

# Why Is Goiter Depicted So Often in Early Classical Paintings?

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Thyroid gland enlargement, commonly known as goiter, appears frequently in classical and Renaissance paintings, capturing the attention of scholars across art history, endocrinology, and medical history. This condition was prevalent throughout history and became a recurring artistic motif from the Hellenistic period onward. Artists often depicted models, particularly women, with visibly enlarged thyroids during the Middle Ages and Renaissance, reflecting the high prevalence of goiter in the general population. In addition, during this period, a fuller neck was considered a sign of high social status, which significantly influenced the portrayal of women in art. As artistic styles evolved toward more faithful and less idealized representations, especially in portraits of identifiable individuals, the depiction of both diffuse and nodular goiter became increasingly pronounced. Notably, the thyroid's function was not yet understood at that time, and goiter or neck swelling had not been recognized as originating from the thyroid gland [1].

To investigate the extent of this phenomenon, researchers conducted a study to determine the prevalence of goiter in individuals depicted in European Renaissance paintings [2].

**Figure 1.** A close-up on a maid (left side), with a prominent multinodular goiter in *Judith Beheading Holofernes* by Caravaggio (1571–1610)



**Figure 2.** The painting features a lady with diffuse goiter (left) in the masterpiece *Judith and her Maidservant* by Artemisia Gentileschi (1593–1656)



The study examined 2000 randomly selected paintings by European Renaissance artists. Two independent reviewers assessed each painting for the presence of goiter, and only cases in which both reviewers agreed were considered positive. Disagreement occurred in only three cases, which were excluded from analysis. Most paintings were examined through reproductions, introducing potential bias, as palpation remains the most effective method for the clinical diagnosis of goiter. The study determined that goiter prevalence in these artworks was 10%, attributed to iodine deficiency, which was widespread in many European regions during that era.

One of the most impressive Renaissance artworks depicting goiter is presented here [Figure 1]. The canvas, *Judith Beheading Holofernes*, was discovered in a sealed-off section of an attic near Toulouse, France, which was accessed during repairs for a water leak in 2014. The painting depicts the biblical figure Judith decapitating Holofernes, as described in the apocryphal Book of Judith. A preliminary investigation attributed the painting, likely created in Rome or Naples between 1604 and 1605, to the Italian master Caravaggio (1571–1610). A close-up of the maid on the left side prominently displays a multinodular goiter [3]. The painting is displayed in the Museo Pignatelli, Naples, Italy.

Another notable painting of a woman with goiter merits description [Figure 2]. This masterpiece, *Judith and Her Maidservant* by Artemisia Gentileschi, an Italian Baroque painter (1593–1656), features

a lady with diffuse goiter. The painting is displayed in the Palazzo Pitti, Florence, Italy. Gentileschi was the first woman to become a member of the Accademia di Arte del Disegno in Florence and enjoyed an international reputation [4]. She was one of the most important female painters of early modern Europe and is now regarded as a heroine among feminists. Interestingly, a close-up of the painting reveals that on Judith's sword is the image of a gorgon, a symbol of the power of the violated feminine. Like Figure 1, this painting depicts the key episode from the Book of Judith in which Judith, the brave widow, accompanied by her apprehensive maidservant, charms the Assyrian captain Holofernes, decapitates him as he sleeps, and in doing so saves her city of Bethulia and the kingdom of Judea from the Assyrians [5].

What accounts for the frequent appearance of goiters in early paintings? Most researchers attribute this phenomenon primarily to the widespread iodine deficiency of that era. Many early artworks were produced in regions where goiter was endemic, particularly in parts of the Alps, northern Italy, and southern Germany, where dietary iodine deficiency was prevalent. Artists painted what they observed, so the appearance of goiter in art likely reflects the actual characteristics of the population [6]. From the Renaissance onward, there was a strong emphasis on naturalism and anatomical accuracy in art. Artists such as Leonardo da Vinci, Michelangelo Buonarroti, Andreas Vesalius, Albrecht Dürer, and Raphael

conducted careful studies of human anatomy. If a model presented with goiter, it would likely have been included as part of a faithful representation of the subject's features.

Some scholars argue that goiters were not always viewed as pathological but rather represented stylistic choices to convey strength, maturity, or fertility. A fuller neck might have been associated with robustness or beauty, particularly in women [1]. While modern medicine regards goiter as a sign of disease, earlier periods may have carried less medical stigma around the condition, especially in endemic areas. Consequently, it may not have been considered inappropriate for artistic representation.

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**The problem with being sure that God is on your side is that you can't change your mind, because God sure isn't going to change His.**

Roger Ebert (1942–2013), American film critic, film historian, journalist, essayist, screenwriter, and author