide.org/healthfiles Health files
• https://www2.gov.bc.ca/gov/content/education-training/k-12/administration/program-management/safe-caring-and-orderly-schools/anaphylaxis BC Ministry of Education
• https://www.allergyaware.ca/courses/ Allergy Aware
• Anaphylaxis in Schools & Other Settings 3rd edition
References

Food Allergy Canada (2019) http://foodallergycanada.ca/

Anaphylaxis in Schools & Other Settings (Third edition) by the
Canadian Society of Allergy and Clinical Immunology.

Risk-Taking and coping strategies of adolescents and young adults
with food allergies http://www.jacionline.org/article/S0091-6749(06)00652-X/pdf

Article about Sabrina’s Law

IH public website
http://www.interiorhealth.ca/YourHealth/SchoolHealth/SchoolMedical
Conditions/Pages/AllergiesAnaphylaxis.aspx
Acknowledgments

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Images and/or product shots from:

Pfizer Canada Inc. (EpiPen®), kaleo, Inc (Auvi-Q®), Food Allergy Canada or purchased by Interior Health
Any Questions?