



Birth & Care of Young

- **MORE ABOUT POLAR BEARS ›**

Gestation

- The total gestation period is about eight months.
- Gestation includes a period of delayed implantation.
 - The fertilized egg divides into a hollow ball of cells one layer thick (a blastocyst), then stops growing and lies free-floating in the uterus for about four months. The blastocyst then implants in the uterine wall and continues to develop.
 - Delayed implantation assures that the cub is born during the best time of the year for survival and allows the female to get into good physical condition and use her energy for nursing her newborn cubs.
 - The actual embryonic development is estimated to be four months.

Denning

- Once mated, females begin depositing fat in preparation for cubbing. Females need to gain at least 200 kg (441 lb.) for a successful pregnancy.
- Some females may seek out maternity dens as early as late August, but most enter dens in mid to late October. Dens protect newborn cubs from winter's temperature extremes.
- Females usually dig dens in snowdrifts on southerly facing slopes. Some dig earthen dens that later become covered by snow.
- Most dens are on land, within 16 km (10 mi.) of the coast. In some areas, dens are more than 100 km (62 mi.) from the coast. A few polar bears make dens on the sea ice.
- Den elevations range from sea ice level to 548 m (1,800 ft.) above sea level.
- Most dens consist of a single chamber slightly elevated from a short entrance tunnel, but they can be complex with several chambers. On average, the chamber is 2 m (6.6 ft.) long, 1.5 m (4.9 ft.) wide, and 1 m (3.3 ft.) high, not much bigger than the bear. Polar bears maintain a ventilation hole through the chamber ceiling to provide fresh air.
- Because of the bears' body heat and snow insulation, the den stays warmer than the outside air temperature. Scientists are now using this heat to detect bears with forward-looking infrared technology (FLIR).

Birth Seasons

Polar bear cubs are born November through January in a den. Mother and cubs emerge from their den in late March or April.

Frequency of Birth

- Most adult females give birth once every three years. In populations with access to abundant food, birth occurs once every two years.
- The most frequent litter size is two, followed by litters of one. Litters of three are less common than twins or singles, and litters of four are rare.

Cubs at Birth

- At birth, polar bear cubs weigh about 454 to 680 g (16-24 oz.) and are about 30 cm (12 in.) long. Males are born slightly larger than females.
- Polar bear cubs are born small and helpless, with their eyes closed.
- The fur is very fine at birth, making the cubs look hairless..

Care of Young

Nursing

- Female polar bears have four mammary glands. Mothers nurse their cubs in a sitting position, or lying down on their side or back.
- During their first few weeks of life, polar bear cubs nurse most of the time and stay close to their mother to keep warm.
- For the next three or four months the cubs nurse as often as six times a day. The length and number of nursing bouts gradually decreases as the cubs grow older.
- Mother polar bears nurse their cubs for as long as 30 months. Some cubs stop nursing as young as 18 months of age, but remain with their mothers for survival until they are 30 months old.
- The average fat content of polar bear milk is 33%, similar to the milkfat of other marine mammals. For comparison, human milk has a 3-5% fat content.

Mother polar bears are extremely protective of their young, even risking their own lives in their cubs' defense.

Cub Growth and Development

- Cubs open their eyes within the first month.
- The cubs begin walking while in the den at about two months. By this time, they also have thick, whitish fur and their teeth have erupted.
- By the time the mother and cubs emerge from the den in late March or April, the cubs weigh 10 to 15 kg (22-33 lb.).
- Mother and cubs remain around the den for about 12 more days, sometimes longer.
 - This enables the cubs to acclimate to the colder weather and develop their walking muscles.
 - During this time the cubs still spend about 85% of their time in the den, sleeping there at night.

- When ready, the mother polar bear leads her cubs to sea ice. Travel is slow with frequent rest and nursing stops. A mother sometimes carries her cubs on her back through areas of deep snow or water.
- Cubs begin eating solid food as soon as their mother makes her first kill on the sea ice (about three to four months of age).
The cubs grow quickly on their mother's fat rich milk and on seal blubber. By eight months of age, they weigh more than 45 kg (99 lb.).
- Polar bear cubs learn to hunt by watching their mother. Cubs try hunting in their first year, but don't seem to be successful until they're over one year old. Even then, they only spend about 4% of their time hunting. By the time they're two years old they spend about 7% of their time hunting and can catch a seal every five or six days.
- When her cubs are about 30 months old, a female polar bear is ready to breed again. At this time, an adult male may begin following her. Either the mother bear or the male chases away the cubs.
- **Polar bear milk** is 31 to 35% fat. (Cow **milk** is 4% fat). Most cubs are nursed until they are two years old, though some are weaned after their first year. ... **Polar bears** can weigh 50% more at the end of the good season (seal hunting) than they do at the end of summer (lean times – seals out at sea).

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