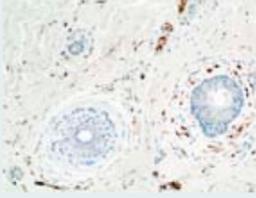
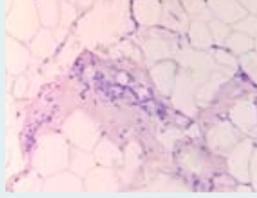


**page 1**  
Water-jet assisted fat harvesting with body-jet®



**page 2**  
Tissue effects of the water-jet



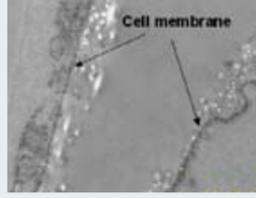
**page 3**  
Smooth and gentle water-jet: intact lipocytes



**page 3**  
Local anesthetics and vitality of pre-adipocytes



**page 3**  
Clinical reports on safety



**page 3**  
Effect of the water-jet viewed by the electron microscope



**page 4**  
New surgical treatment option



**page 4**  
More information on BEAULI

## BEAULI – a new method for breast augmentation by lipotransfer\*



**Klaus Ueberreiter M.D. on BEAULI**  
Interview by Inge Matthiesen

**Question: What is meant by BEAULI?**

Dr. Ueberreiter: BEAULI means „Breast Augmentation by Lipotransfer“ and represents a new method of fat grafting for breast augmentation.

**Question: What has triggered the introduction of this new fat transplantation method?**

Dr. Ueberreiter: Through the publications of Sydney Coleman in New York, micro-fat grafting has been gaining popularity since the mid-90s and is now being used worldwide for the correction of tissue deficits in the facial area. It wasn't long before, the use of autologous fat for breast enhancement as an alternative to silicone implants was also being discussed.

**Question: Have advances since been made in the use of this method for breast augmentation?**

Dr. Ueberreiter: In March 2007, Coleman presented the results of a study on breast augmentation with autologous fat (1); Zocchi and Delay, from Italy and France, published additional findings. Since then, autologous fat transfer has been generally accepted as a surgical option for breast enlargement.

**Question: What are the disadvantages of previously used methods and the advantages of the new method you have developed?**

Dr. Ueberreiter: The previously used methods of micro-fat grafting with intermediate steps such as centrifugation are very time-consuming and associated with long surgery times. Whereas fat cells that have been aspirated from tissues using the body-jet® are already washed, and the blood content of the aspirate is very low. In our studies, we have been able to prove that this fat contains the same number of vital fat cells and fat stem cells (pre-adipocytes) as the fat harvested using the Coleman method. This is the first method for fat harvesting that requires only slightly more time than the liposuction itself while significantly decreasing the overall procedure time of breast augmentation.

**Question: Can you describe the method more detailed?**

Dr. Ueberreiter: Fat removal with the body-jet® represents an especially gentle form of liposuction, as has since been substantiated in various publications, e.g. by Stutz, Araco and Meyer (2). We have been using this system successfully since 2004. This success led to the idea of constructing a special collection system with additional filter functions for the sterile collection of fat, an idea that was successfully implemented, thanks to the cooperation of human med AG. When the LipoCollector™ II is used in combination with the body-jet®, the filtered, washed fat no longer has to be centrifuged and can be used for re-injection without further preparation.

**Question: For which patients is this method most suitable?**

Dr. Ueberreiter: The patients treated with this technique basically fall into three groups. The first group includes patients with primarily aesthetic desires for breast enlargement.

Also, the procedure is very appropriate for filling defects and correcting asymmetries as well as in cases where the patient cannot tolerate silicone implants in the long term and the implants must be removed. A third and very important area of application is breast reconstruction following breast cancer surgery.

**Question: What about the survival rate of the transplanted cells?**

Dr. Ueberreiter: After approximately six weeks about 80% of the transplanted cells have been integrated into the host tissue. These integrated cells will remain in the tissue permanently.

