The value of the central density is of key importance for annihilation processes. For the ground state we discuss its determination from the moments of the ground state density. We first review the way of reaching the moments from the spectrum. In particular we show how to get the lowest moments in D = 3, namely $\langle r^2 \rangle$ and $\langle r^{-1} \rangle$ from the series expansion of the Laplace transform of the density. We then recall a method to obtain the central density based on the Stieltjes moment problem. If the number of known moments is finite, this technique yields a lower bound. We investigate the possibilities to estimate the accuracy of the bound and the corresponding asymptotic value. An application to the muonic 208Pb atom is presented