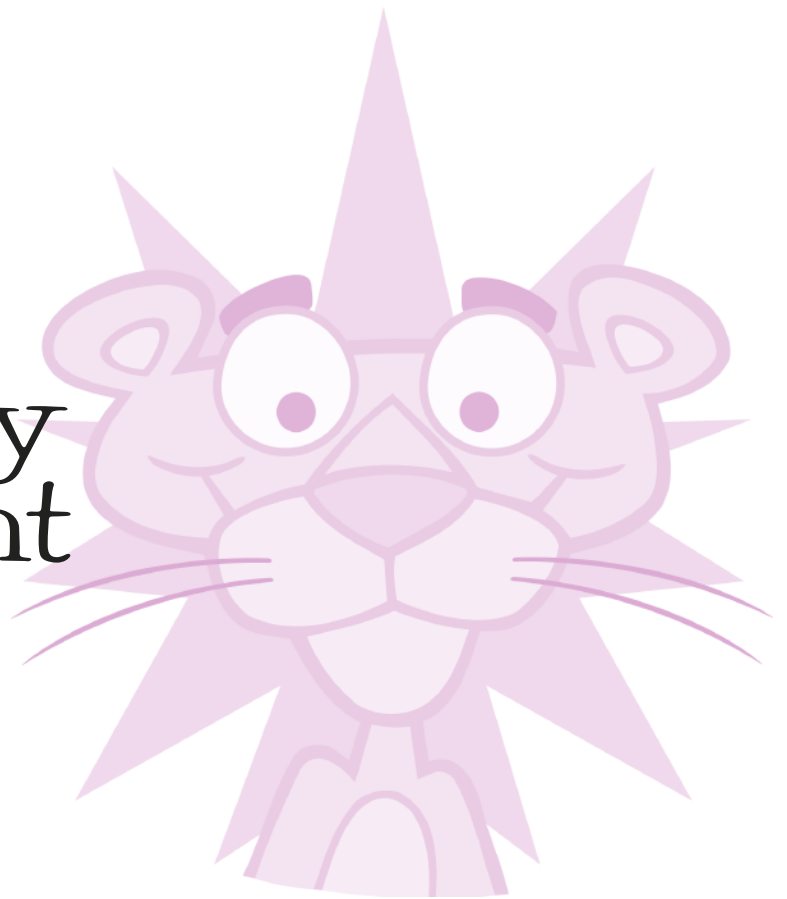


Chapter 16

Sick-Day and Surgery Management



SICK-DAY MANAGEMENT

Children with diabetes get sick just like other children. The average child gets eight colds a year. These may affect the diabetes.

It is important to:

- Always check **urine and/or blood ketones** and the **blood sugar** with any illness. Check ketones even if the blood sugar is normal.
 - Call your doctor or nurse if the urine ketone result is moderate or large or if the blood ketone level (using the Precision Xtra™ meter) is above 1.0 mmol/L.
 - The earlier you treat the ketones with extra Humalog/NovoLog/Apidra or Regular insulin and fluids, the less chance your child will have to go into the hospital.
- Always give some insulin.
 - If vomiting is present and ketones are negative, the dose may have to be lowered, but some insulin **must** be given.
- If the person vomits three or more times, a Phenergan suppository or skin-application or orally dissolved tablets called Zofran® may be helpful (children under two years of age should not use a Phenergan suppository).
- Glucagon can be mixed and given with an insulin syringe just like insulin.
 - It is helpful when the blood sugar is low and vomiting continues (see Chapter 6).
 - The dose is one unit for every year of age up to 15 units.
 - It should not be given if urine ketones are moderate or large (or blood ketones above 1.0 mmol/L).
 - Call your doctor or nurse before giving the glucagon injection if you have questions. It can be repeated every 20 minutes if needed.

Many medications have a warning label that a person with diabetes should not use the medicine. This is because they may raise the blood sugar a few points.