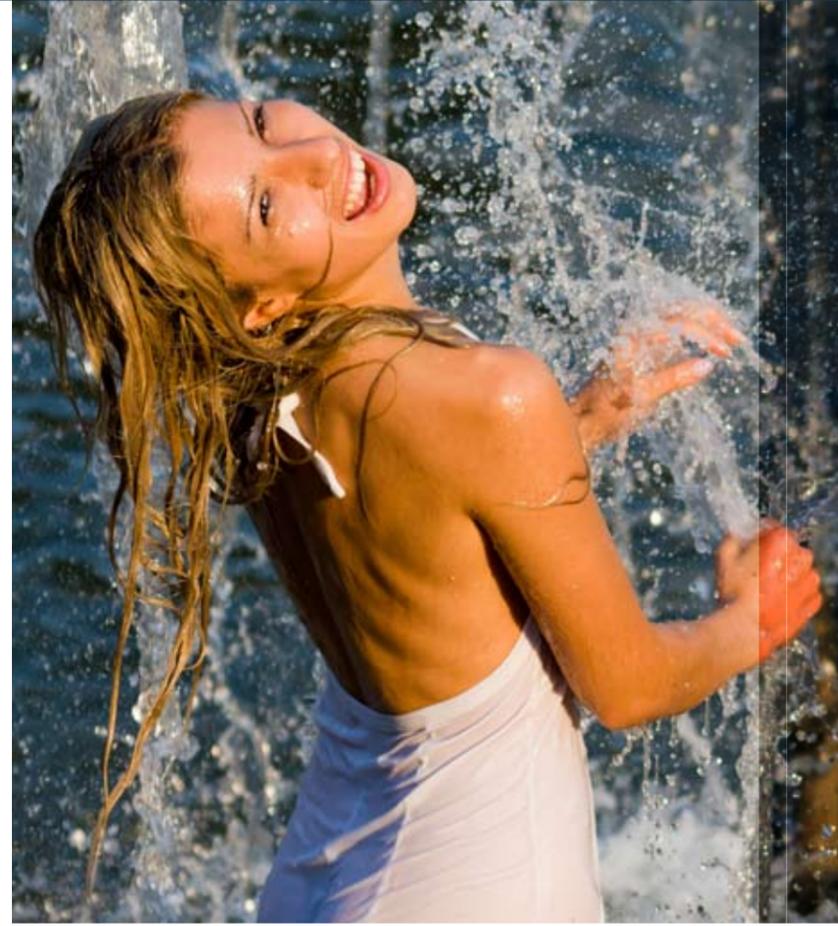
**Question: Are there still problems associated with the masking or mimicking of possible tumor tissue in imaging procedures?**

Dr. Ueberreiter: No. There have been numerous reports published on this topic since the issue was first raised. The quality of diagnostic imaging has been improved significantly over the past 10 years.

### New Study on BEAULI results

**Question: Dr. Ueberreiter, you are preparing to publish the results you have achieved with this new method?**

Dr. Ueberreiter: Since October 2007, we have been conducting a prospective controlled study on breast augmentation; the results we have seen with about 50 patients, who have undergone the procedure to date are very promising. These results are being examined using various tests, including imaging procedures (MRI), both prior to and six months after the surgery, with volumetric evaluation. Also, a



recording of results over two years will be done. After completion of the documentation we will analyze and publish these data until end of the year. It will be the first time that exact volumetric determinations of integrated fat cells are established in a study.

**Question: Which patient groups are included in this publication?**

Dr. Ueberreiter: Based on our extended experience with lipotransfer during reconstruction following cancer related breast amputation, and refilling of volume after removal of silicone implants, we are preparing several publications on this subject. The third large group are primarily aesthetic procedures in patients with micromastia or hypoplasia. A new study group will be treatments with concomitant firming and autologous fat grafting. The large sub groups will be published separately.

**Question: Can you give us some first results of your study on aesthetic breast augmentation?**

Dr. Ueberreiter: It can be stated that the BEAULI method functions reliably. I do not have a single case without any gain in volume. The aesthetic patients often have the

desire for relatively large transplantations of fat, so that we normally do two fat grafting procedures within three months. As a rule of thumb, it can be said that a half cup size per treatment is realistic.

**Question: Any adverse effects or complications so far?**

Dr. Ueberreiter: None up to now, fortunately. There may be mild hematoma occasionally, and minor pain. Pain has been registered on the first postoperative day, with a value of 3 on a scale of 1 to 10 in the area of the breast.

