

Hibernation: Not Simply Sleep

As winter settles over the northern hemisphere of our planet, many kinds of creatures are moving toward hibernation. True hibernation is much more than just a deep, prolonged sleep. In fact, many animals that are popularly believed to hibernate, like bears, are not true hibernators. A wintering bear's body temperature seldom falls below 86 degrees, so bears are easily awakened. True hibernators actually need several hours to awaken.

The ground squirrel is a true hibernator. Its hibernation pattern is triggered by an internal clock that causes hormone changes. These changes not only lower the squirrel's temperature, metabolic breathing and heart rate, but also changes the way its nervous system and cell membranes operate. If the squirrel's nervous system and cell membrane operation were not modified for hibernation, the other changes would kill it.

Once the squirrel is in true hibernation, its body temperature drops to about 35° F, its heart rate drops from 350 beats per minute to about 3 beats per minute, and it will breathe only once every several minutes.

The vast and complex internal changes that must take place in hibernation, affecting the function of every cell, show us that hibernation is an ability that was built into many creatures. If all these changes were due to genetic accidents, there would be no hibernating animals today. They would all have died trying to find the right combination of internal changes to allow hibernation to occur.

Psalm 121:2-4

"My help cometh from the Lord, which made heaven and earth. He will not suffer thy foot to be moved: he that keepeth thee will not slumber. Behold, he that keepeth Israel shall neither slumber nor sleep."

Prayer: Dear Heavenly Father; I see Your love for all that You have made in the ways that You have provided for good of all Your creatures. If You would be their Father through such tender loving care, how much more would You be my Father for the sake of Your Son Jesus Christ! Amen.

REF.: Fleming, Carol B. How do animals hibernate? *Science* 84.