- Our view is that if the medicine is needed, go ahead and take it. We can always give a bit more insulin if needed.
- Steroids (e.g., prednisone) are the most difficult (often used for asthma) and, if prescribed, the diabetes care provider should be notified.

Youth with type 2 diabetes must also remember to check the urine and/or blood ketone level.

- If the person is receiving metformin (Glucophage), the pills should be stopped during the illness. (A condition called lactic acidosis can develop.)
- It is usually best to return to insulin shots during the illness.
- Call your doctor or nurse if you have questions.

SURGERY MANAGEMENT

If surgery is planned:

- Call your diabetes care provider **AFTER** you find out the time of the surgery and if eating food in usual amounts will be allowed.
- Take your own diabetes supplies with you to the surgery:
 - blood sugar meter and strips, with finger poker (lancet)
 - insulin and syringes
 - glucose (dextrose) tablets or gel
 - blood ketone strips and meter or urine Ketostix
 - glucagon emergency kit
 - if on a pump, equipment to change insertion if needed
- Take your phone card with your diabetes care provider's numbers.
- If you/your child received a basal insulin (e.g., by insulin pump or by Lantus or Levemir injection), the basal insulin can be continued during the period of surgery. Then restart bolus pump therapy or other insulin injections when the person is able to eat.



Table 1

MANAGEMENT OF VOMITING (WITHOUT KETONES)

Avoid solid foods until the vomiting has stopped.

If vomiting is frequent, some doctors recommend giving a Phenergan suppository, or orally dissolved tablets called Zofran, to reduce vomiting, and wait to give fluids for an hour until the suppository is working (children under two years of age should not use a Phenergan suppository).

If you do not have suppositories, ask for a prescription for them at the time of your clinic visit.

Gradually start liquids (juice, Pedialyte®, water, etc.) in small amounts. Juices (especially orange) replace the salts that are lost with vomiting or diarrhea. Pedialyte popsicles are also available.

- Start with a tablespoon of liquid every 10-20 minutes.
- If the blood sugar is below 100 mg/dl (5.5 mmol/L):
 - Sugar pop can be given.
 - For some children, sucking on a piece of hard candy often works well.
- If the blood sugar is below 70 mg/dl (3.9 mmol/L) and the person is vomiting, give glucagon just as you would give insulin. The dose is 1 unit per year of age up to 15 units. Repeat doses can be given every 20 minutes as needed.
- If the blood sugar is above 150 mg/dl (8.3 mmol/L), do not give pop with sugar in it.
- If there is no further vomiting, gradually increase the amount of fluid.
- If vomiting restarts, it may again be necessary to rest the stomach for another hour and then restart the small amounts of fluids. A repeat suppository or Zofran tablet can be given after three or four hours.

After a few hours without vomiting, gradually return to a normal diet. Soups are often good to start with and they provide needed nutrients.



Table 2

SICK-DAY FOODS



Liquids*

- Fruit juice: apple, cranberry, grape, grapefruit, orange, pineapple, etc.
- Sugar-containing beverages: regular 7Up®, ginger ale, orange juice, cola, PEPSI®, etc.*
- Fruit-flavored drinks: regular Kool-Aid, lemonade, Hi-C®, etc.*
- Sports drinks: Gatorade, POWERADE®, etc., any flavor
- Tea with honey or sugar
- Pedialyte, or Infalyte® (especially for younger children)
- JELL-O®: regular (for infants, liquid JELL-O warmed in a bottle) or diet
- Popsicles, regular or diet
- Broth-type soup: bouillon, chicken noodle soup, Cup-a-Soup®



Solids (when ready)

- Saltine crackers
- Banana (or other fruit)
- Applesauce
- Bread or toast
- Graham crackers
- Soup

*Sugar free may be needed depending on blood sugars (e.g., greater than 150 mg/dl [8.3 mmol/L]).

