

Chemical Warfare  
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Shared by



Of course you passed high school chemistry. Maybe you even made a through a college course or two. But a little knowledge is a dangerous thing--especially when it comes to chemical equations. See if you can keep yourself and others alive for the next ten days. All it takes is a little knowledge of chemistry. Mark your choices, then check the answers to see if you know enough to survive.

DAY ONE:

You are at home cooking and suddenly a fire starts on the top of your stove. You are frightened and look for a quick way to douse the flames. There are three jars containing different chemical compounds on your cupboard. Which do you. toss onto the fire?

- A)  $\text{NaHCO}_3$                        B)  $\text{CS}_2$                        C)  $\text{C}_7\text{H}_3$ .

DAY TWO:

Some of your food keeps getting a bit of mold on it. You search for a compound that will help prevent the mold, but won't hurt you when you eat the food. What is best to put on the food?

- A)  $\text{As}_2\text{O}_3$                        B)  $\text{C}_{17}\text{H}_{23}\text{NO}_3$                        C)  $\text{C}_3\text{H}_5\text{O}_2\text{Na}$ .

DAY THREE:

You have developed a bit of an infection. You really should take something for it before it gets any worse. What would you like to have?

- A)  $\text{C}_9\text{H}_{11}\text{N}_2\text{O}_4\text{SR}$                        B)  $\text{C}_6\text{H}_6\text{Cl}_6$                        C)  $\text{C}_{17}\text{H}_{21}\text{NO}_4$

DAY FOUR:

Your allergies have been acting up again, and you have a bad insect bite on your arm. You need some medication with a good compound to help that allergy, and an ointment with something to make that insect bite feel better. You want plenty of which compound in your medication?

- A)  $\text{H}_2\text{SO}_4$                        B)  $\text{C}_{18}\text{H}_{21}\text{ClN}_2$                        C)  $\text{C}_{20}\text{H}_{12}$

DAY FIVE:

When you ride the ferry across the bay you sometimes experience a little nausea. A drug with something to help you feel better would be nice. After all, nobody likes to feed the fish. Which will you take?

- A)  $\text{CH}_2\text{FCOONa}$        B)  $\text{C}_{17}\text{H}_{19}\text{N}_2\text{SCl}$        C)  $\text{C}_{19}\text{H}_{26}\text{ON}_2$

DAY SIX:

After examining one of your more careless patients, you conclude that this person has a case of gonorrhea. You go to your locked cupboard and find three possible forms of medication. Which do you choose to administer to the anxious sufferer?

- A)  $\text{C}_6\text{H}_8\text{N}_2\text{O}_2\text{S}$        B)  $\text{C}_{21}\text{H}_{22}\text{N}_2\text{O}_2$        C)  $\text{C}_{10}\text{H}_{14}\text{N}_2$

DAY SEVEN:

You stop by the local fast food restaurant and pick up some french fries. They seem somewhat bland today, so you grab something from your laboratory shelf to sprinkle on them. Which did you grab?

- A)  $\text{NaCN}$        B)  $\text{KCN}$        C)  $\text{NaCl}$

DAY EIGHT:

So you're going to the beach for a little sun. To which kind of compound do you choose to expose your sensitive body so that you won't get sunburned?

- A)  $\text{HCl}$        B)  $\text{CH}_3\text{COSH}$        C)  $\text{C}_6\text{H}_4\text{NH}_2\text{COOC}_2\text{H}_5$

DAY NINE:

You are very concerned. The vet told you over the phone that it sounds as if Fido has parasites. There must be something fast and effective to make him more comfortable. What will it be?

- A)  $\text{HCN}$        B)  $\text{C}_{10}\text{H}_8\text{O}$        C)  $\text{CCl}_3\text{NO}_2$

DAY TEN:

Well, doctor. Here it is your last day. A patient has a bleeding problem during an operation. What kind of compound do you wish to administer to make the blood coagulate better?

