

## Mosquito anatomy

Mosquito's body has typical insect body structure and consists of three basic parts: head, thorax, and abdomen.

- whole body

- head

the head is specialized for acquiring sensory information and feeding; the head contains the eyes, a pair of long segmented antennae, proboscis, and two sensory palps

- antenna

the antennae are important for detecting host odors as well as odors of breeding sites where females lay eggs

- ocellus

pl. **ocelli**; also called **simple eye**

- compound eye

the eye consists of one to thousands of **ommatidia** which are tiny independent photoreception units that consist of a cornea, lens, and photoreceptor cells

- brain

complex of six fused ganglia (three pairs) located dorsally within the head capsule; each part of the brain controls

(innervates) a limited spectrum of activities in the insect's body

- **thorax**

the thorax is specialized for locomotion; three pairs of legs and a pair of wings are attached to the thorax; thorax consists of **prothorax**, **mesothorax**, and **metathorax**

- **prothorax**

the foremost of the three segments in the thorax; bears the first pair of legs

- **salivary gland**

the paired salivary glands are present in the thorax flanking the oesophagus; the salivary glands (i) facilitate blood feeding, (ii) transmit parasites, (iii) produce chemicals for completion of parasite life cycle, (iv) have probable receptors for recognition of sporozoites

- **abdomen**

the abdomen is specialized for food digestion and egg development

- **midgut**

**mesenteron**; middle part of alimentary canal; **stomach**; the malarial parasite sporozoites burst out of the midgut-stage oocysts into the hemocoel (an open

circulatory system) to locate and invade salivary glands of blood-sucking female prior to transmission to a vertebrate host

- **hindgut**

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- **fat body**

chalky globular structure, which works somewhat like a liver by metabolizing and storing carbohydrates, lipids and proteins; it was suggested that fat body regulates mosquito host-seeking behavior and is considered the main immune organ in insects; fat body tissues are widely distributed and believed to be regionally specialized

- **hemocyte**

a cellular component of the blood



