

Reading: Designing a Comfortable Chair

Most people rate comfort as the most important requirement of a chair. Style, appearance, and sturdy joinery are also undeniable key elements, but if any of these criteria results in an uncomfortable chair, the product may end up being used as little more than an attractive showpiece.

Uncomfortable chairs give rise to a familiar litany of complaints: cutting of circulation to the legs; straining neck, shoulder, and back muscles; and squeezing the legs together. Each of these problems stems from the fact that, although very few people share the same size and shape, most chair designs are inspired by the “one size fits all” philosophy. Some chairs, like those found in fast-food restaurants for example, are actually intended to be uncomfortable to discourage users from sitting in them for lengthy periods.

The standard dimensions for various types of chairs presented in the chart below provide good starting points for designing chairs, but following these guidelines slavishly will yield pieces that are only well-suited for people of average build. Standard-size chairs can be uncomfortable for individuals who do not fit the mold: children; pregnant women; or people who are taller, shorter, or heavier than the average. But as a woodworker, you have the opportunity to fine-tune the design of your chairs to fit the individual user.

There are a few basic principles to follow. Seats that slope back slightly, for example, help position body weight more comfortably. Positioning a seat so that the user’s feet will be firmly planted on the floor will not cut off circulation to the legs. Armrests that are properly located will minimize muscle tension in the shoulders. If the whole chair is to be angled back, the seat must also tilt backward to keep the user from sliding forward and prevent the front of the seat from cutting off circulation to the legs.

Well- designed backrests that conform to the shape of the human spine are crucial. For instance, a backrest should be concave to wrap around the back of the rib cage, shoulders, and waist. It should also curve from bottom to top, rather than be made perfectly straight.

Whatever its style, function, or design, a chair must support the lower five vertebrae in the small of the back, known as the lumbar region.

(Excerpt of *Designing a comfortable chair*. Source: *Building chairs, The Art of Woodworking*. 1994. St. Remy Press, Montreal-New York).

Standard chair dimensions:

<u>Type of chair</u>	<u>Seat width</u>	<u>Seat depth</u>	<u>Seat Height</u>	<u>Back Height</u>	<u>Seat angle from horizontal</u>
Kitchen	14” to 16”	14” to 16”	17” to 18,5”	30” to 36”	0 to 5 degrees
Desk chair	18” to 20”	16”	17” to 18,5”	36” to 42”	0 to 5 degrees

Vocabulary

1. Rate- vurdere, evaluere
2. Sturdy- solid, kraftig
3. Joinery- (møbel)snekkerarbeid
4. Undeniable- ubestridelig
5. Familiar- velkjent
6. Litany- liste
7. Straining- (an)spent, anstrengt
8. Stem- komme/stamme fra
9. Intend- ha til hensikt
10. Slavish- slavisk
11. Yield- innbringe, gi
12. Slope- skråne, helle
13. Angle- gi bestemt vinkel
14. Tilt- helle, stille på skrå
15. Prevent- forebygge
16. Spine- ryggrad
17. Crucial- avgjørende
18. Concave- konkav
19. Rib cage- brystkasse
20. Vertebra (e)- (ryggvirvel)
21. Lumbar region- korsryggen