

Universal Design in Lighting



Our vision is increasingly worse when we reach age 40 than it is when we are 20. Studies indicate up to three times more light is required to see - but it's not as simple as switching from a 100 watt to a 150 watt bulb. Review these simple tips to learn how to reduce glare and shadows, and see more clearly.

It's not necessary to completely redesign the home's lighting scheme. However a lot of new construction now contains lighting and design elements that allow easy transition through the life stages of the occupants. Remember that Universal Design means ease of use for all.

The goals are:

- **Consistency** - Balanced even light throughout the room. Even light promotes:
- **Reduced glare** - Direct glare (from a light bulb) and reflected glare (shiny surfaces) are eliminated.
- **Decreased shadows** - Especially when moving between rooms. A drastic transition from light to dark or dark to light can be extremely awkward for those with reduced vision.
- **Flexibility** - Lighting can be added or adjusted when brighter light is needed.
- **Focus** - Light is directed to the areas that need it most.
- **Security** - Well lit stairways, handrails, hallways and entry ways offer safety and a sense of well being.

The following ideas and solutions would prove useful as well as stylish in practically any application:

- **Overhead** lighting is normally provided by incandescent or fluorescent bulbs. Upgrade or supplement overhead lighting with additional sources.
- **Recessed** lights can be placed in the exact spots where additional illumination is needed.
- **Track** lights provide overhead light and allow lights to be focused where it's needed.
- **Under-cabinet** lights are a very inconspicuous source of kitchen illumination.
- **Task** lights supplement overhead indirect lighting when additional light is needed for hobbies, reading, or other concentrated projects. Lamps are the most logical source of task lighting. Place them on one or both sides of the task. Reduce glare by having the shade below eye level.
- **Wall fixtures** help light stairways and hallways. Side lights by the bathroom mirror reduce shadows.
- **Skylights** and **tubular** lights provide natural light.

Lights & Switches

Bulbs

The three main types of light source are incandescent, halogen, and fluorescent:

- **Incandescent** is the most common. Inexpensive and shorter-lived than halogen and fluorescent, they are regularly used for overhead lighting and lamps.
- **Halogen** lights make great task lighting, plus they are energy efficient.
- **Fluorescent** bulbs are available in either tubes or compact. Both are efficient and inexpensive to operate. Compact fluorescent bulbs are designed to fit conventional incandescent sockets.

Switches

- **Rocker** or **toggle** switches are easily used by those who have limited hand strength or dexterity.
- **Dimmer** switches with knob or touch sensitive controls allow adjustable light levels. Mount switches 36-48 inches from the floor for easy reach.

Contrast is Key

Skylights have already been mentioned, but **contrast** is an essential concept. Depending on the background or base color, add contrast by using lighter or darker colors on:

- Cabinet hardware and drawer pulls.
- Pillows and bathmats
- Glasses, dinnerware, kitchen utensils, and trash cans.
- Molding and doors.