

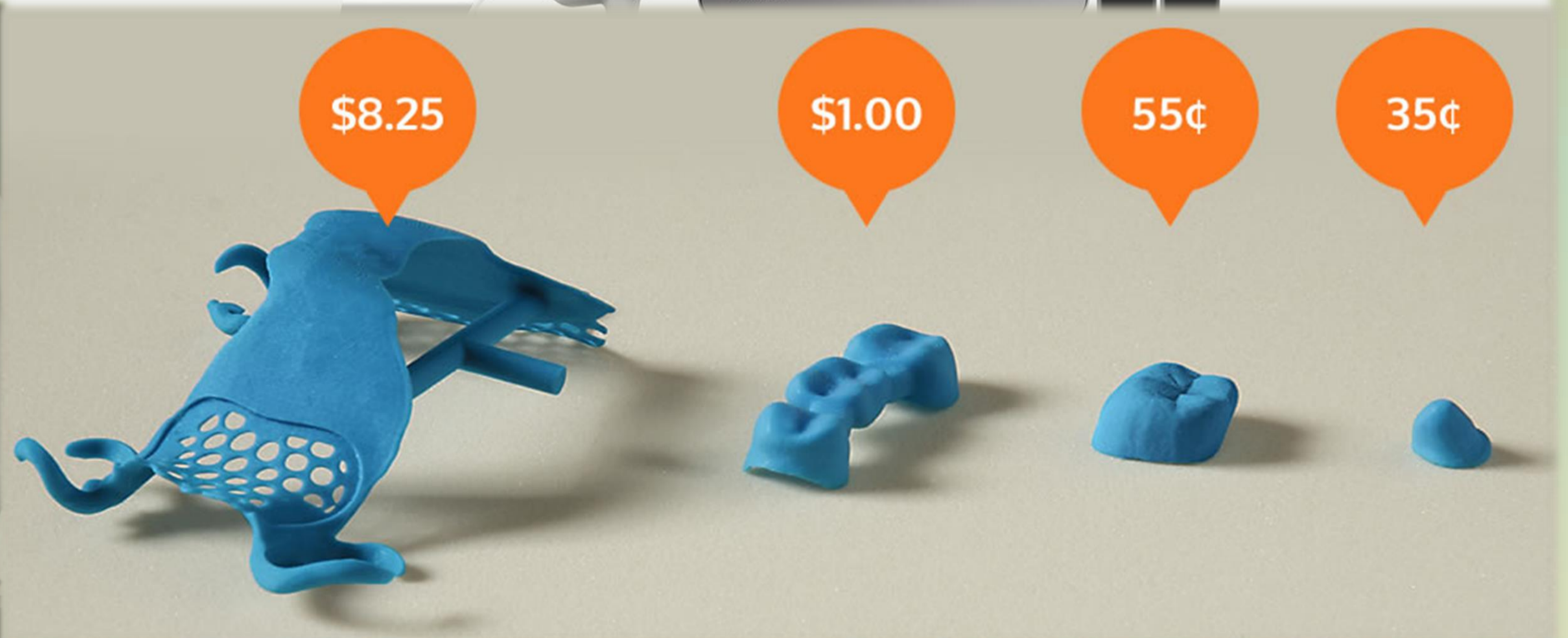
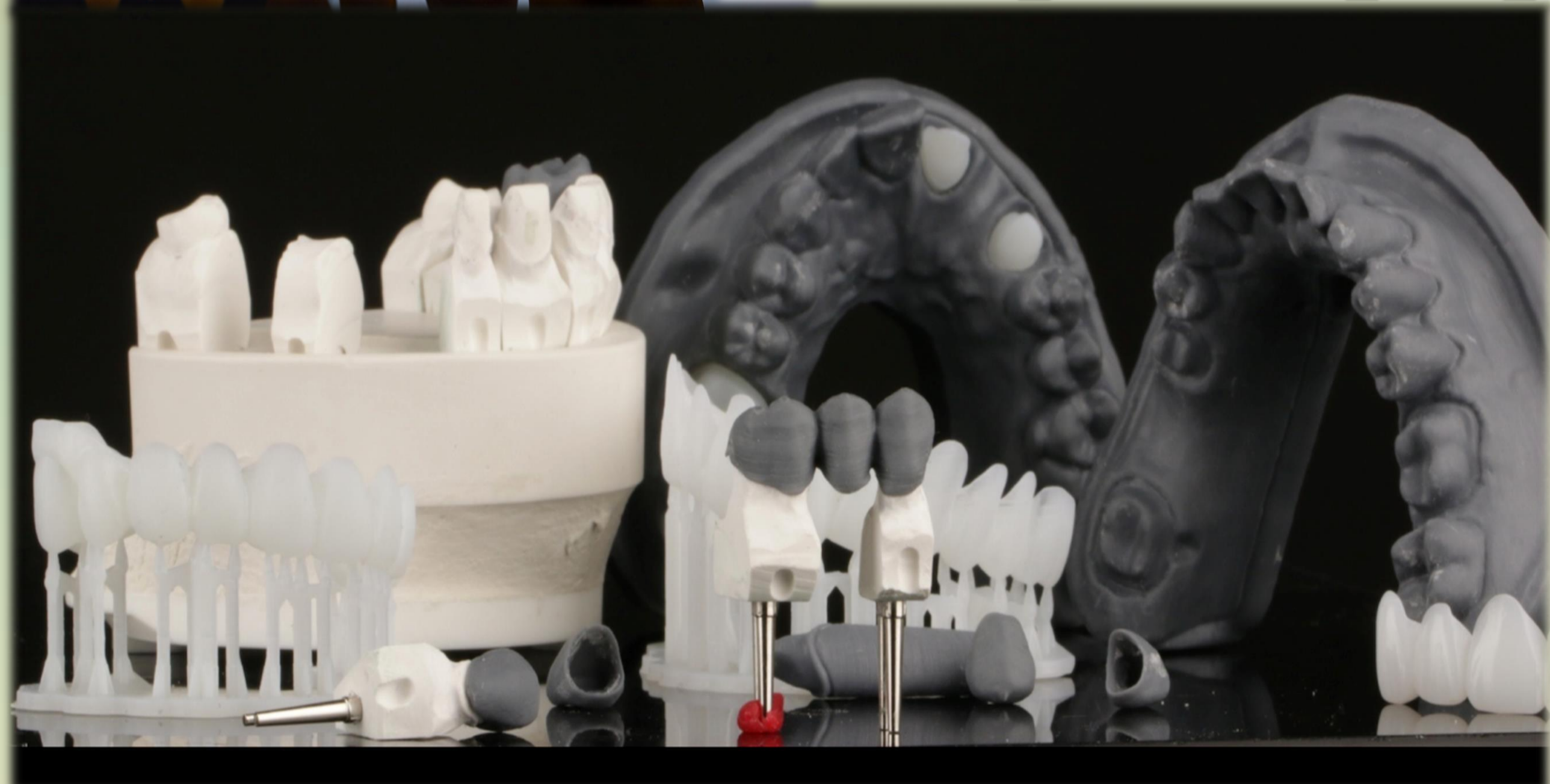
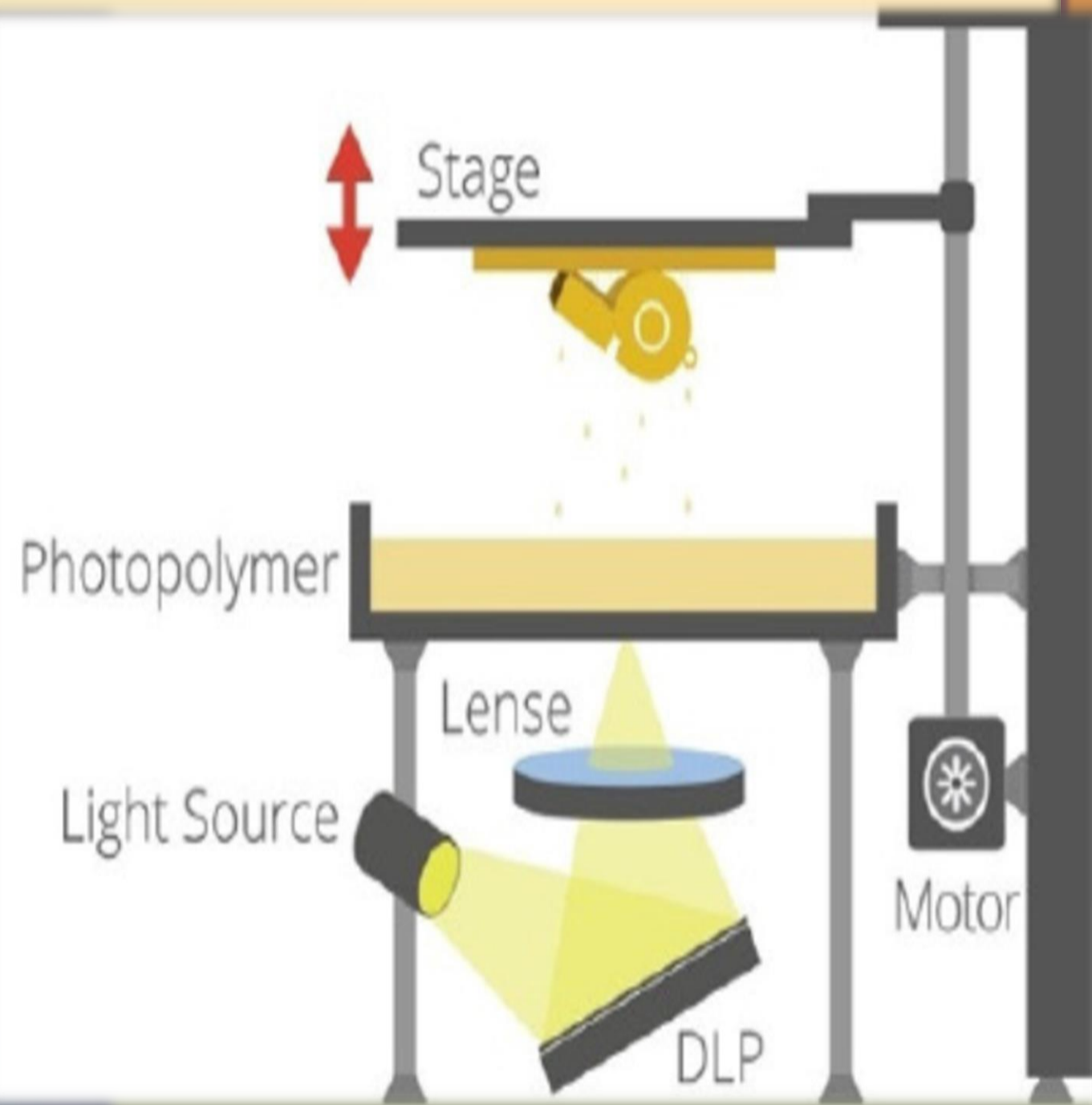


3D Printing in Dental Lab

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Researchers all over the world are very busy developing 3D printers that we will be able to use for many applications and (for now) in unimaginable ways. With the speed of developing increasing at an exponential rate, those developments are seemingly around the corner. In the dental technology world, engineers are coming close developing a 3D printer that will be able to print a complete denture, including both the resin base and the teeth.

Its efficiency is enhanced by printing multiple units and relying upon the economies of scale. The objects the printer can produce for the laboratory include models (casts), crown and bridge resin burnout patterns for casting or pressing ceramics, temporary crowns, surgical guides, splints, partial denture framework patterns, custom impression trays, and more. With proper settings, it can consistently produce resin products of stunning quality. Researchers at Wake Forest University in North Carolina say they have created a 3D printer that can produce organs, tissues, and bones that could theoretically be implanted into living humans.



We may be a few years from printing the final restoration and even farther than that from printing a replacement jaw, but as the above research suggests we may be there sooner than we think. There is no question that print speed can affect a lab's productivity. The good news is that speed can be adjusted by pre-setting the layer thickness. Production time is also decreased by adding economies of scale with a DLP printer. Multiple units cure in virtually the same time that it takes to print a single unit. Adding units increases productivity while maintaining the same per-unit build time.