Introductions.
This project was originally funded through a federal grant under the Department of Justice (DOJ), specifically the Community Oriented Policing Services (COPS) program. The Rural Methamphetamine Education Project (RMEP) was part of the Rural Crime and Justice Center (RCJC), a University Center of Excellence at Minot State University. RMEP provided education and awareness to ND communities about methamphetamine and other drugs.

This section covers some of the common side effects of meth use. Think of this as a laundry list of possibilities. Not every user will experience every side effect. A good comparison is prescription medication. Some people respond very well to prescription drugs, and others seem to end up with all of the side effects. Think of the list of side effects at the end of all Rx commercials.

Alternative introduction slide for this section. Typically used with students when it was inappropriate to use a picture of someone smoking the drug.

Meth is somewhat unique because any way a user can think of to get it into the body, the drug will do what it is designed to do. Smoking is most common in ND. Effects are nearly immediate when smoked or injected; the user experiences an intense “flash” or “rush.” All methods provide a “high” that can last for several hours, depending on the user (tolerance), how much they have taken, and purity of the product. Meth can be absorbed transdermally (through the skin). This contamination is often what happens when children test positive for meth after being removed from a home. The meth saturates their clothes, toys, furniture, carpeting, etc. Meth is a popular sex drug among gay males. The drug is administered anally, and sometimes called a “booty bump.”
Meth is an exceptionally powerful stimulant. It affects four primary neurotransmitters. Meth use results in an accumulation of dopamine (and serotonin) in the pleasure areas of the brain - excessive dopamine produces the euphoria and stimulation that the user is trying to achieve. Methamphetamine, however, not only blocks the feedback mechanism of the nerve cells (the transporter - which normally takes the chemical back up and saves it), but also reverses that transporter pushing the dopamine out faster. The dopamine stores eventually become depleted, as the nerve cells cannot keep up with the amount of dopamine released and not returned to the cells. Damage to the nerve cells themselves has also been documented.

The desired effects of methamphetamine use are directly related to the dopamine and serotonin released. Dopamine release causes euphoria (feeling of well-being), excitation, intensification of emotions, unusual motor movements, elevation of self-esteem, increased alertness and aggression, decreased appetite and elevation of libido (sexual appetite). Elevated levels of serotonin result in increased feelings of empathy and closeness as well as a generalized state of well-being.

Structurally, meth is very similar to dopamine. Fascinating study by Cardwell Nuckols, PhD. Measuring dopamine levels in rats brains. Sex increased dopamine by 200%, cocaine increased dopamine by 300%, and meth increased dopamine by 1100%!
The user's mood is altered differently depending on the route used for ingestion. There is reportedly a "flash" or a "rush" that has been described as "extremely pleasurable" immediately after the drug is injected or smoked. This rush is then followed (in essentially all methods of use) by feelings of euphoria or extreme well-being.

Many users report feeling great early on. They weren’t tired; had lots of energy; seemed to be productive; lost a few pounds. Users can still maintain a job and family life for a time. This “honeymoon” phase will vary from person to person. It can be very short lived, as the body starts to incur damage from continual use. Hyperthermia is dangerously high body temps – up to 106 degrees!

Methamphetamine users often display multiple behavior changes. These individuals are frequently violent, bizarre acting, excessively anxious, confused and unable to sleep. Psychotic features are very common as an effect of this drug as well. These individuals can show paranoia, visual and auditory hallucinations, mood disturbances, delusions, homicidal thoughts, suicidal thoughts, and out of control rages.

This slide is included for medical personnel who will recognize the terminology used. It was not intended for the general public. The medical complications of methamphetamine use are multiple and involve almost every major organ system.
Many parents and teachers will say this describes every teenager they know. 😊 This is where it becomes very important to know your children/students! Look for the changes in behavior/appearance, drop in grades, new groups of friends, etc. Most of this list can also be indicative of depression, and there may not be drug use at all. Noticing a change in one area should prompt closer examination of other areas. One change alone doesn’t necessarily indicate drug use.

Media has termed this “meth mouth.” Some users have drastic effects, and others aren’t affected at all. Several reasons this happens. If the drug is being used orally or smoked, it accelerates the decay process. Users are typically not concerned with personal hygiene: showering, dental care, etc. Users are probably not eating nutritious foods, if any food at all. Often times high sugar, high caffeine drinks are their preferred beverages, which will also accelerate the decay process. Meth users may also clench their jaws and grind their teeth.

Technical term is formication. It is a common side effect with stimulant drugs. When it happens with meth, slang terms are “crank bugs” or “meth mites.” When it happens with cocaine, slang term is “snow bugs.” It is a hallucination in which the user sees or feels bugs or worms crawling on or under the skin. The user then scratches the skin or starts digging or picking at the skin to remove the bugs which can lead to open wounds and infections.

These pictures are widely publicized and various stories are attached to them. This is the most accurate information we could locate.

Created for the use of the East County Drug Court, San Diego Superior Court, California  May 13, 2001
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These are mug shots of “Tammy” in Hollywood, FL. Though many stories say this progression is the result of meth use, there were probably many illicit substances used. She had resorted to prostitution to support her drug habit. The pictures span 9 years and 2 months from beginning to end: Nov 1979 to Jan 1989. There’s not exactly a year between pictures, some are only a few months. In the first picture, “Tammy” is in her early 30’s, so she is in her early 40’s in the last picture.

Notice the drastic changes in less than a decade. Tremendous weight loss, damage to nasal passages, lost most of her teeth, can’t open eyes for a picture. Have you seen people in their 80’s and 90’s that are in better condition?!? Imagine what the rest of her body must look like since we are only seeing from the neck up. . .

Other images can be found at: [http://www.facesofmeth.us/main.htm](http://www.facesofmeth.us/main.htm)