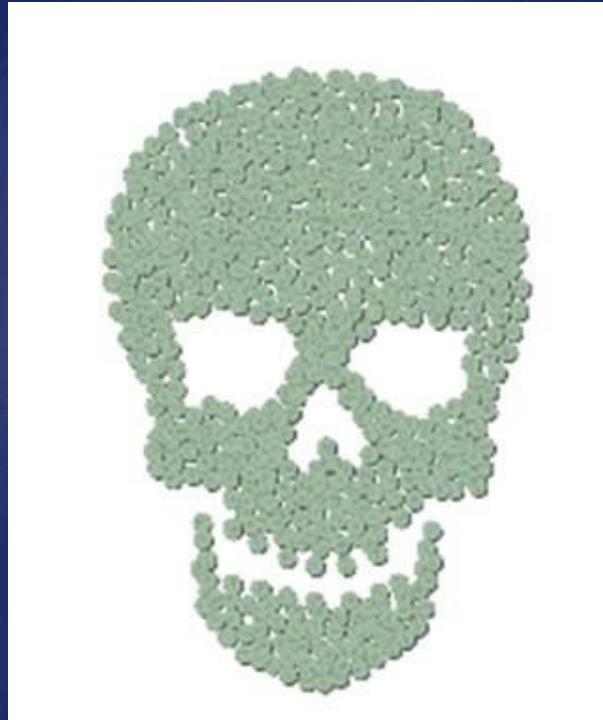


<https://www.youtube.com/watch?v=0DUM80LjGMo>

VIGILANCE ✦ COURAGE ✦ PRIDE



# FENTANYL



Staff Sergeant Martin Schiavetta  
Calgary Police Service  
June 2016

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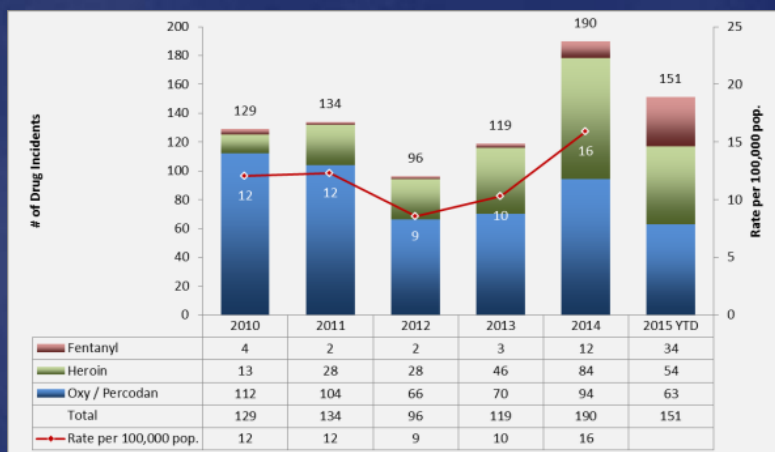
# Oxycodone

Semi-synthetic opioid analgesic – time released pain reliever

1996 – Health Canada approves brand name version of oxycodone (Oxycontin)

2004 – Health Canada launches review (Atlantic) – addiction, death

2012 – Purdue Pharma replaces OxyContin with OxyNeo



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# Opiate Drugs

## Commonly prescribed

- Buprenorphine
- Codeine
- Fentanyl
- Hydromorphone
- Hydrocodone
- Oxycodone
- Morphine
- Methadone

## Clandestinely produced

- Heroin
- Fentanyl
- Fentanyl analogs
- MT- ? Compounds
- AH-? Compounds

\*Source: NES, Brian ESCAMILLA, 2016

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# Fentanyl

Pharmaceutical – Anesthesia and pain management

Synthetic opioid 100 times more toxic than morphine  
- 40 times more toxic than heroin

Used to increase potency of heroin or as fake oxy

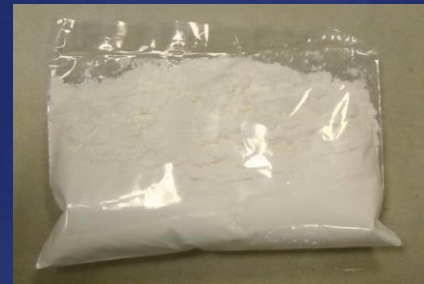
Pill, powder, liquid, lozenge, patch  
- Snorted – pill is grated into a powder

## EFFECTS

Euphoria, Relaxation (controls pain/emotion)

