Why are electrical plug prongs different sizes?

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For electrical appliances to be safe it is important that the power comes through a fuse or circuit breaker, into the wall outlet, then the plug must take that same wire to the on/off switch of the appliance. This way, when the appliance is turned off, there is no power coming to the appliance. Put the plug into the wall backwards, and the appliance switch stops the electricity after it has gone through the whole appliance. If any wire is shorted out to the casing of the appliance, it will always be hot, even if the switch is off. That accounts for that fuzzy feeling in some lamps for example. If you touch this "hot" appliance and a sink faucet, even with the switch off, you could still get a shock. That is one of the basic reasons we have polarized plugs -- one fat and one thin. When you change a plug on the end of the cord, you have to make sure that the thin prong takes electricity directly to the on/off switch of the appliance -- and when wiring outlets you always have to make sure that the "hot" wire from the fuse goes to the "gold" screw on the thin side. The wide prong on the plug goes to the silver screws, and the white return wire.Another reason for this in fancy sound systems is that if you put the return wire on the wrong side of things you can create static in the amplifier. I guess you could call that a fuzzy sound.You can buy a polarity tester at the hardware store, that simply plugs into a wall outlet and tells you if the wires are all in the right places.Remember that all electrical work requires a permit, some provinces allow homeowners to do their own electrical work and some provinces require liscensed electricians to carry out all such work.Â

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