

LUKE Arm

Patient Information Sheet

LUKE Arm Description and General Considerations

The development of the LUKE Arm (formerly DEKA Arm) was funded by the Defense Advanced Research Projects Agency's (DARPA) Revolutionizing Prosthetics program. Following Military Health System (MHS), Veterans Health Administration (VA) and internal DARPA research and development, the FDA approved the DEKA Arm System on May 9, 2014. This paved the way for the device to be made available to MHS beneficiaries with upper extremity amputations. The LUKE Arm is currently being manufactured by Mobius Bionics LLC (Manchester, NH).

The LUKE Arm can be used by MHS beneficiaries with different levels of arm amputations including transradial (below-elbow), transhumeral (above-elbow), and shoulder disarticulation. The Arm provides the ability to move in various different directions and complex movements can be performed at the same time. The hand has many different grips and includes a sensor that provides grip force feedback. The LUKE Arm provides resistance against light rain and fine dust allowing wearers peace of mind when using the Arm outside the home. The LUKE Arm can use a variety of inputs for control of the prosthesis so you can use what works best for you.

Am I a candidate?

The fitting process and training require a significant commitment. This commitment involves travel to an MHS Advanced Rehabilitation Center and multiple sessions of training on how to use the device. This training will take place both at the MHS Advanced Rehabilitation Center as well as in your local community. The following considerations are used by MHS clinicians to determine if you are a candidate for further evaluation at a MHS Advanced Rehabilitation Center.

In order to be fit with a LUKE Arm, you should:

1. be at least 18 years old.
2. have a single or bilateral upper limb amputation.
3. have the ability to understand the fitting and training requirements of the LUKE Arm.
4. have active control over one or both ankles, OR have an appropriate number of other control sites.

You may not be able to be fit with the LUKE Arm if you have:

1. an amputation level of elbow disarticulation, wrist disarticulation or partial hand.
2. a residual limb condition that would prohibit socket fitting.
3. significant uncorrectable visual deficits that impair the ability to see the prosthesis.
4. a major communication problem.
7. a neuropathy, uncontrolled diabetes, insensate feet, a history of skin ulcers, are receiving dialysis or has any other significant comorbidity which would interfere with fitting and training requirements.
8. severe circulatory problems including peripheral vascular disease and pitting edema.
9. cognitive deficits or mental health problems that would limit your ability to participate fully in the fitting and training requirements.

Evaluation and Fitting Process

Evaluation and Fitting Requirements: The evaluation for fitting with the LUKE Arm will include an initial screening by a MHS Advanced Rehabilitation Center. If you are deemed to meet the majority of the considerations noted above, you will be referred to undergo additional screening procedures by the MHS Advanced Rehabilitation Center. This evaluation may include a chart review, telephone interview, and either an in-person or telehealth evaluation.

Travel and Housing Requirements: The fitting and training process will require you to travel and lodge for approximately 2 weeks at a MHS Advanced Rehabilitation Center. Travel and lodging arrangements will follow current policy, procedure and regulation.

Who do I contact for more information?

To request additional information or to be considered for fitting with the LUKE Arm, please contact Chief, Clinical Programs, Extremity Trauma and Amputation Center of Excellence, at 703-681-4262 or usarmy.ncr.hqda-otsg.list.eace-clinical-affairs@mail.mil.