

Anaplastology

Restoring Form and Function

By: Wendy A. Smith C.P.(c), C.C.A.

The desired goal of a prosthesis is to restore form and function. It is a goal shared by the certified prosthetist and the anaplastologist. A certified prosthetist works as part of a multi-disciplinary team to provide the patient with a comfortable and functional prosthesis. An anaplastologist is the member of the interdisciplinary health care team who provides custom prosthetic treatment to patients with facial and body disfigurements.

The field of anaplastology includes health care providers and researchers originating from the fields of medicine, dentistry, medical art, allied health, materials research, psychology and others (source: IAA website). Generally speaking, the different kinds of prostheses made by the Anaplastologist include facial, somato (body) and ocular (eye) prostheses.

To become a prosthetist or anaplastologist, earning a university or college certificate or degree in a related field (e.g. kinesiology, medical art, dental technology) is usually the first step.

Following completion of a program, or as an integral part of a program at an accredited institution, in either Prosthetics or Anaplastology, the clinician enters into an internship where he or she can further develop their skills under supervision. At the end of the required internship period, the clinician can apply to write a comprehensive exam to become board certified. For the Certified Prosthetist or Certified Clinical Anaplastologist there are a variety of employment opportunities in hospital, university or private clinic settings.





In the field of Anaplastology, a prosthesis may help to protect exposed delicate tissues, cover exposed cavities, provide support for the eyeglasses or hearing aids, and restore appearance. Some of the types of prostheses that anaplastologists provide are nasal (nose), auricular (ear) and digit (finger) prostheses. Various retention methods are utilized depending on a patient's lifestyle, physiology and practicality. For example, an elderly patient with a weakened bone structure in the facial area may not be a good candidate for bone anchored implant retention. The design process is complex, and there are many considerations. Anaplastologists are particularly skilled in mold-making, colour formulation and sculpting. A knowledge of material science and innovative thinking are the keys to providing the best care for patients.

“Cosmetic” Means:
 Blends with Body
 Natural
 Life-like
 Integrated
 Aesthetic
 Anatomically Correct
 Beautiful

“Cosmetic” Doesn’t Mean:
 Frivolous
 Unnecessary
 Indulgent
 Luxury

There are certain aspects of prosthetic design and creation that are unique to the field of Anaplastology. Often the anaplastologist designs prostheses for the face and hands – visible parts of the body. When creating prosthetics for the face and hands, the prosthesis must blend in with the body's contours and the colour formulations must make the prosthesis appear life-like. The prosthesis must also be retained securely and

comfortably as possible. A patient's acceptance of the prosthesis will depend on how well they can integrate the prosthesis into their body image.

Let's consider nomenclature for a moment and how two common descriptive words have different meanings to different people. The two words are function and cosmetic.

There is always a functional component associated with prosthetic wear.

Function in prosthetics usually refers to the restoration of a specific purpose such as grasping or holding with the hand. It also means a return to normal activities and being more productive at work. There are very few prostheses that are provided solely for the role of appearance. What if we think of function in a different context?

Consider someone who can take their affected hand out of their pocket and use it because of a prosthesis. Just the action of removing the hand from the pocket (not hiding it) and comfortably trying to use it also defines function. Another word that is misunderstood when describing a prosthesis is cosmetic. When the word “cosmetic” is used to describe a prosthesis, it often seems to be synonymous with frivolous and unnecessary. “Cosmetic” could refer to a passive prosthesis, as in a prosthesis without moving components, or it may mean that a prosthesis is worn to restore a life-like, natural appearance. Or “cosmetic” may refer to the effect that an appropriate prosthesis has on someone's body, such as allowing clothing to fit properly or, dramatically improve posture.

The overall appearance of a patient cannot be minimized and is directly related to a feeling of well being. Each patient should have the opportunity to feel comfortable and confident. They should also have the chance to return to pre-injury activities. When prostheses are aesthetically pleasing, the patient does not attract unwanted attention and they are permitted to blend in with society once again. Many of my patients have told me that it is the repeated questions about their injury that makes them self-conscious. Since most people notice an absence of a body part, wearing a prosthesis can help with this problem. Personalizing prosthetics with detail and/or embellishment (such as a custom tattoo) will further increase the level of

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acceptance and wearing compliance.

When we talk about nomenclature, we should also consider how the description of prostheses affects the level of funding for those prostheses. What is covered and what isn't? There are several areas that are rampant with misinformation. When prostheses are labeled as cosmetic, they are usually deemed medically unnecessary and in turn, not funded adequately or at all.

One such example is a breast prosthesis following mastectomy surgery. A breast is not required for walking, hand function or eating. Therefore, some funding agencies consider a breast not medically necessary. There is not enough study-based information to the contrary. Available articles that do refute this notion do not seem to carry enough weight in the medical field.

In contrast, surgical breast reconstruction is completely covered and encouraged. The benefits to patients who have had a mastectomy and wear an appropriate breast prosthesis are well documented. Why then, is the surgery paid for and yet women have to fight to get a minimum amount of money to pay for a breast prosthesis?

Another example of outdated thinking lies in the fact that usually only one

prosthesis is paid for. This attitude is common across the fields of prosthetics and anaplastology. It seems prostheses need to be multifunctional in order to justify the cost which is perceived to be high. Having several types of prostheses for different reasons, like glasses or shoes, is virtually unheard of, except perhaps for children. This can be very challenging for the prosthetist and the anaplastologist.

It is not uncommon for patients to require several types of prostheses for different activities. It is uncommon however, for several types of prostheses to be paid for by funding agencies. Adult patients are expected to be satisfied with one prosthesis for everything. There is generally more flexibility when seeking funds for multiple prostheses for children.

Designing and creating multi-purpose prostheses can be a challenge for the prosthetist or the anaplastologist. For example, a prosthesis that is meant to be used at work may need to be reinforced in a certain way which may prevent the clinician from achieving the ideal “cosmetic” or aesthetic result. If the prosthesis is made with the highest degree of aesthetic appeal, then it likely will not hold up to rougher more

aggressive use in a work environment. The patient is often forced to choose one type of prosthesis over the other.

The attitude that one prosthesis should fulfill all the requirements of any one patient stems from a lack of awareness about the complex needs of the prosthetic patient. There is often little knowledge about what goes into the design and fabrication of any prosthesis, in general, let alone a highly aesthetic one. Funding agencies, for the most part, are not aware of the extensive educational background and high level of skills required by both prosthetists and anaplastologists.

There is much work to be done to increase awareness and to educate the public and other health care providers. We need to continue developing our programs and engage in more research with an emphasis on documented treatment outcomes. We can help our patients by using innovative ideas and thinking outside the box. At the same time, it is crucial for everyone involved to lobby for improved funding structures that allow fair and equitable access for patients to the best prosthetic treatment available.

For further information regarding prosthetics and anaplastology, visit the following websites: www.anaplastology.org, www.bcca-cca.org and www.prostheticsandorthotics.ca.

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