Vitamin E and selenium belong to the micro components in animal NUTRITION. They act as anti-oxidants, which means they support the oxidative stability of lipids in the cell membrane and thus protect cells from peroxidative damage caused by free radical activity. By supplementing vitamin E and selenium it was demonstrated that placental retention, metritis and ovarial cysts in cattle can be reduced. The aim of the present study was to examine the relatively unknown effects of vitamin E and selenium supplementation (prior and post partum) on udder health, using a meta-analysis.

In total 1843 publications were found related to this subject and 19 of these were included in the meta-analysis. By supplementing vitamin E and selenium the mean relative risk for MASTITIS was reduced by 34%. The effect was stronger (~40%) when supplementing selenium on its own, in comparison to supplementing vitamin E on its own (~30%).

On average, the somatic cell count was reduced by 24,000 cells per ml milk, when supplementing with vitamin E and selenium. The milk yield was significantly increased (on average +1.0 kg milk per animal and day). The effect of vitamin E was considerably higher than the one of selenium (on average +6.5 kg vs. +0.4 kg milk). A pre- and postpartal supplementation of vitamin E and selenium is therefore advisable.