Death - Respiratory depression, Cardiac Arrest and  
Anaphylactic reaction

Physiologically and psychologically addictive



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# Fentanyl

Majority of seizures in Calgary – Marked as Oxy 80's  
- CDN on one side and 80 on the other

Mixed – caffeine, xylazine, heroin (lower quality), cocaine, oxomemazine (non-scheduled sedative anti-allergic agent antihistamine)

- 1 part fentanyl/100 part cutting agent

Calgary Street Price - ~\$20 per pill

Measured in micrograms, not milligrams  
(1mg = 1000 micrograms)

Single dose by IV is 125 micrograms

(1 grain of salt = 60 micrograms)

Lethal dose – 2 milligrams

Skin permeable

May look like heroin or cocaine – but odourless

Naloxone can reverse overdose temporarily



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Preview failed. Video not found.

<https://www.youtube.com/watch?v=dkG80-rjgHo>

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# FENTANYL ANALOGS

ANALOG	CarFentanyl	3-Methyl Fentanyl	SuFentanyl	Acetyl Fentanyl	Butyryl Fentanyl
POTENCY RELATIVE TO FENTANYL	100x	10 – 15 x	5 – 10 x	~ 1/7	~ 1/7

ALBERTA – Acetyl and Butyryl

ALBERTA & BC – 3-Methyl

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# FENTANYL ANALOGS

2,5-Dimethylfentanyl	$\alpha$ -Methylthiofentanyl	Lofentanyl
3-Allylfentanyl	Acetylfentanyl	N-Methylcarfentanyl
3-Methylbutyrfentanyl	Alfentanyl	Mirfentanyl
3-Methylfentanyl	Benzylfentanyl	Ocfentanyl
3-Methylthiofentanyl	$\beta$ -hydroxyfentanyl	Ohmefentanyl
4-Fluorobutyrfentanyl	$\beta$ -hydroxythiofentanyl	R-30490
4-Fluorofentanyl	$\beta$ -methylfentanyl	Remifentanyl
4-Phenylfentanyl	Butyrfentanyl	Sufentanyl
4-Methoxyfutyrfentanyl	Brifentanyl	Thiofentanyl
Acrylfentanyl	Carfentanyl	Trefentanyl
$\alpha$ -Methylacetylfentanyl	Furanylfentanyl	

There are over 30 analogs but there is a potential for more than 1400  
Only 200+ have been synthesized and studied

\*Source: NES, Brian ESCAMILLA, 2016

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# FENTANYL - INDUCED DEATHS (ALBERTA)

YEAR	DEATHS
2012	34
2013	91
2014	90
2015	272

2015  
90 Deaths in Calgary



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# PROFIT

## LOW RISK → HIGH REWARD

### Purchase powder from overseas to re-sell powder in Canada

1 kilo Fentanyl powder \$12,500 USD on internet = **\$280,000** (sold in Canada)

**\$267,500 profit**

### Purchase powder to make pills

1 kilo Fentanyl powder \$12,500 USD on internet = **1 million counterfeit pills**

\$20/pill x 1 million pills = \$20 million - \$12,500 = **\$19,987,500 profit**

\$80/pill x 1 million pills = \$80 million - \$12,500 = **\$79,987,500 profit**

**\$12,500 investment → \$60-\$80 million return**

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# TABLETING OPERATIONS: PILL PRESS

## PILL PRESS

- USA: Legal to purchase and import (**regulated**)
- Canada: Legal to purchase and import (**not regulated**)
- CBSA: No authority to seize pill press
- Individuals with no criminal histories importing presses into Canada
- Multi-stage commercial press **\$6000 to \$10,000 USD**  
**10,000 – 18,000 tablets / hour**

Hot spots – chocolate chip cookie effect

1 pound of powder can kill 250 000 people



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# TRANSPORT

Easy to order online

Recruiting people to accept packages off craigslist

Ziploc baggies, either at a 200, 500 or 1000 ('boat') count

The screenshot displays the EC21 Global B2B Marketplace interface. At the top, navigation links include 'Sign In', 'Join Free', 'Buy Now', 'Sell Now', 'My EC21', 'Community', and 'Help'. Below the navigation bar, a search bar contains the text 'acetyl fentanyl'. To the right of the search bar are links for 'Global Buyer DB' and 'Post Your Products'. The main content area is divided into several sections: 'Categories' (listing Pharmaceutical Intermediates, Other Pharmaceutical Ingredients, and Drugs), 'Group Products' (with a 'Select Certification' dropdown and a 'Search' button), 'Subscription' (with a 'Trade Alert' button and an 'RSS Feeds' link), 'My Recent History', and 'Community' (with links to 'Recommended Topics', 'Basics of Import/Export', 'Business Talk', and 'Safe Trading Basics'). The 'Products' section shows search results for 'acetyl fentanyl', listing 64 products found from 61 suppliers and manufacturers. The results are organized by 'Supplier Country' (United States, China, Ukraine, Yugoslavia) and 'View as' (grid, list). Each product listing includes a thumbnail image, the product name, place of origin, minimum order, price, price condition, and a 'Contact Now' button. The 'Get Listed' section on the right encourages users to join EC21 for free to find suppliers and get their products listed.

