**Background**: Anabolic androgenic steroids (AAS) are testosterone derivatives compounds. They are illegally self-administered by gym visitors to increase their muscle size and strength. AAS abuse is linked to several adverse side effects such as cardiovascular system disorders, nervous system disorders, liver toxicity, lung disease, and reproductive system dysfunction. Although the illegal use of AAS is common, the knowledge about self-administered AAS to improve body fitness is poorly documented. **Methods**: The cross-sectional survey was designed to assess the spread of AAS and the most adverse effects of steroid abuse among gym attendees in Basrah City from January 2024 to April 2024. The online questionnaire consisted of three sections: demographic information, investigated knowledge of AAS, and steroid regimen information. **Results**: Out of 222 participants, who responded to the questionnaire, 74.8% of the participants did not use AAS and only 25.2% used AAS. Interestingly, the use of AAS was increased at 15-20 years of age (43.7%). The major source of recommendation for AAS was friends (58.9%) and the major purpose for using AAS is to increase muscle mass. Close to 100% of steroid users surveyed had adverse effects risks and these effects increased with the early and prolonged use of steroids. **Conclusions**: The prevalence of AAS use was 25.2% among males. The majority of AAS users were younger, less educated and non-athletes. They only used AAS to improve their physical appearance. The illegal use of AAS is a reality in Basrah and causes major health risks among young adults and adolescents. Therefore, educational programs are needed to warn adolescents and increase public awareness about the harmful effects of AAS abuse.