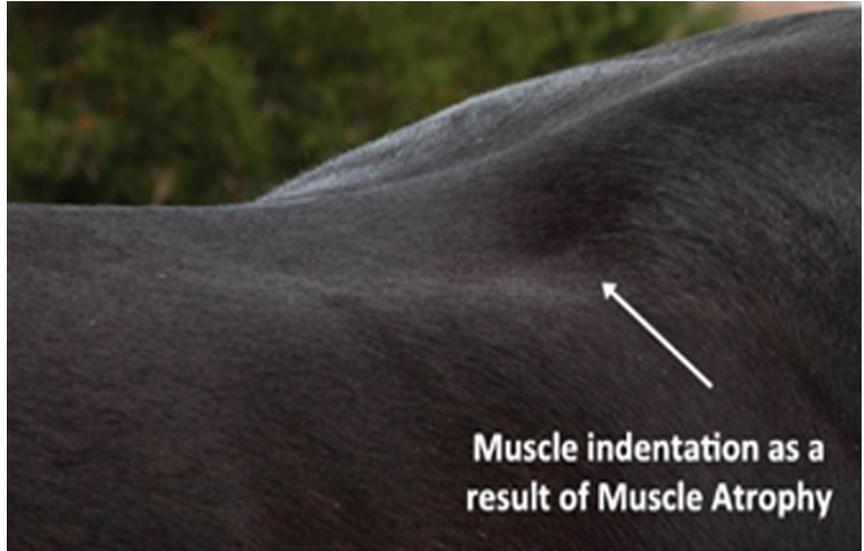


# What Exactly is Muscle Atrophy and How Does it Differ from Muscle Definition?

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*Photo shows muscle atrophy at the loin area - paradoxically caused by an incorrectly fitted gullet plate, which seated the rider too far back and creating excessive pressure in this area. This may also happen if the panel is too long.*

**A** When a muscle has been trained for more than it would have normally developed naturally, and then not used for a while, it will naturally 'atrophy' back to its normal shape. It takes four times longer to develop a muscle than it does to lose muscle, which is why illness resulting in bed rest can have such a drastic effect on your muscles.

Muscle atrophy also occurs when an unbalanced saddle puts too much pressure on a particular muscle, and the horse tries to avoid this pressure. He goes into 'defensive mode' by contracting the muscle in the area (as well as the surrounding muscles) and can even alter his gaits. Under the point of pressure where circulation is impacted (thus reducing nutrients and oxygen to the affected area) the muscle will 'undevelop' or atrophy. As explained by veterinarians,

atrophy will occur under severe instances of constant pressure which will first damage the hair follicles (resulting in hair loss and/or white hair). This can be reversed only when the cause is addressed (i.e., the pinching saddle), which will allow the muscle to regrow although the white hairs remain. Muscle memory will help in the rebuilding of atrophied muscles if these were properly trained. It will take significantly longer to build up untrained muscles or incorrectly trained muscles.



*Abnormal muscle development caused by a saddle that was too long.*

Muscle definition can actually be a form of atrophy – but it is negative definition in this sense. Positive definition is development of muscular conformation as expected during proper training; negative definition happens when defensive contraction occurs to counteract a poorly fitting saddle. This negative muscle definition is considered 'hypertonic' which means the contraction phase of the muscle(s) is unnaturally long and in a state of abnormal tension. This results in tight, cramped, and painful muscle development – which can look like atrophy.



*The trapezius muscle can be inflamed from an incorrectly angled tree point/gullet, resulting in this bulge and nearby hollow behind the withers.*

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