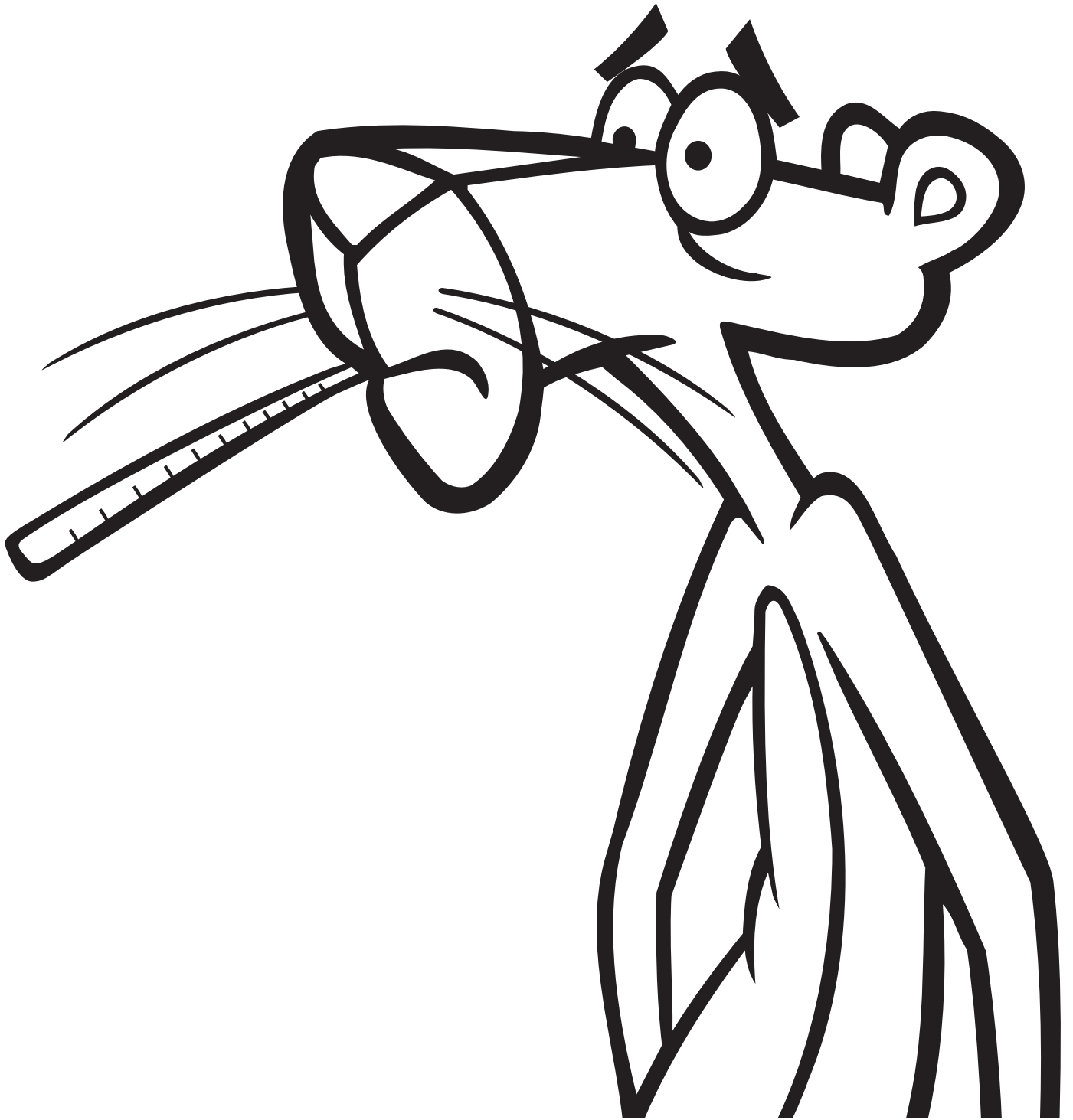
