a combination of sugar and amino acid played a rôle in the absorption of these two substances from a mixture. If this were the case, for each molecule of sugar one molecule of amino acid should be absorbed, irrespective of the molecular proportion in which sugar and amino acid are present in the mixture. However, the experiments did not bear this out. For molecular proportions of mixtures of glucose and glycine of 1:1, 1:0.86, 1:0.6 and 1:0.5, the molecular proportion of absorption was 1:0.96, 1:0.89, 1:0.57 and 1:0.52 respectively. In other words, the molecular proportion of absorption is parallel to the molecular proportion of the mixture. These findings make it very likely that sugars and amino acids are absorbed at the same place of the cell structure.

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Fiber Connections and Functions of the Corpus Striatum in the Cat.

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A destructive lesion was placed in the left lenticular nucleus of forty cats. These animals were allowed to live from 9 to 11 days and their symptoms carefully observed. The 15 brains containing the best lesions were then prepared by the Marchi method for degenerated nerve fibers.

The following efferent fiber systems were found to have their origin in the *globus pallidus:*

1. A lateral strio-bulbar fasciculus, closely associated with the lateral cortico-bulbar tract, is composed of (a) a primary, homolateral division to the masticator, facial and ambiguous nuclei; (b) a secondary division to the trochlear, abducens, and hypoglossal nuclei of both sides; (c) a crossed division decussating with the *brachium conjunctivum* to reach the masticator, facial and ambiguous nuclei of the opposite side.

2. A strio-tegmental fasciculus terminates in the interstitial nucleus of Cajal, the nucleus of Darkschewitsch, and the oculomotor nucleus of the homolateral and perhaps also of the opposite side.

3. A large fasciculus of fibers terminates in the intrapeduncular nucleus of Malone (motor division of the *substantia nigra*), and the peripeduncular nucleus of Jacobsohn.

4. A group of fibers passes to the anterior, and another to the posterior part of the *substantia reticularis hypothalami* of Malone (nucleus of Forel's field) of the homolateral side.

5. Many fibers terminate in the subthalamic nucleus of Luys.

6. Many fibers pass to cells in the region medial to Forel's field H_2 (Mammilo-infundibular nucleus of Malone), of the same and opposite sides.

7. Fibers pass through Meynerts commissure to the *globus pallidus* and a few to the region of Forel's field H_2 of the opposite side.

These fiber systems are identical with those found in a study of seven human brains with degeneration in the lenticular nuclei.

A lesion involving the medial division and the ventral part of the lateral division of the *globus pallidus* of the left side was followed by:

1. Left circus movements accompanied by an extreme hypertonicity of the muscles of the left side of the body.

2. A general hypertonic, restless condition affecting all muscles of the body.

3. Constriction of the left pupil.

4. Athetosis in some cases and occasionally tremor.

These symptoms disappear within eight to ten days (except the pupillary constriction) and the muscles that were previously hypertonic become somewhat hypotonic.

A lesion in the dorsal part of the putamen and lateral division of the *globus pallidus* is followed by voice disturbances, and marked difficulties in taking, chewing and swallowing food. These difficulties are at first (8 to 10 days) due to a spasticity of the muscles, but later to a hypotonic condition of the same muscles.

The early symptoms are believed to be irritation symptoms, while the later hypotonic condition is considered to be due to a true absence of function of parts of the *corpus striatum.*

The *corpus striatum* in fish, reptiles, birds and mammals is fundamentally a feeding mechanism. It is concerned with taking, masticating and swallowing food as well as the general body movements essential to searching for and obtaining food, or the pursuit, capture and killing of prey. It may also be concerned with the mating instincts, flight and defense reactions, and some of the more phyletically ancient behavior of the animal as suggested by several investigators.