



**motosafe**

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## Sit Up Straight

Posture techniques for safe riding...

**R**emember when your Granny admonished you at the dinner table, to, "Sit up straight and eat your broccoli!?" Granny had your welfare in mind, and perhaps we can learn a riding-lesson from her. Let's think about good riding posture, both in a straight path, and while cornering. Please note that these comments apply mainly to riders of standard configuration motorcycles, including most sport touring and dual-sport bikes. Riders of bikes near the polar extremes, pure sport bikes, and cruisers, will find that much of this discussion applies to them, as well, with certain modifications. Also, these ideas regarding posture apply to street-riding practices; riders who enjoy closed-course riding - track-days and track-schools - will modify their posture for the track. Remember that responsible riders keep the track stuff for the track, and keep it off the street!

**HEAD and EYES UP:** Good riders know the value of keeping the eyes up, looking forward as we search for hazards while viewing the entire upcoming path of travel. The posture prescription is keeping *both* head and eyes up, eyes near the center of the eye-socket. It appears that kinesthetic activity causes our muscles to react to head-positions near as much as eye-position. Using our head to 'aim' our eyes, both up near the horizon, and around corners, seems to enable our muscles to respond with much finer control and confidence.

Think of your face as having a very pointy chin. You can explore this idea by holding a pen or pencil up, underneath your chin with a thumb, tip pointing forward from under your chin. The 'pointy' end of your chin should be aimed at the horizon while riding. This forces the head upward, which helps keep eyes looking

forward and up, rather than drifting down. Head and eyes looking forward and up - aiming your eyes with your head and your 'pointy-chin' - helps promote a greater sense of balance, as well as enabling the eyes to feed the brain all of the visible information about the upcoming path of travel. The information comes all at once rather than in a series of incomplete installments. The good news is that your brain can normally and easily figure out reasonable and realistic solutions to your traffic and riding problems, as they continually occur, when it receives all of the currently available information at the same moment! Getting information on the installment plan is a prescription for disaster.

**BACK STRAIGHT:** Actually, good straight-line-and-cornering riding posture requires a slight arch in the riders' back. Think of beach boys and bathing beauties preening on the sand; they have an arch in their back, with their shoulders pulled back slightly. Riding with this back posture places slightly more body weight on the forward portion of the hip joints, and spreads weight out over a greater area, reducing fatigue. As the back is arched, the hips are rotated slightly forward, and

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less body weight is placed directly on the tailbone. Shoulders, while pulled back slightly to hold this posture, should be generally relaxed, but should not slump forward. While good riding posture includes a straight back, it may be necessary to lean forward slightly, at the waist, to keep the...

**ELBOWS SLIGHTLY BENT:** Frankenstein's monster is dead, so let's keep him that way! A bend in the elbows, or keeping the elbows 'cocked,' enables a rider to confidently and precisely execute the countersteering press on the inside handgrip while cornering or executing obstacle-avoidance swerves. Generally, the more bend in the elbow, the greater cornering confidence a rider will enjoy. A well-cocked set of elbows also enables the rider to keep the upper elbow, the one on the outside of the turn, limp and relaxed. As discussed above, it is often necessary to bend the torso forward, from the waist, while keeping the back straight and slightly arched. Riding with elbows straight and locked, is prone to initiating lean for turning with torso-contortions, which include twisting the torso to generate countersteering press, a most imprecise and slow technique. Riding like this will leave you with little ability to swerve quickly when it becomes necessary, and you may feel uneasy while cornering aggressively.

**SOFT HANDS, WRISTS FLAT:** As Jim Ford discussed several months ago, soft hands promote not only greater comfort and endurance, but enable the rider to receive almost imperceptible and minute feedback from the motorcycle. Keeping the right (throttle) wrist flat with the knuckles, or wrist lower than the knuckles, enables automatic throttle roll-off as the front brake is operated, and eliminates unplanned, sometimes frightening,

throttle modulations that a curved wrist causes.

**KNEES NEAR or AGAINST THE TANK:** Elvis is also among the dearly departed, and there's no sense trying to resurrect him, either. Ideally, a rider will keep the knees in contact with the tank, although some tank-and-seat configurations may cause a rider to modify the knee position slightly. Keeping the knees in, near the center plane of the chassis and in contact with the tank, promotes a sense of oneness with the motorcycle, and eliminates the side-to-side hinge effect between the buttocks and motorcycle seat that leads some riders to counter weight (lean outside the vertical plane of the motorcycle's chassis) while cornering; poor technique indeed! Track day techniques of hanging the inside knee or hanging off add little-to-nothing in the way of control while riding at responsible street-riding speeds. Yeah, it looks good, but is of questionable benefit to the street-rider.