### BEAULI as a new standard

**Question: Why do you define BEAULI as a new standard?**

Dr. Ueberreiter: Meanwhile there is a big discussion on fat transplantation into the breast. Having been a taboo topic for 20 years in most countries, we are concerned about uncontrolled methods of fat grafting. Inappropriate attempts to transplant large volumes of fat collected by unsuitable techniques may cause



LipoCollector™ II



negative effects, for example oil cysts and calcifications. In order to distinguish between the different methods, we have given a name to our method of lipotransfer. We assume that with the BEAULLI method there will be no negative side effects like oil cysts and calcifications.

**Question: Are the body-jet® and the LipoCollector® essential for the BEAULLI standard?**

Dr. Ueberreiter: Yes, the body-jet® and the LipoCollector® are an essential entity, because the fat being "washed out" gently with water by the body-jet® under low negative pressure, has an especially good quality. By means of the LipoCollector® the fat is harvested, separated from the water, and then re-injected without centrifugation in a sterile and very convenient way. Also, the remaining water content helps to distribute the fat within the subcutaneous layer of fat tissue in an especially even way.

**Question: Do you use any additional techniques besides the body-jet® and LipoCollector®? Do you use centrifugation?**

Dr. Ueberreiter: If smaller volumes are required, for example for injections into facial eye lids and wrinkles, we do centrifuge the fat in order to achieve a more dense quality. For fat transfer into the breast we do not

centrifuge, because the concentrated fat is less evenly distributed.

**Question: Which cannulas do you use for liposuction and why?**

Dr. Ueberreiter: During liposuction for re-injection we use the 3.8 mm stainless steel Rapid Cannula. The reason is that with a 3.5 mm cannula, the openings are too small so that due to the low suction pressure of only 0.5 bar, the cannula would get blocked too often. Whereas with a larger cannula the fat portions would be too large. I am interested in harvesting small fragmentized lumps of fat which is distributed much better in the target tissue.

**Question: What kind of cannulas do you use for re-injecting the fat?**

Dr. Ueberreiter: I use the 2 mm infiltration cannula designed by ourselves which are part of the BEAULLI set.

**Question: How much fat volume can/should you inject into the breast, and do you over-correct?**

Dr. Ueberreiter: Fat cells are very fragile. I like to compare fat cells with the foam of beer. Imagine you would have to aspire this foam into a syringe and then inject it somewhere else that is quite delicate. If you try to over-correct by applying too much pressure to the fat cells, many of the adipocytes will burst, thus leading to a worse result as compared to the

application of too little volume. It has been proven to be reasonable to inject just as much as can be taken up by the breast without filling and distending the tissue excessively.

**Question: Apparently the fat cells perish after four to six weeks. Does this mean that you also transplant stem cells with the BEAULLI method?**

Dr. Ueberreiter: As a matter of course we do transplant pre-adipocytes, because otherwise the whole method would not be effective. If you would only transfer adipocytes without any pre-adipocytes, after apoptosis of the mature adipocytes your result would be gone within six weeks.

**Question: Are the stem cells destroyed by the water-jet?**

Dr. Ueberreiter: The stem cells are so microscopically small, that they cannot be damaged by the water-jet. During liposuction with the water-jet we harvest whole cell clusters of approximately 50 to 200 adipocytes. Within the tissue structure and between the adipocytes are located the fat stem cells which are not harmed by the water-jet.

## Hints on technical aspects

**Question: Which local anaesthetic do you use and how do you prepare the solution?**

Dr. Ueberreiter: We use Klein's tumescent solution, as published by Klein in 1992 (3) in order to have an internationally comparable composition. This solution contains 500 mg Lidocaine per liter, 1 mg Adrenalin and 12.5 ml sodium bicarbonate as a buffer.

**Question: Are local anaesthetics harmful regarding augmentation and fat cell survival?**

Dr. Ueberreiter: We published a study on the influence of local anaesthetics on the vitality of pre-adipocytes. In

this study it was concluded that the toxicity of local anaesthetics was very variable, and that a good survival rate of adipocytes is found for our solution containing the mentioned concentrations. (4), (please also refer to page 3)

**Question: Do you recommend warming of the rinsing solution, and if yes, to which temperature should it be warmed?**

Dr. Ueberreiter: The rinsing solution should definitely be warmed to body temperature, because fat cells are sensitive to temperature. The oil in the fat cells may congeal at temperatures below 20°C (68°F), and thus could lead to rupture of the cell membrane. As a certain cooling occurs anyway during the infiltration, it is necessary to warm the solution before using it. Apart from that it is much more convenient for the patient instead of being treated with cold room-temperature solution.

