3-D Print for Bone Replacement and Design

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Human bone is one of the most vulnerable tissues in human bodies. In the lifetime of a lot of people, bone tissue is commonly experienced with bone fracture and other bone pain symptoms especially in sports activity [1-5]. Bone-induced human disable is one of the leading causes for morbidity and mortality of senile patients.

Bone disease commonly need a long term of physiological recovery. In search for new orthopaedic solutions for bone diseases surgery and pharmacotherapy, cutting-edge technology is one of the priorities. Among these modern technology, 3-D prints for different tissues is very promising [6-9].

In many bone disease treatments, some bones are greatly damaged (break to a lot of small pieces), artificial bones will be replaced. At present, the artificial bones are difficult to make and very expensive to personalize. These broken bones have to be kept. Due to conserve these broken bones, long terms of disease recovery are quite necessary.

Presently, a systematic approach has been made for replacing broken bones with artificial bones. At present, many small piece of bones or joint can be easily replaced by these artificial bones or joints. This process may treat a lot of patients (Figure 1).

Patients with bone diseases are greatly different. Some patients are very tall and others may be very low. The artificial bone producers may be difficult to provide all these
different products. As a result, it needs time and money to do this. It makes patients a lot of inconvenience.

In the future, image-based 3-D printers will be used to print artificial bones to replace broken or dead bones. From these efforts, a great difference will be made. In these activities, math-modality may be helpful [10].

With the quick developments of 3-D printers, all human bone tissues and joints may be available in a lot of hospitals. This is a great future challenge.

BIBLIOGRAPHY