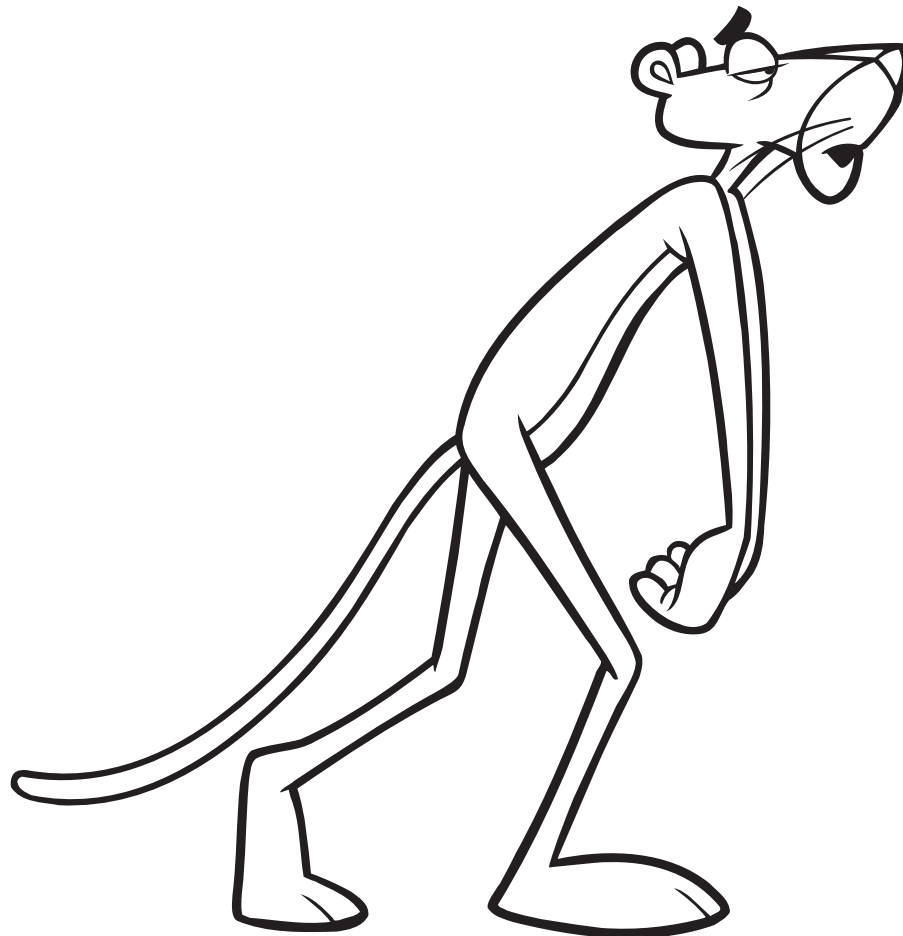