**Question: What is your opinion regarding negative effects of oxygen and light on the fat cells?**

Dr. Ueberreiter: If fat is exposed to oxygen, after several hours, oxidation may occur. However, the fat in the fat cells is protected by the cell membranes so I do not expect any negative effect from oxygen. A negative impact of light on fat cells is not known of.

**Question: Do you freeze fat to use it at a later stage?**

Dr. Ueberreiter: As mentioned before, the intracellular oil will congeal below 20°C (68°F). The melting point may be compared approximately with that of margarine. When the oil congeals, the cell membranes break down. If you freeze and unfreeze the fat you will get a non-vital fat pulp, possibly some individual pre-adipocytes would survive, but certainly no adipocytes.

**Question: What do you recommend postoperatively? Compression bandage, warmth, analgetics?**

Dr. Ueberreiter: Postoperatively, the patient is covered by a warming blanket. The breast is bandaged by a thick cotton batting. No compression is applied as the fat cells are extremely sensitive to pressure, as we could observe earlier.

**Question: Dr. Ueberreiter, can you briefly summarize the advantages of the new BEAULLI method?**

Dr. Ueberreiter: The advantages lie in the fact that the fat can be harvested (liposuction) and transferred (fat grafting) during a single operation. The entire procedure takes less than two hours. Furthermore, the vitality and the integration rate of the fat cells harvested using this gentle method are very good. The entire surgery can be performed on an outpatient basis under local anesthesia with light sedation.

(1) Sydney Coleman, A. P. Saboiero: Fat Grafting to the Breast Revisited: Safety and Efficacy. *Plast. Reconstr. Surg.* 119:775, 2007.

(2) Publications by Stutz, Araco and Meyer, please refer to page 3 of this issue.

(3) J.A. Klein: The tumescent technique for liposuction surgery. *J Am Acad Cosmetic Surg* 4:263-267, 1987.

(4) M. Keck, J. Janke, K. Ueberreiter: Vitalitätsunterschiede von Präadipozyten unter dem Einfluß verschiedener Lokalanästhetika. *Handchir Mikrochir Plast Chir*, 2007, 215-219.

### Contact:

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\*For the USA: Caution: Current FDA clearance for body-jet® does not cover breast augmentation by lipotransfer.

Sydney Coleman, A. P. Saboiero: Fat Grafting to the Breast Revisited: Safety and Efficacy

Conclusions: Given these results and reports of other plastic surgeons, free fat grafting should be considered as an alternative or adjunct to breast augmentation and reconstruction procedures. It is time to end the discrimination created by the 1987 position paper and judge fat grafting to the breast with the same caution and enthusiasm as any other useful breast procedure. (*Plast. Reconstr. Surg.* 119: 775, 2007.)

## Investigation on tissue effects of water-assisted liposuction with the body-jet®

In a recent investigation at the University of Greifswald, the effect of the body-jet® water spray has been studied on different tissue structures including

- skin, adipose tissue, adjacent muscle tissue, blood vessels and nerves.

All samples were exposed to the five application ranges (Range 1 to 5) of the body-jet® water jet with a 3.5 mm infiltration cannula. The duration of the saline spray application was 30 seconds within a space of one centimeter in all five ranges. This procedure represents a substantially increased impact on the tissues, as normal application times would only be up to 5 seconds and while moving the cannula. Special attention was focused on the affection of vessels and nerval structures.

The researchers conclude that "no vessels or nerval structures were destroyed in the corium/epidermis or in the muscle tissue, even with deep penetration. Our findings indicate that no scarring is to be

expected after the edema recedes, but a slight reactive fibrosis is possible. This would lead to a tightening of the tissue which could be seen as a firming effect." The impact of the body-jet® water spray on vascular and nerval structures was analyzed by immunohistochemical staining. Samples representing all three specimens vessels and nerves were marked by CD34 and S100 in order to investigate them for lesions of that structures.

