Posture and Locomotion Encyclopedia Article

Posture and Locomotion

The following sections of this BookRags Literature Study Guide is offprint from Gale's For Students Series: Presenting Analysis, Context, and Criticism on Commonly Studied Works: Introduction, Author Biography, Plot Summary, Characters, Themes, Style, Historical Context, Critical Overview, Criticism and Critical Essays, Media Adaptations, Topics for Further Study, Compare & Contrast, What Do I Read Next?, For Further Study, and Sources.

(c)1998-2002; (c)2002 by Gale. Gale is an imprint of The Gale Group, Inc., a division of Thomson Learning, Inc. Gale and Design and Thomson Learning are trademarks used herein under license.

The following sections, if they exist, are offprint from Beacham's Encyclopedia of Popular Fiction: "Social Concerns", "Thematic Overview", "Techniques", "Literary Precedents", "Key Questions", "Related Titles", "Adaptations", "Related Web Sites". (c)1994-2005, by Walton Beacham.

The following sections, if they exist, are offprint from Beacham's Guide to Literature for Young Adults: "About the Author", "Overview", "Setting", "Literary Qualities", "Social Sensitivity", "Topics for Discussion", "Ideas for Reports and Papers". (c)1994-2005, by Walton Beacham.

All other sections in this Literature Study Guide are owned and copyrighted by BookRags, Inc.



Contents

Posture and Locomotion Encyclopedia Article.....1

Contents.....2

Posture and Locomotion.....3

Posture and Locomotion

Walking on two legs, or bipedal locomotion, was adopted by our ancestors millions of years ago, and was among the earliest features distinguishing the hominid line from the apes. Bipedal locomotion was an adaptation to life on the African plains, where food sources were widely scattered. It allowed the ability to move from one place to another while holding things at the same time. It also provided a higher vantage point from which to scan the area for predators.

While advantageous in many ways, the upright posture is inherently unstable, like a two-legged stool. Over time, **evolution** has brought changes to the human musculoskeletal system, especially the pelvis and lower limbs, to help balance and support the mass of the body with a minimum expenditure of energy. These include powerful and bulky leg muscles, and a wide pelvic girdle to support the body's weight and transmit it to the lower limbs.

Humans employ a plantigrade gait, in which the entire sole of the foot is placed on the ground. The heel strikes the ground first, followed by the rest of the sole. The ankle and toes are then flexed, pushing off to provide forward motion. Meanwhile, the other leg is off the ground. It raises, swings forward, and is planted on the ground to continue the cycle.

Because the body's center of gravity generally falls between the two feet, every time we lift a foot to take a step, we create even more instability for our musculoskeletal system to handle. It does this by shifting the body's weight over the supporting leg using the hip abductor muscles.