**BALL-OF-THE-FEET ON FOOTRESTS:** Normally, we should not be covering the foot controls – rear brake and gearshift lever – unless transiting risky areas like intersections. Keeping the balls of the feet on the footrests keeps the toes near the controls, and at the ready, but prevents a rider from touching a foot down, unexpectedly, while cornering. Even a lane change can be a risky event for the rider whose heels are on the footrests, toes hanging down near the pavement. Ever catch a reflective Botts-Dot with toe? Ouch! Keeping the foot on the footrest generally places greater body weight on the footrests, slightly lowering the composite center of gravity. As some body weight is supported by the footrests, less is suspended on the buttocks and upper thighs, increasing comfort and endurance.

**CORNERING POSTURE:** While cornering, maintain the good posture described above, but consider these modifications. Two cornering-posture basics include keeping the elbows slightly bent, and leaning the torso very slightly inside the vertical plane of the motorcycle's chassis.

Here's an easy-to-remember tip to promote this position. Think about leaning the torso toward the inside handgrip when approaching a corner from a straight line of travel. Not much, just two or three inches. This accomplishes two

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things at one time. First, it will increase the bend in the elbows, particularly the inside, or 'turn side' elbow, the one you will use to execute the countersteering press. Second, moving the torso toward the inside handgrip will rotate your body weight slightly to inside of the bike's vertical plane. You can feel this effect by noticing that most of the weight on the buttocks and upper thighs is now supported by the inside (turn-side) hip joint.

While cornering, particularly with enthusiasm, try sliding forward as far as is comfortable on the seat; doing so will increase forward weight bias slightly, improving front tire traction, and, more importantly, moving the all-important line of vision forward on the motorcycle. From this position, the eyes 'see' less of the motorcycle, and more of the upcoming path of travel. It appears that the brain is much more confident about cornering when it sees mostly the road to come, instead of the mass of motorcycle it must try to control. If you find that you habitually turn in early (press too soon) while cornering, try moving the head and eyes forward. You will probably feel much better about turning in a tad later, and driving out of the corner with a great deal of comfort and confidence.

Moving the torso forward and slightly to the inside at something like a 45-degree angle also places the head and eyes in a position inside the vertical plane of the bike. Of course, that plane tilts as the chassis tilts while cornering. Our brains seem to be much more comfortable and confident while cornering if our head is 'inside the bike,' rather than to the outside. Research shows that a high percentage of riders tend to counter-weight (lean the torso away from the turn) while cornering. Research reveals that the average rider leans the torso approximately two-thirds as much as the bike is leaned. In other words, if the motorcycle is leaning over at a 30-degree angle, the average rider's torso is leaning at only 20 degrees, placing the head and eyes to the outside of the motorcycle as it transits a turn. This very poor posture leads the rider to feel increasingly uncomfortable; particularly should the radius decrease and the turn tighten up. In addition, the rider may use up the ability to perform the countersteering press as the inside arm straightens out. The rider has the feeling the he or

she is pushing away from the motorcycle and running out of press. Motorcycle-lean is also and unnecessarily increased, consuming tire traction for no good reason. So, as the corner is approached and a good entry speed is established, think about leaning your chest toward the inside handgrip, just before initiating the counter steering press. You may well enjoy a feeling of increased cornering comfort and confidence.

Skilled cornering posture also requires that the rider point their "pointy-chin" in order to aim the eyes at the exit of the turn, at the point where the pavement actually disappears or the road becomes straight. They point their chin all the way, right away, and continue this crucial posture position throughout the turn or curve. Of course, the rider will actually unwind the head turn as we approach the turn's end. So, pointing the chin at the beginning of a turn is a fairly abrupt or deliberate movement, while the unwind is much slower and progressive, depending on the radius of the present turn.

Granny *did* have your welfare in mind; good posture can improve your moto-experience, your abilities and confidence, as you make good riding posture a habit. As for the broccoli, well, that's up to you, although a nice fresh stalk, quickly steamed and still crisp, garnished with a tangy cheese sauce, makes a nice side dish for your end-of-the-ride New York strip. Ride safe, ride often and sit up straight! ●

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