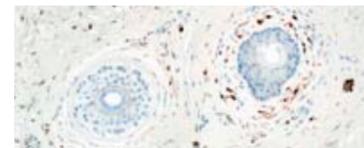
"In all specimens neither in the dermis nor in the subcutis or adjacent muscles a rupture or lesion of vessels or nerves was observed." According to the findings, "a large range of action of the water jet was apparent in pure adipose tissue. Connective tissue strands in the subcutis and corium/epidermis impeded the water jet, depending on the thickness of the fibres. Multiple successive connective tissue strands effectively shortened the range of action. No destruction of connective tissue was seen." Penetration of water into the corium



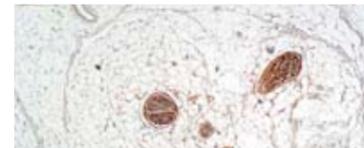
Blood vessels, CD34 endothelium staining, subdermal



Blood vessels, CD34 endothelium staining, subcutis



Nerves, S100 nerval staining, dermis



Nerves, S100 nerval staining supramuscular

and/or the epidermis would lead to edema, which would subsequently be drained via the lymph vessels. The present findings suggest that no scar formation is to be expected." "Wherever strands of connective tissue in the subcutis do not cushion the water jet before it reached the muscle layer, thin, diffuse distribution inside and between the individual muscle fibers would occur. Here, too, edema would result from the water penetrating the muscle tissue. This water would drain over the space of a few days through the lymph vessels. However, there could be transient swelling in the muscle fibers and probably slight tenderness in the muscles for a few days."

### Contact:

Professor M. Jünger, M.D., Department of Dermatology, Ernst-Moritz-Arndt-University, Greifswald; B. Arheilger M.D., University of Rostock, Germany

# Smooth and gentle on blood and lymph vessels – intact lipocytes

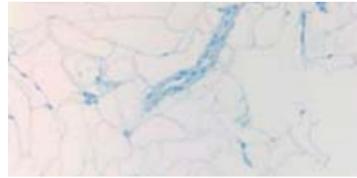
In a new study by Stutz and Krahl published in *Aesthetic Plastic Surgery* in 2009, the authors are concluding:

„A paradigm shift has occurred with the introduction of water-jet assisted liposuction. For this method no tumescence (firm-elastic infiltration condition with high tissue pressure) is necessary. Likewise no pre-infiltration period for the homogenisation of the adipose tissue is required. The aspiration procedure is started immediately after the anaesthesia has taken effect.“

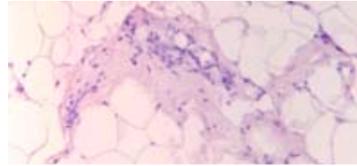
„The atraumatic, anatomically appropriate procedure of water-jet assisted liposuction (WAL; body-jet®) available today represents a promising

treatment for lipoedema patients who generally suffer from severe subjective and objective impairment. Liposuction treatment can bring long-term improvement if the operative technique focuses on lymph vessel preservation. Immunohistological analyses show minimal evidence of lymph vessel structures in lipoaspirates.“

„The histological analysis of the aspirates documents a relatively specific removal (‘‘apheresis’’) of primarily intact lipocytes with low vascular amount. In the lipoaspirates of 28 of the 30 investigated lipoaspirates



Intact lymph vessels in WAL aspirate (D2-40 antibody staining)



Intact lipocyte complexes in WAL aspirate with strands of collagen-fibrous connective tissue

(patients), the lipocytes were found to be predominantly (>70%) intact.“

„The analysis of liposuction aspirates from 60 lower extremities obtained from the inner knee area, which represents an especially high-risk region for this type of operation, showed that only minimal or no injury was done to the lymph vessels, if the liposuction procedure was performed strictly parallel to the axis of the lymph collectors. The immunohistochemical evaluation also confirmed the assumption that a state of tumescence is not required for the

water-jet assisted liposuction (WAL) procedure preserving the structural integrity of lymph vessels. It was also proven that, when the WAL technique is used, the pre-infiltration period for the tumescent fluid did not have to be observed.“

J.J. Stutz, D. Krahl: Water Jet-Assisted Liposuction for Patients with Lipoedema: Histologic and Immunohistologic Analysis of the Aspirates of 30 Lipoedema Patients. *Aesth Plast Surg* (2009) 33:153-162

## The influence of local anesthetics on the vitality of the pre-adipocytes

According to a study by Ueberreiter, Keck and Janke, the selection of the local anesthetic has a great impact on the vitality of the pre-adipocytes. In this investigation, human pre-adipocytes from the fat cell aspirate of 9 patients after liposuction with the body-jet® have been

incubated with a variety of local anesthetics. Afterwards the vitality of the cells was tested by FACS analysis.

