FlexHD® ACELLULAR DERMAL MATRIX: AN ADVANCEMENT IN BREAST RECONSTRUCTION PROCEDURES
Acellular dermal allografts are donated human dermis that have been processed to remove the components that could result in any immune/inflammatory response and trigger rejection. What remains is an undamaged tissue matrix, capable of natural, full regeneration after implant.

Operative benefits of FlexHD® over autologous and synthetic alternatives:

- No donor site defect or associated complications
- Eliminates the risk of prosthetic mesh infections
- No harvesting time
- Provides the biomechanical strength and resistance to stretching required in hernia repair
- Malleable
- Nonimmunogenic and noninflammatory

The annual number of musculoskeletal tissue transplants increased from approximately 350,000 in 1990 to over 1.6 million in 2006. —Center For Biologics Evaluation and Research
FlexHD®: THE ACELLULAR HUMAN DERMIS OF CHOICE

FlexHD® is a unique prehydrated acellular human dermis. It provides an acellular (nonimmunogenic) tissue matrix with excellent biomechanical strength.¹,³,⁵

Operative benefits of FlexHD®:

- Prehydrated, ready-to-use off the shelf
  - Hydration of some freeze-dried grafts can require 40 minutes⁶
- Does not require refrigeration
- Minimizes handling in the OR by people other than surgeons for less chance of contamination
- Quality and safety assurance from the Musculoskeletal Transplant Foundation (MTF)⁷,⁸ with over 3 million grafts distributed since 1987

Providing strength, versatility, and new possibilities in breast reconstruction

Reconstruction with implants has proven to be easier, quicker, and less traumatic than the use of autologous tissue, while offering acceptable aesthetic outcomes.⁹

FlexHD®, when used to accomplish complete coverage of a tissue expander or implant, enables the surgeon to create a larger submuscular pocket with durable lateral and lower pole support.⁹

FlexHD® can recreate the ideal inframammary fold (IMF) and lateral mammary fold (LMF) during breast reconstruction. Additionally, the rectus abdominis and anterior rectus fascia and/or muscles that otherwise would have been harvested in a TRAM procedure, are spared.¹⁰,¹¹
Supplement muscle with reinforcing sling
The interposition of FlexHD® between the inferior border of the pectoralis major muscle and the IMF-LMF span provides secure support in the form of a sling.

Benefits of acellular allografts like FlexHD®¹⁰
- Supports and holds prosthesis in place, helping define shape and contour of reconstructed breast
- Provides a biologic interface between mastectomy skin flaps and prosthesis, potentially reducing the risk of necrosis and/or extrusion
- Obviates the need to create muscle or fascial defects to restore breast shape and contour

Repair of contour deformities in post-reconstruction patients¹²
After reconstruction, examine patients in the upright position for any observable unevenness or soft-tissue defects in the upper portion of the breast. Delineate these, dissect the reconstruction, tailor a graft of FlexHD® to fill the defect, replace implant, and close incision in layers.
An extended FlexHD® flap helps create a secure pocket that defines the inframammary fold, and provides an additional layer of coverage for the implant/expander.

**Nipple reconstruction using FlexHD®**

Often the last stage in the procedure, successful nipple reconstruction can be one of the most important and challenging. When achieved, it can restore a patient’s sense of completeness and familiar body shape.

Long-term success has been achieved using acellular allografts such as FlexHD® as a central strut within a modified star flap. The dimensions of the flap width should be designed so that a projection overcorrection of 50% can be achieved to allow for postoperative projection loss.
Closure of abdominal fascial defect

Since the introduction of the TRAM flap technique for breast reconstruction, the closure of abdominal donor site defects has posed a challenge. Complications include lower abdominal wall laxity, unsightly and undesirable bulges, hernia, and loss of strength.\(^ {11}\)

Numerous studies have shown the improved outcomes that result from the use of acellular human dermis—such as FlexHD\(^ \text{®}\)—to provide an option for the repair of abdominal fascial defects after TRAM flap harvesting for breast reconstruction.\(^ {2}\)

Benefits of acellular allografts like FlexHD\(^ \text{®}\)

- FlexHD\(^ \text{®}\) integrates into the surrounding tissue with less chance of rejection or inflammation\(^ {11}\)
- May avoid the need to perform a submuscular dissection\(^ {10}\)
- Obviates the need for alternative techniques such as:
  - the surgical incision or transection of the external oblique muscle to facilitate closure\(^ {11}\)
  - the use of synthetic mesh and the potential risk of infection which could lead to contracture or encapsulation\(^ {11}\)
After the transposition of abdominal wall muscle during a TRAM procedure, FlexHD® can be used as an underlay to provide strong, nonimmunological support tissue for the repair of resulting abdominal wall defects.

### FlexHD® Implant Product Specifications

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For MTF, quality and safety are in the details:

- **FlexHD®** passes rigorous safety testing using the latest technology
- Demonstrates all desired biomaterial properties, before being made available for implantation
- Over 3 million grafts distributed since its inception in 1987

**Result:** A versatile, ready-to-use, dermal matrix with an excellent safety record for the best outcomes in plastic surgery

FlexHD® is used for the replacement of damaged or inadequate integumental tissue or for the repair, reinforcement or supplemental support of soft tissue defects. Before use, physicians should review all risk information, which can be found in the Instructions for Use attached to the packaging of each FlexHD® Acellular Dermal Matrix.

References:

Visit [www.mtf.org](http://www.mtf.org) for more information.

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