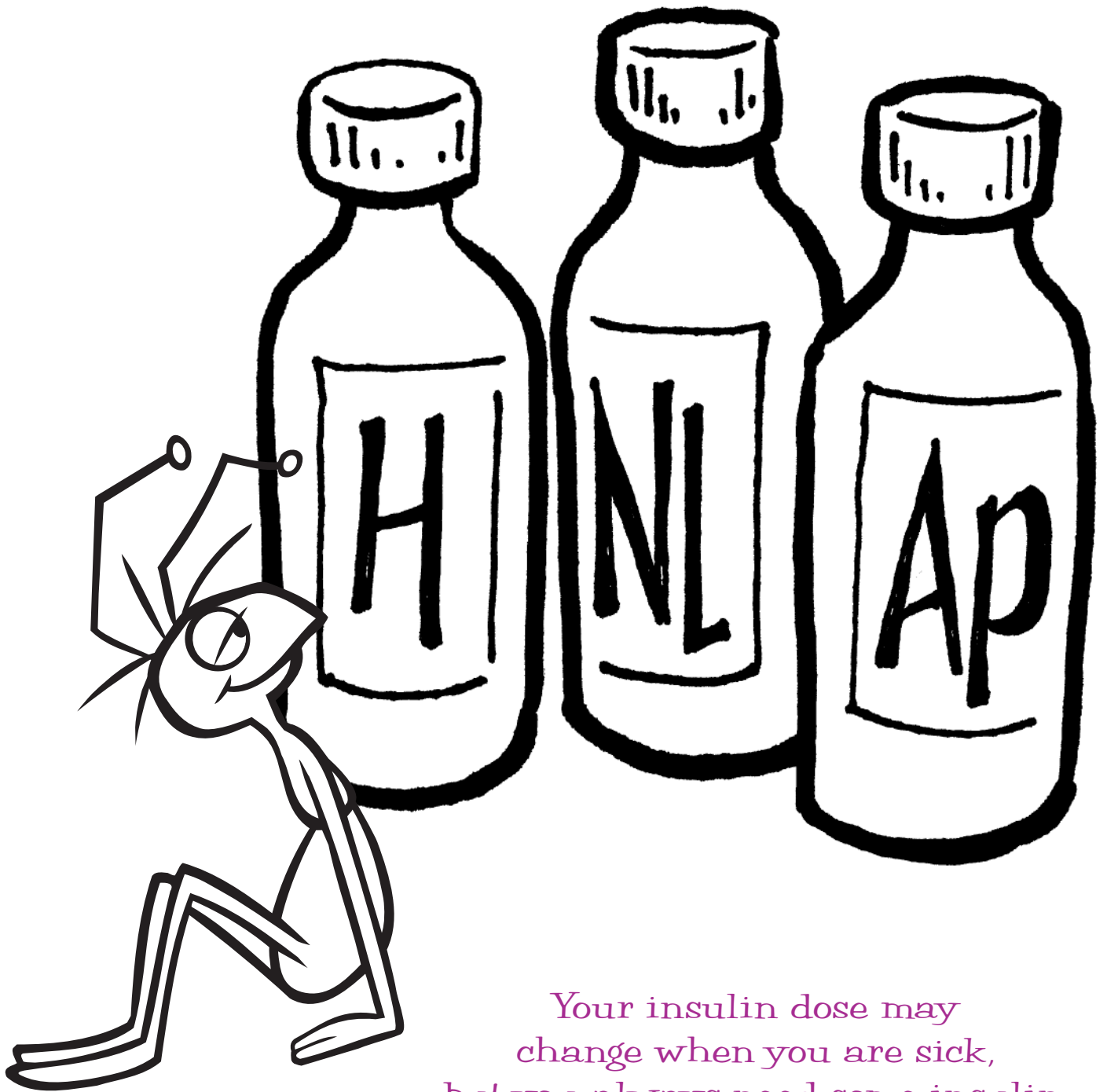
Table 3

SICK-DAY MANAGEMENT: WHEN TO CALL FOR EMERGENCY CARE

- If you have vomited more than three times and can keep nothing in your stomach, and urine ketones are not moderate or large or blood ketones above 1.0 mmol/L, call your primary care physician.
- *If help is needed with an insulin dose, call your diabetes care provider.*
- If moderate or large ketones are present or blood ketones are above 1.0 mmol/L, call your diabetes care provider.
- If you have difficulty breathing or have “deep breathing,” you need to go to an emergency room. This usually indicates severe acidosis (ketoacidosis).
- Low blood sugar (hypoglycemia):

If there is any unusual behavior such as confusion, slurred speech, double vision, inability to move or talk, or jerking, someone should give sugar or instant glucose. (Glucagon [Chapter 6] is given if the person is unconscious or if a convulsion [seizure] occurs.) The diabetes care provider should be contacted if a severe reaction occurs. In case of a convulsion or loss of consciousness, it may be necessary to call the paramedics or to go to an emergency room. Have an emergency number posted by the phone.





Your insulin dose may
change when you are sick,
but you always need some insulin.



Family support is very important
for the child with diabetes.