**Conclusion:** Only Lidocaine and Articaine/Epinephrine are applicable for the preparation of infiltration

solution for liposuctions for the purpose of autologous fat harvesting.

M. Keck, J. Janke, K. Ueberreiter: Vitalitätsunterschiede von Präadipozyten unter dem Einfluß verschiedener Lokalanästhetika. *Handchir. Mikrochir. Plast Chir*, 2007, 215-219.

Used local anesthetic	Percentage of vital pre-adipocytes
Prilocain	21,7%
Ropivacain	58,8%
Articain, Epinephrin	65,3%
Lidocain	76,5%
Controls (NaCl)	92,8%

### Clinical Reports on the use of water-assisted lipoplasty (WAL) with the body-jet®

Water-assisted lipoplasty with the body-jet® is being described in the literature for the first time with 280 patients treated from October 1999 on.(1). Since then, the body-jet® is used for lipoplasty in Europe (e.g. in the UK, The Netherlands, Spain, Switzerland, Austria, Germany), in the USA, in Asia (e.g. Japan, Korea, Hong Kong, Singapore), in Australia, Saudi Arabia, Iran, Brazil, Venezuela, Australia and many other countries. Clinical publications and postmarket surveillance reporting do not indicate any case of a major adverse event.

### Clinical data on the safety of WAL with the body-jet®

For WAL with the body-jet® the incidence of complications and adverse events is very low.

In a study by Taufig (1), it is reported that no infections occurred in any of the 280 patients. In one case of 280 a hematoma appeared in the medial area of the knee. In none of the cases was there a seroma that could be clinically established. The occurrence of ecchymosis was very rare and in these few cases minimal. The previous sensitivity



## The Safety

### of Water-assisted Liposuction with the body-jet®

of the skin of the treated areas returned after 3 days to 6 weeks. (1)

In a prospective randomized trial of postoperative pain by Araco et al. comparing body-jet® WAL („power water-assisted“) and SAL („traditional“) liposuction (2), no postoperative events and no cases of hypovolemia, hemorrhages or infections were reported for WAL and SAL. However, statistical differences were found for ecchymosis measurements, bruising reduction, and pain measurements, as well as the number of daily analgesic pills.

The authors state that the „comparison of the pain measurements showed a significant difference, with average values 4.8-fold lower for power water-assisted (WAL body-jet®) than for traditional liposuction (SAL) (p < 0.05). Additionally, after 4 days, 87% (28/32) of patients treated with power water-assisted liposuction (body-jet®) were completely free of pain versus 3.6% (1/28) of those treated with traditional liposuction.“(2)

„Ecchymosis measurements also were significantly lower for the patients who underwent power water-assisted (body-jet®) rather than traditional liposuction (p < 0.05), and the differences were significant in every postoperative measurement.“(2)

Araco et al.: „Both techniques showed a dramatic bruising reduction at postoperative day 5. However, the scores were significantly lower for the power water-assisted liposuction (body jet®) in every assessment during the first 5 postoperative days.“(2)

In another study by Man and Meyer (3), the authors have found in more than 800 treatments with the body-jet® that

- „It is notable that patient safety has increased considerably, even in extensive procedures.“
- „There is significantly reduced pain-related impairment during and after the procedure compared with standard tumescent technique. Patients recover quickly and return to normal daily activities rapidly.“

- „Considerably less intraoperative swelling allows the surgeon to realize the target result with greater precision.“
- „Compared with the quantity of tumescent solution used in conventional manual lipoplasty, an average of 20% to 30% was used in preinfiltration“ (when using the body-jet®)
- „The length of time tumescent solution remains in the tissue, as well as the resulting absorption times, are all considerably lower for the recommended infiltration solutions (when using the body-jet®) compared with all other tumescence-based lipoplasty techniques.“ (3)

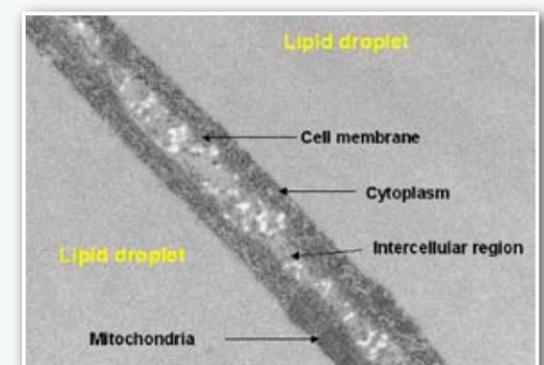
These last comments may have an aspect regarding discussions on cardiotoxicity of lidocaine and other drugs after high volume infiltration, and on volume-related electrolyte shifts that may occur during traditional liposuction techniques.

