

Body positions of ancient Egyptians

Abstract

Ancient ordinary Egyptians were assuming mostly standing, walking, sitting on the ground positions of the body. Only gods or pharaohs were presented as sitting on chair. This is in contrast to current people who assume often sitting position during their work, traveling by car, sitting in front of a television set.

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Introduction

Being in contemporary Egypt one can see several historical artefacts presenting body positions of ancient Egyptians. The author visited five places, namely:

- 1) Egyptian Museum in Cairo,
- 2) Accommodation of an ancient engineer in Giza,
- 3) Karnak Temple in Luxor,
- 4) The Temple of Queen Hatshepsut,
- 5) The Valley of the Kings.

As it is today, ancient Egyptians assumed body positions as follows:

a) standing, b) walking, c) kneeling, d) leaning on four limbs, e) sitting on the ground, f) sitting on the chair.

Standing was very common in ancient Egypt comparing to contemporary time where sitting is very common. Gods and pharaoh were presented usually in standing or sitting positions on a throne. Pharaoh had his crossed upper extremities positioned near the chest and holding king's insignia. (Figure 1)



Figure 1 God Amun in standing and sitting positions (a and b) and also pharaoh and pharaoh and his wife in standing and sitting positions (c and d).

It is interesting that no other person was depicted in a sitting position on a chair except of the god or pharaoh. Other people were presented in sitting positions on the ground or on the pillow. Still other were during standing and walking positions, e.g. people walking with gifts or marching soldiers. (Figure 2)



Figure 2 Ancient people during marching barefoot activity:

(a) a procession of people with gifts, (b) marching soldiers with fighting gear.

From the biomechanical point of view one can notice the step length of ancient people is of a high value. In both frescos a step length is about lower extremity's length. It is hard to say is it from reality or just artist's vision. When looking at present marching soldiers a step length is about 80 % of lower extremity's length. In addition, ancient soldiers marched barefoot, and contemporary soldiers use heavy boots.¹ (Figure 3) Only in special situations contemporary people have very long step, e.g. when they are in a hurry or they take part in a sport competition.



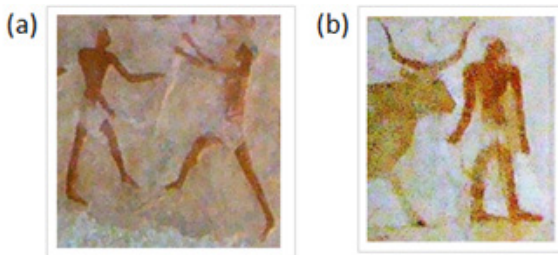
Figure 3 Contemporary soldiers during marching activity.¹

Some educated people who were employed as writers assumed sitting position on the pillow put on the ground with lower legs directed towards centre.² (Figure 4)



Figure 4 Writers assumed sitting positions on the pillow put on the ground.²

During other everyday activity, e.g. during household or agriculture work people assumed different positions depending on the



need. (Figure 5 and 6)

Figure 5 Household and agriculture activity:

(a) standing in special way while working with a sheet of a fabric, (b) walking



with an animal and holding a rope.

Figure 6 Different body positions found on the wall of Giza apartment of ancient engineer; contours by author.

During still other work, e.g. during producing a pottery, ancient Egyptian workers assumed positions: leaning while standing, leaning on four limbs, kneeling, sitting on the ground. (Figure 7)

Position with straighten lower extremities and leaning a trunk is especially dangerous for lower part of the vertebral column and surrounding soft tissues. A center of mass of a leaning trunk is far from the axis of rotation of lumbar vertebrae so the moment of gravity force is of a high value. According to American research³ the most

health problems of contemporary workers in the United States deal with lower back pain. The author of this paper with co-workers analyzed for a court a heart attack of a worker who assumed leaning, i.e. wrong position while lifting a very heavy engine.⁴

Quite different positions of the body assumed ancient workers while being involved in the construction of pyramids. At first very heavy blocks needed to be cut from quarry near the Assuan, then they were transported by Nile River, next they were pulled to the pyramid site. At last and the toughest work was done while moving stone blocks upward to built the pyramids. All those works involved thousands of workers of high muscle strength and assuming different body positions.



Figure 7 Different body positions of ancient Egyptians producing a pottery. Person at the background in (a) assumed dangerous leaning position.²

Sitting on the ground while working is still present. Figure 8 shows workers making pots from hard material. They worked near the Valley of the Kings, Luxor, Egypt. This is in contrast to many contemporary people who assume often sitting position during their work, traveling by car, sitting in front of a television set using chairs, armchairs, or couches.



Figure 8 Contemporary workers photographed in 2012 assuming body positions sitting on the ground.

Figure 9 shows children watching entertainment of a clown while sitting on a cobbled street in the city of Torun, Poland, EU. Unfortunately, today children in the developed countries spend much of time sitting on chairs in front of computer or TV screens.



Figure 9 Children do not care they are sitting on cobble street (2023).

Conclusion

Ancient people in Egypt, but also in other parts of the world, rarely used chairs, they usually sat directly on the ground. Current people, especially in the developed countries, usually use chairs. Unfortunately, they use chairs in excess, especially when they sit incorrectly.

According to some authors, people sitting with poor posture have numerous pain syndromes within the musculo-skeletal system. Incorrect sitting posture while using a chair contributes to many disorders. The amounts of time spent in a seated position have extensive implications for people's health. Sitting on the ground involves active work of trunk muscles, while sitting on a chair with leaning against the backrest does not involve such a muscle activity. Maintenance of the physiological curvature of the spine is crucial for the biomechanics of the sitting position, as well as the location of the head and position of the pelvis.⁵

Other investigations show there is evidence which is limited in quality to indicate that ergonomic workplace interventions can improve gross sitting posture.⁶ In addition, Zanola et al. stated that the individual data from several manuscripts suggest that the sitting posture causes a reduction in the height of the lumbar intervertebral discs.⁷

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Conflicts of interest

The author declares that there is no conflict of interest.

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