The terms free flap, free autologous tissue transfer and microvascular free tissue transfer are synonymous terms used to describe the “transplantation” of tissue from one site of the body to another, in order to reconstruct an existing defect. “Free” implies that the tissue is completely detached from its blood supply at the original location (“donor site”) and then transferred to another location (“recipient site”) and the circulation in the tissue re-established by anastomosis of artery(s) and vein(s). This is in contrast to a “pedicled” flap in which the tissue is left partly attached to the donor site (“pedicle”) and simply transposed to a new location; keeping the “pedicle” intact as a conduit to supply the tissue with blood.

Various types of tissue may be transferred as a “free flap” including skin and fat, muscle, nerve, bone, cartilage (or any combination of these), lymph nodes and intestinal segments. An example of “free flap” could be a “free toe transfer” in which the great toe or the second toe is transferred to the hand to reconstruct a thumb.

For all “free flaps”, the blood supply is reconstituted using microsurgical techniques to reconnect the artery (brings blood into the flap) and vein (allows blood to flow out of the flap).

Free autologous tissue transfer is performed by many surgical specialties.