October 1, 2015, the Chinese government added fentanyl (and its analogues) to their controlled chemicals list. As a result, there is potential for an increase in domestic manufacturing of powdered fentanyl


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# Fentanyl OD's

## What **TO DO** if somebody is ODing

If somebody is ODing, they need help. Without help, they might die. Seconds can count!

1. Call 911.
2. Use the naloxone kit if you have one.
3. Roll them into the recovery position if they are passed out. This prevents more problems like choking on vomit or their tongue. 
4. Breathe for them if they aren't breathing:
  - Make sure there is nothing in their mouth.
  - Tilt their head back.
  - Give them a breath every five seconds.
5. Stay with them until help comes. If you can't stay, write down on a piece of paper what drugs the person took, and leave it with them so they can get the right help.

## What **NOT** to do if somebody is ODing

- Don't leave them alone.
- Don't put them in a shower or cold bath.
- Don't leave them on their back.
- Don't hit or hurt them to try and bring them around.
- Don't give them other drugs.
- Don't inject them with salt water.

These will all just make things worse.

## Read... remember... react

When an OD happens, it can be easy to panic and forget what to do. So keep these tips handy, read them often and tell your friends about them. Remembering them could save a life.

OVERDOSE  
PREVENTION

Save a Life  
FENTANYL

For more information and to find an addiction services office near you, please call the 24-hour Helpline at 1-866-332-2322.  
©AHS 2015  
640K



## ODs: Signs & Symptoms

The following symptoms are signs of an overdose:

- Breathing is slow or not breathing at all
- Nails and/or lips are blue
- Choking or throwing up
- Making gurgling sounds
- Skin is cold and clammy
- Can't wake them up

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# Domestic Synthesis of Fentanyl

The chemicals required to manufacture fentanyl can be acquired domestically as there currently are no regulations in place to prevent their acquisition. Many solvents used to produce fentanyl are the same as other synthetic drug production; however their precursor materials are not ones that are used to manufacture Methamphetamine or MDMA.

Some precursors utilized in clandestine drug labs to produce fentanyl are:

- Anilin
- 1-Benzyl-4-piperidone
- 2-Chloroethylbenzene
- Methyl acrylate
- Phenethylamine
- N-(1-phenethyl)-piperidin-4-one
- N-(1-phenethyl-4-piperidiny)aniline
- 2-phenyl-2-bromoethane
- N-(4-piperidiny)aniline
- Propionic anhydride
- Propionyl chloride



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# Domestic Synthesis of Fentanyl

Precursors critical to synthesize fentanyl domestically:

Aniline – Flammable, fatal if swallowed

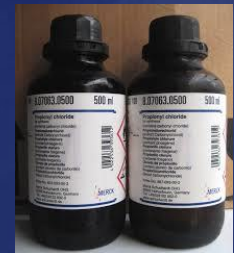
Propionyl Chloride – may ignite/explode if contacts water, eye/skin burns

Sodium Borohydride – corrosive, flammable solid

Sodium Triacetoxyborohydride

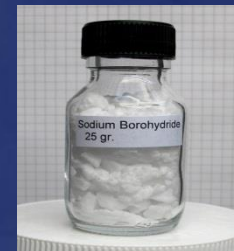


Fentanyl can also be made domestically in a 'one pot lab'. This process involves three separate reactions occurring in one container.



No heat or special equipment is required.

This process can produce roughly 26.2 grams of powdered fentanyl equivalent to 2.62 kilograms of diluted fentanyl.



Cost to purchase reagents - \$375.95

\$375.95 = **\$26, 200 profit**

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# FENTANYL HANDLING INSTRUCTIONS

Individuals who come across fentanyl, in tablet or powdered form, should wear latex, or nitrile, gloves and a N95 (paper dust) mask to handle the drug. Consider wearing double sets of gloves for added protection and long sleeves to prevent a powder from inadvertently contacting your skin.