#### References:

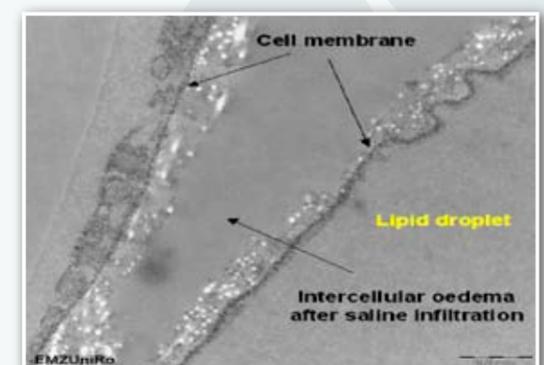
1. Taufig, A. Z.: Water-Jet Assisted Liposuction. In: *Liposuction – Principles and Practice*. Springer 2006; 326-330.
2. Araco, A., Gravante, M.D., Araco, F., Delogu, D., Cervelli, V.: Comparison of Power Water-Assisted and Traditional Liposuction: A Prospective Randomized Trial of Postoperative Pain. *Aesth. Plast. Surg.* 31: 259 – 265, 2007.
3. Man, D.; Meyer, H.: Water Jet-Assisted Lipoplasty. *Aesthetic Surgery Journal*, May/June 2007, 342 – 346.

## The effect of the body-jet® water spray during infiltration/irrigation. The loosening of fat cells – viewed by the electron microscope.

Picture 1  
Adipose tissue – normal finding prior to saline infiltration.



Picture 2  
Oedematous disintegration of the intercellular region. The cell membranes are separated by the saline spray.





## LipoCollector™ II

The new LipoCollector™ II serves to harvest large amounts of fat (more precisely micro-fragments of fatty tissue) from the aspirate of a water-jet assisted liposuction (body-jet®).

**NEW with pre-filter: even simpler – even better**

The new integrated filter basket prefilters the aspirate so that larger strands of tissue are less likely to block mesh filters or cannulae. Fat harvesting gets even easier! An additional foot ring adds stability against accidental tilting.

### Function

Aspirated fatty tissue and rin-

sing fluid are separated immediately by physical buoyancy and gravity; individually chosen mesh filters complete the separation process. While the fat is collected inside the sterile LipoCollector™ II, the fluid is lead further to the waste bag.

### BEAULI™ Cannulae

The all new, sterile single-use cannulae have been developed especially for the reinjection of fat harvested during WAL. The wing-shaped Luer connectors facilitate a firm grip, while the speciale shaped straight and side openings are tailor-made for the texture of the collected fat.

### ① BEAULI™ Infiltration

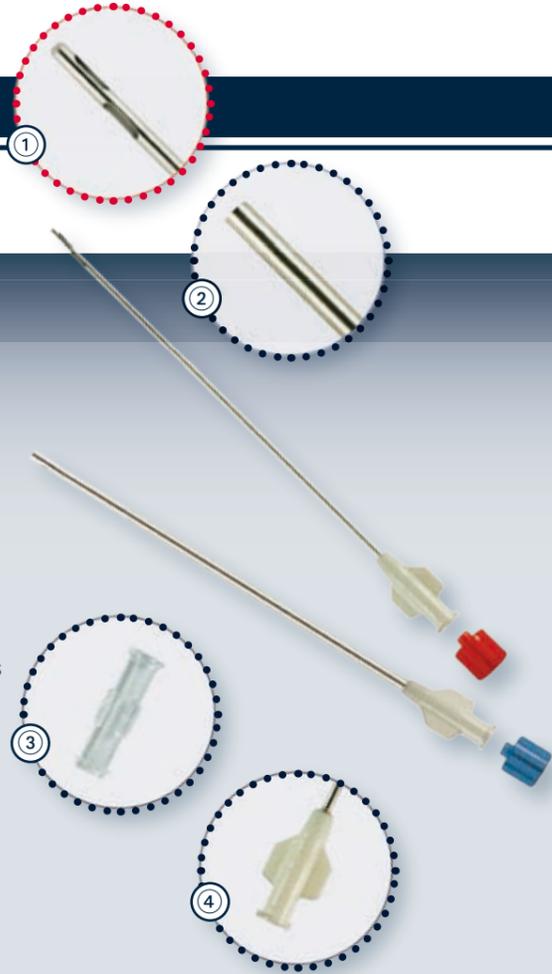
Cannula – for microtransfer of fat into soft tissues (autologous fat transfer)  
dimensions: Ø 2.0 mm;  
length = 150 mm

