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I used a computer simulation model of aerial movement to investigate the techniques for producing and controlling rotations of the human body during free flight. I found that the rotational motion can change from a twisting somersault to a nontwisting somersault by flexing at the hips at a suitable time. Twist may be produced in the aerial phase by means of asymmetrical movements of arms or hips, which result in a tilting of the longitudinal axis away from the plane perpendicular to the angular momentum vector. Asymmetrical movements may also remove the tilt and stop the twist. Elite performances of twisting somersaults are characterized by a large contribution from aerial twisting techniques. A progression of movements is presented for learning a double somersault with one and a half twists in the second somersault.