- A)  $\text{C}_{15}\text{H}_{16}\text{N}_3\text{SClAnCl}_2$        B)  $\text{C}_{15}\text{H}_{15}\text{N}_2\text{CON}(\text{C}_2\text{H}_5)_2$        C)  $\text{C}_6\text{H}_5\text{COONa}$

END OF TEST

## CHEMICAL WARFARE ANSWERS

*Give yourself a point for each correct answer.*

### DAY ONE:

- (A) Good choice. You got the fire out by smothering the flames with ordinary baking soda. It looks like you will make it to day two.
- (B) Sorry, but carbon disulfide is a highly flammable, poisonous solvent. I'm afraid you haven't made it through the first day.
- (C) Whoops. Toluene is a flammable, poisonous hydrocarbon, originally from the balsam of Tolu. It is used as a solvent, and to make dyes and--ah, yes--even explosives.

### DAY TWO:

- (A) Arsenic trioxide will simply not fill the bill. However, this arsenic compound is great for exterminating insects and rodents.
- (B) Oh, my. If you picked this one you are in big trouble at mealtime. Hyoscyamine is a very poisonous alkaloid. No time to call the doctor.
- (C) Correct. Sodium propionate is one of your standard mold preventives.

### DAY THREE:

- (A) Congratulations. Penicillin has been the choice of many doctors for years now.
- (B) I don't think you will see much improvement. This powerful and poisonous insecticide, benzene hexachloride, just doesn't seem to do the trick.
- (C) Why not? Who knows, maybe a little cocaine will help your infection. (But I have my doubts.)

### DAY FOUR:

- (A) Ouch! And double ouch! I don't think sulfuric acid will have the desired effect. Though it is good for making dyes, paint, and explosives, I'm afraid its corrosive nature may not promote healing.
- (B) Good choice. Chlorcyclizine is an antihistamine for allergies and is also used in medication to sooth insect bites.
- (C) Benzopyrene, which comes from coal tar and cigarette smoke, has been found to cause cancer in laboratory animals. You struck out on this one.

### DAY FIVE:

- (A) Sorry, you'll never squeak again. Sodium fluoroacetate is a powder used as a highly effective rodent poison.
- (B) Chlorpromazine is the correct choice. In addition to its use to control nausea, this compound is also used in medication to help treat certain mental disorders.
- (C) Wrong. Curarine is a toxic alkaloid made from a South American plant. Natives use the poison on the tips of their arrows.

**DAY SIX:**

- (A) Good choice, doctor. Sulfanilamide is used to treat streptococcal infections.
- (B) Sorry, it looks like malpractice time. The strychnine you administered. seems to have cured your patient's problem permanently.
- (C) Nice try, but nicotine is not commonly used to treat this type of disorder. In fact in this pure form it's rather fatal.

**DAY SEVEN:**

- (A) Negative. Though sodium cyanide is also a salt, it is highly poisonous one. I hope you have a valid will.
- (B) You couldn't have done much worse. Potassium cyanide is an extremely poisonous compound. It is used for extracting gold, electroplating, and as an insecticide. But it just doesn't go well with fries.
- (C) That's correct. Common table salt is the best and safest choice.

**DAY EIGHT:**

- (A) This will be the worst sunburn you've ever had. Hydrochloric acid can even be worse than the sun's harmful rays.
- (B) Sorry. If you try putting this all over you, you won't feel so comfortable, but you will probably have plenty of elbowroom on the sand. After all, tear gas (thioacetic acid) usually keeps crowds back quite well.
- (C) That's right. Benzocaine is also used as a local anesthetic.

**DAY NINE:**

- (A) Well, Fido is gone to that big pound in the sky. Hydrocyanide acid is used as a fumigant. This poisonous gas just doesn't go well with pets.
- (B) Good choice. Betanaphthol is used in medicines as a parasiticide. Fido will thank you.
- (C) Goofed again. Call the pet cemetery. Chloropicrin is a poisonous gas used in chemical warfare. (And we though Fido was your best friend!)

**DAY TEN:**

- (A) That's right. Toluidine blue is used as a coagulant in medicine. Maybe you'll even be able to collect your bill this time.
- (B) I don't think lysergic acid diethylamide will stop the bleeding. All LSD does is cause psychedelic hallucinations.
- (C) Nope. Sodium benzoate is great for preserving food, but not so good for preserving patients.

**YOUR RATING:**

- 8-10 Correct: Excellent. You are a true expert in this field.
- 6-7 Correct: Very good. You either know a lot or are very lucky.
- 4-5 Correct: Good. You must be a high school chemistry teacher.
- 2-3 Correct: Fair. The law of averages was on your side.
- 0-1 Correct: Need help. Eat only all-natural foods.