### ② Extraction Cannula – for sterile filling of transfer syringes

dimensions: Ø 3.0 mm;  
length = 155 mm

### ③ Luer-to-Luer-connector for direkt coupling of two syringes (e.g. of 50 to 10 cc)

### ④ Connector with wings for a better handling



### At a glimpse

- Up to 1 liter of fat during a liposuction
- Gentle
- Usually no centrifugation
- Fat for immediate use
- Complete, economical system

## The Lipo-Collector™ and other liposuction techniques than WAL

Quite often we receive the question whether the LipoCollector™ can be used in combination with other liposuction techniques.

The advantage of water-jet assisted liposuction (WAL) with the body-jet® is the gentle removal of adipocytes. This represents the most important precondition of a successful lipotransfer. The problem with other liposuction techniques is that longer exposure times are required for the tumescence solution to take effect at the area of fat cell removal. This can have a negative impact on the adipocytes, produced by swelling, maceration and absorption of local anaesthesia.. Other liposuction techniques are directly aimed at destroying the fat cells, like laser-, RF- and ultrasound-assisted methods.

However, with these other methods a reduction of the pre-infiltration time or shortening of the absorption time would inevitably increase the mechanical pressure which has to be exerted on the fat cells in order to remove them from the tissue.

### WAL has left behind the limits of classical TLA

Water-jet assisted liposuction (WAL) has left behind the limits of classical tumescence liposuction. WAL does not require large volume pre-infiltration, and does not have to destabilize the cell structure by diffusion and osmotic processes. The body-jet® spray injection of tumescence solution leads directly to an oedematous disintegration of the INTERCELLULAR region. Cell formations are separated from each other by the gently pressurized saline spray, thus loosening the cell structure including their attached stem cells. (please also refer to page 3 and the publication by Stutz and Krahl)

### The LipoCollector™ II collects and separates

The LipoCollector™ II directly separates the superfluous rinsing solution from the adipocytes. The integrated bypass avoids that further pressure is exerted on the fat cells. The upwelling of

the fat enables the water to flow downwards. In addition, the constant water flow prevents the fat from touching and clogging the built-in filter. The fat practically swims above the filter. Only by this method the continuous collection of up to 1 liter of fat is possible without any further intervention or processing.

Thus the continuous flow of rinsing solution (saline) of the body-jet® represents an important function during the collection of fat. If the LipoCollector™ II is combined with other liposuction systems available, like classic TLA or vibration-assisted liposuction, the LipoCollector™ II runs dry and clogs after a very short time. With other liposuction techniques available on the market, additional pressure would have to be applied on the collected fat to remove the rinsing solution. Liposuction methods which are based on destroying fat cells in the body via the application of energy are contrary to the grafting and transfer of adipocytes. Of course it appears useless to collect melted fat or oil.



**body-jet® users**  
on television / Internet

The body-jet® has appeared on many television and Internet reports which can be viewed e.g. on [www.thedoctorstv.com](http://www.thedoctorstv.com) or [www.youtube.com](http://www.youtube.com) or [www.mybodyjet.com](http://www.mybodyjet.com). In a CBS News story Dr. Gerald Pitman, noted New York City plastic surgeon and renowned expert on liposuction was featured on body-jet® liposuction. Dr. Pitman reports that the gentle action of the body-jet® liposuction improves accuracy, reduces bruising and swelling, while resulting in shorter recovery times. He states that the body-jet® "uses water to flush out the fat in more complete way than the former method." Dr. Pitman also noted that he uses the body-jet® because it is more efficient – „it shortens the procedure and results appear more quickly." (see [www.youtube.com/watch?v=PydDyd-w3b8](http://www.youtube.com/watch?v=PydDyd-w3b8))

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