

The anatomy and feeding of the bottlenose dolphins

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The Bottlenose Dolphin is a species of dolphin and is part of the kingdom animalia, they are vertebrates because they have backbones, they are multicellular, and depend on respiration for energy. They are in the phylum Chordata because they have a backbone, they belong to the class Mamalia, which is for all mammals. Dolphins are mammals because at some point in their lives they obtained hair, nurse their young with milk, can regulate their body temperature (warm-blooded), breathe air, and give live birth. They are in the order Cetacea, which is the place where whales, dolphins, and porpoises are placed; their suborder is Odontoceti indicating that dolphins have teeth.

Bottlenose Dolphins are classified in the family of Delphinidae consisting of all oceanic dolphins; their subfamily is Delphinae, members of this subfamily are medium sized ocean dolphins who have a rostrum or beak. The Genus is where all species of Bottlenose Dolphin are placed, which is Tursiops, there are different species and subspecies of Bottlenose Dolphins: Common Bottlenose Dolphin, Indo-Pacific Bottlenose Dolphin, and the Lagoon Dolphin. The Species of the Bottlenose Dolphin is Truncatus, and the full scientific name for the Common Bottlenose Dolphin is Tursiops Truncatus.

Bottlenose dolphins have a symmetrical body. More specifically, they have bilateral symmetry. A bilateral symmetry is found in organisms that can have a line drawn to divide the organism into two identically mirrored halves. Yes tissues are present in Dolphins. Their skeletal elements are supported by connective tissue and cartilage pads. The dorsal fin is used for balance.

Flukes are flattened pads of tough, dense, fibrous connective tissue,

completely without bone or muscle. Each lobe of the tail is called a fluke. The dorsal fin is constructed the same as the pectoral fins, dense fibrous connective tissue, with no bones. There are three germ layers in dolphins, animals with three germ layers are called triploblastic. The first germ layer is the ectoderm, which is the outermost layer, covering the surface of the embryo, gives rise to the outer covering and, in some phyla, to the central nervous system.

The endoderm, the innermost germ layer, lines the pouch that forms during gastrulation and gives rise to the lining of the digestive tract or cavity and the liver and lungs of vertebrates. A third germ layer, the mesoderm, lies between the endoderm and ectoderm, the mesoderm develops into the muscles and most other organs between the digestive tube and the outer covering of the dolphins.

Bottlenose Dolphins have a thoracic cavity (or chest cavity) is the chamber of the body of vertebrates that is protected by the thoracic wall (rib cage and associated skin, muscle, and fascia). The central compartment of the thoracic cavity is the mediastinum. Vertebrates, which include dolphins, have the dorsal body cavity, it is a fluid filled space which surrounds the brain and spinal cord, the dorsal cavity is usually considered as two semi-separate spaces, the cranial cavity and the spinal cavity, housing the brain and spinal cord, the thoracic cavity (or chest cavity) is the chamber of the body of vertebrates that is protected by the thoracic wall (rib cage and associated skin, muscle, and fascia). The central compartment of the thoracic cavity is the mediastinum.

The pelvic cavity is a body cavity that is bounded by the bones of the pelvis. Its oblique roof is the pelvic inlet (the superior opening of the pelvis). Its lower boundary is the pelvic floor. The pelvic cavity primarily contains reproductive organs, the urinary bladder, the pelvic colon, and the rectum. The abdominal cavity contains a number of crucial organs including the lower part of the esophagus, the stomach, small intestine, colon, rectum, liver, gallbladder, pancreas, spleen, kidneys, and bladder. In gastrulation, the endodermal cells go through the interior of the embryo until they reach the other side, creating a continuous tract through the embryo; the archenteron, or embryonic gut, the blastopore becomes the embryo's anus.

Dolphins are aquatic mammals which means they need to breathe in air to survive. They evolved from land mammals and as a result, they move their tails up and down to swim. Dolphins are warm-blooded and their blubber keeps them warm, they give live birth to one baby every 1-6 years and breast feeds them milk. There are 38 types of oceanic dolphin species and 4 river dolphin species. Some species are confused as whale but are actually dolphins such as; Pilot Whales, Killer Whales (Orcas), False Killer Whales, and Melon-headed Whales. All of their sizes range from 5. 6ft-31ft.

Dolphins live in the world's oceans and seas, Orcas are the only dolphins that reside in the Arctic and Antarctic's southern oceans, there are also dolphins that live in freshwater like the Amazon River Dolphin, South Asian River Dolphin, Tucuxi, Guiana Dolphin, Irrawaddy Dolphin, and the Finless Porpoise. Most toothed whales feed on various types of fish or squid. The various species of toothed whales have long rows of sharp teeth, suitable for

grasping quick-moving prey. They do not chew their food, but swallow it whole, using muscles at the back of their tongue and throat to squeeze the salt water out and the fish down.

Bottlenose dolphins are the largest of the beaked dolphins. There is a definite crease where the rostrum (snout or beak) joins the melon. Their bodies are dark gray on the back and sides, fading to a pinkish white belly underneath. Their dorsal fins are often falcate, curving slightly to the back. Pectoral fins and flukes are pointed at the tips. The natural diet of the bottlenose dolphin seems to vary according to its home region. Open water pods tend to feed mostly on pelagic fish, such as blue whiting, cod fish, and squid. Those found in coastal Atlantic waters feed on mullet, herring, smelt, capelin, catfish, eels, shrimp, and other crustaceans.

In the Indian Ocean, dolphins will be more likely to feed on coral reef dwelling fish and mullet. Haddock, anchovies, and mackerel also seem to be favorites of some populations. Bottlenose dolphins seem to work together during feeding as well as while searching for fish. Small groups may converge on a central point by porpoising to that point, and then bunching fish up together in the center. Groups have been observed moving synchronously in a U-shaped formation towards other individuals, trapping the fish in between. At times, individuals may dive down and herd a school of fish upwards by swimming around and under them, tightening the circle until the fish are forced to the surface where the rest of the pod is waiting to feed.