Exhibits should not be handled alone.

If you get any powder on yourself, let someone know immediately and remove the clothing or rinse with water if it has come in contact with skin

Do not rely on a NIK/NARK presumptive test kit to identify the drug or hazard.

Be sure to clean your work surface area and properly dispose of gloves and paper used in exhibit handling.

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# PREVENTION / EDUCATION

## Partnerships

Medical Examiners Office (Death Investigators)

Chief Toxicologist

## AHS

- take home Naloxone kits
- Addiction/Mental Health 24 hour line 1-866-332-2322
- Educational video

Other Agencies – RCMP, CBSA

Media – numerous releases/posters/interviews

Officer safety workshop/presentations /SRO Education



In Calgary, fentanyl has been cut with caffeine, heroin and horse tranquilizers.

How do you know what you're getting?



Fentanyl is **40X** more toxic than heroin and **100X** more toxic than morphine.

How do you know what you're getting?



**2/3** of fentanyl deaths in Calgary happen in suburban communities.

How do you know what you're getting?



A deadly dose of fentanyl is **2 mg**, which is equal to just **2 grains of salt**.

How do you know what you're getting?



VIGILANCE ♦ COURAGE ♦ PRIDE



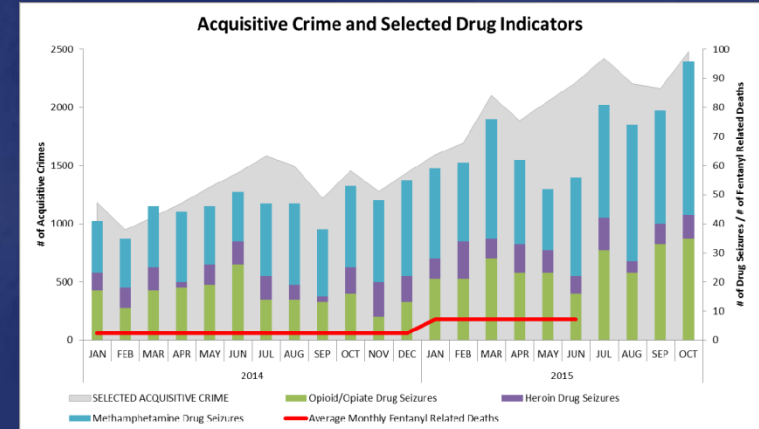
# Community Impact / Public Health Crisis

Not just a law enforcement issue

Public health crisis lacking suitable addiction resources

Fentanyl abuse leads to increased criminal offences:

- Auto theft
- B&E's
- Home invasions/Robberies (bank and commercial)
- Car prowlings
- Drug and gang violence



	Facebook People Reached	Facebook Post Clicks	Twitter People Reached	Twitter Post Clicks
In 2015, more Calgarians have died from fentanyl use than traffic collisions and homicides combined. Your next dose of fentanyl may be your last. #FentanylKills	258,300	10,700	19,838	1,622
A deadly dose of fentanyl is 2 mg, which is equal to just 2 grains of salt. How much is in your pill? #FentanylKills	647,100	27,300	19,445	1,732
2/3 of Calgary's fentanyl overdoses happen in suburban communities. Have you talked to your children? #FentanylKills	48,900	2,400	10,297	609
Fentanyl is 40X more toxic than heroin and 100X more toxic than morphine. Your next dose of fentanyl may be your last. #FentanylKills	154,800	6,000	13,474	898
<b>Total:</b>	<b>1,109,100</b>	<b>46,400</b>	<b>63,054</b>	<b>4,861</b>

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# Chief's of Police Resolution: F15-11



## Resolution F15 – 11

### **Proposed Amendment to the Controlled Drugs and Substances Act:**

### **Propionyl Chloride, 1-Phenethyl-4-piperidone (NPP), Aniline, and 4-piperidone.**

- WHEREAS** The Province of Alberta is currently experiencing a public health crisis (i.e., unintended overdoses of illicit street drugs containing the active ingredient fentanyl), which has resulted in the death of more than 145 persons in the Province so far this year; and,
- WHEREAS** Criminal organizations are producing and distributing counterfeit 'OxyContin 80mg' tablets that use Fentanyl as the active ingredient for profit; and,
- WHEREAS** It is anticipated the domestic manufacturing of illicit Fentanyl in Canada is likely to increase with the Chinese government's proposed regulation of Fentanyl (and its derivatives/analogues); and,
- WHEREAS** There is currently no legislation or Federal Regulations governing the sale, acquisition, possession or use of Propionyl Chloride, 1-Phenethyl-4-piperidone (NPP), Aniline, and 4-piperidone within Canada.

### **THEREFORE LET IT BE RESOLVED THAT**

The Alberta Association of Chiefs of Police urges the Government of Canada to amend the Schedules and Federal Regulations of the Controlled Drugs and Substances Act (CDSA) to include Propionyl Chloride, 1-Phenethyl-4-piperidone (NPP), Aniline, and 4-piperidone as 'Class A' precursors in order to govern its sale, acquisition, possession and/or use of these substances within Canada.

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# Chief's of Police Resolution: F15-12



## Resolution 15 – 12

### Proposed Amendment to the Controlled Drugs and Substances Act:

#### Pill Press

- WHEREAS** The Province of Alberta is currently experiencing a public health crisis (i.e., specifically, unintended overdoses of illicit street drugs containing the active ingredient fentanyl), which has resulted in more than 145 deaths in the Province in 2015 thus far; and,
- WHEREAS** Criminal organizations are producing and distributing counterfeit 'OxyContin 80mg' tablets that use Fentanyl as the active ingredient for profit; and,
- WHEREAS** The 'pill press' facilitates the production of illicit street drugs in tablet form; and,
- WHEREAS** There is currently no legislation or Federal Regulations governing the import, export, sale or possession of 'pill presses' in Canada.

#### THEREFORE LET IT BE RESOLVED THAT

The Alberta Association of Chiefs of Police urges the Government of Canada to create Federal Regulations under the Controlled Drugs and Substances Act (CDSA) that will govern the import, export, sale, and possession of 'pill presses' within Canada.



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In Calgary, fentanyl has been cut with caffeine, heroin and horse tranquilizers.

How do you know what you're getting?



In 2015 more deaths can be attributed to fentanyl than traffic collisions and homicides combined.

How do you know what you're getting?



Fentanyl is **40X** more toxic than heroin and **100X** more toxic than morphine.

How do you know what you're getting?



**2/3** of fentanyl deaths in Calgary happen in suburban communities.

How do you know what you're getting?



Alberta Health Services

**IT'S NEVER GOING TO BE YOU...  
UNTIL IT IS.**

Time of Death  
2009

Cause of Death  
Overdose: Fentanyl,  
gabapentin, Xanax,  
valium, other drugs

Fentanyl may be hiding in the drugs you're using.  
You won't see it, smell it or taste it, but it can kill you.  
If you're going to use, don't use alone. And, get Naloxone.

**GET REAL. GET THE FACTS.**  
[www.drugsfool.ca](http://www.drugsfool.ca)



A deadly dose of fentanyl is **2 mg**, which is equal to just **2 grains of salt**.

How do you know what you're getting?



**40%** of bank robberies this summer were linked to fentanyl addictions.

Fentanyl fuels crime.

#FentanylKills



You may think your friend is sleeping, but they're actually OD'ing.

Your first dose could be your last.

#FentanylKills



**IT'S NEVER GOING TO BE YOU...  
UNTIL IT IS.**

Fentanyl may be hiding in the drugs you're using.

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Alberta Health Services

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# WHAT'S NEXT?

## W-18

Most potent of the 32 W-series compounds

100 times more toxic than fentanyl ?

Seized in 2015 by CPS

- Believed to be fentanyl

W-18 was developed in the 1980's, by a professor at the University of Alberta, as an analgesic but because of its potency and addictive qualities was never utilized

Purchased online – usually from China

1 dose = 1 Micro-gram (=1millionth of a gram)

Purchased in powder form (similar to fentanyl)

- Pressed into pills



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# WHAT'S NEXT?

## MT-45

No medicinal use

80% potency of morphine

Seized in 2015 by CPS

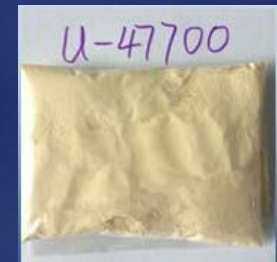


## U-47700

Developed by Upjohn (70's) as an opioid analgesic drug

7.5x more toxic than morphine

Marketed in powder and spray



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# Resources

- Calgary Police Service #AskAnAddict – Reanne and Abby videos  
[www.youtube.com/calgarypolice](http://www.youtube.com/calgarypolice)
- Partnership for Drug Free Canada -  
[Secureyourmeds.ca](http://Secureyourmeds.ca)
- Alberta Health Services – [drugsfool.ca](http://drugsfool.ca)

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# QUESTIONS?

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