

## Specific Risks of Fat Graft or Fat Transfer Procedures

Every surgical procedure involves a certain amount of risk and it is important that you understand these risks and the possible complications associated with them. In addition, every procedure has limitations. An individual's choice to undergo a surgical procedure is based on the comparison of the risk to potential benefit. Although most patients do not experience these complications, you should discuss them with your plastic surgeon at The Aesthetic Center by Kaiser Permanente to make sure you understand all possible risks of a fat graft or fat transfer procedure.

### Change in Appearance

Typically, the transferred fat loses some of its volume over time and then becomes stable. It is possible that more treatments may be needed to maintain the desired volume of the transferred fat and resulting appearance. Less commonly, if you experience significant weight gain, the transferred fat may increase in volume and cause an undesirable appearance. It is important to understand that more than one treatment may be needed and therefore to discuss with your surgeon the costs associated with repeat treatments.

### Firmness and Lumpiness

While most transferred fat results in a natural feel, it is possible that some or all of the fat may become firm, hard, or lumpy. If some of the fat does not survive the transfer, it may result in fat necrosis (death of transferred fat tissue), causing firmness and discomfort or pain. Cysts may also form at the site of the transferred fat. Surgery may be required to improve such conditions.

### Asymmetry

Symmetrical body appearance may not result from a fat transfer procedure. Factors such as skin tone, fatty deposits, bony prominence, and muscle tone may contribute to normal asymmetry in body features. It may not be possible to achieve or maintain exact symmetry following fat transfer.

### Under / Over Correction

The transfer of fat may not achieve the desired outcome. The amount of correction may be inadequate or excessive. It may not be possible to control the process of fat transfer due to factors attributable to each patient's situation. If under correction occurs, you may be advised to consider additional fat transfer procedure. If over correction occurs other surgical procedures such as liposuction or excision of the fat could be required.

### Long-Term Effects

Subsequent changes in the shape or appearance of the area where the fat was removed or placed may occur as the result of aging, weight loss or gain, or other circumstances not related to the fat transfer procedure.

### Tissue Loss

In rare cases, the transferred fat may cause the skin over the treated area to be injured resulting in loss of the skin and surrounding tissue. This may leave scars and disfigurement and require surgery for treatment.

### Seroma

Fluid may accumulate between the skin and the underlying tissues following surgery, trauma or vigorous exercise which is referred to as a seroma. You may notice an increase in fat graft area, localized swelling or a shape change that should alert you that a seroma may have occurred in your post-operative period. Seroma's should be addressed to prevent an unfavorable outcome. Should this problem occur, notify your surgeon and additional procedures for drainage of fluid may be required.

### Combined Procedures

Fat grafting is safe to be performed with other surgical procedures such as breast augmentation, revisional breast surgery and breast reconstruction. There are many other surgical procedures where fat transfer may be included including facelifts, abdominoplasty, liposuction, the treatment of open wounds, scleroderma, ulcers and scars to name just a few.

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### **Donor Sites**

The removal of fat in the process of fat transfer is often advantageous. The common complications from liposuction can occur at your donor site. Folds, wrinkles or creases could occur. Some patients may have inadequate donor sites for fat grafting. These are typically patients who have previously had a liposuction procedure.

### **Fat Necrosis**

Fat that is transferred may not survive. Fatty tissue found deep in the skin might die. Fat necrosis may produce areas of firmness within the skin, hard lumps, localized tenderness/ pain or skin contracture. Calcifications and oil cysts may occur. Additional surgery to remove areas of fat necrosis may be necessary. There is the possibility of contour irregularities in the skin that may result from fat necrosis.

### **Accidental Intra-Arterial Injection:**

It is extremely rare that during the course of injection, fat could be accidentally injected into arterial structures and produce a blockage of blood flow. This may produce skin necrosis in structures. The risk and consequences of accidental intravascular injection of fillers is unknown and not predictable.

### **Serious Complications**

Although serious complications have been reported to be associated with fat transfer procedures, these are very rare. Such conditions include, but are not limited to: fat embolism (a piece of fat may find its way into the blood stream and result in a serious or life threatening condition), stroke, meningitis (inflammation of the brain), serious infection, blindness or loss of vision, or death.

### **Blood Clots**

Blood clots (deep vein thrombosis; DVT) in the veins of the arms, legs, or pelvis may result from fat transfer if it is done as a surgical procedure. These clots may cause problems with the veins or may break off and flow to the lungs (pulmonary embolus; PE) where they may cause serious breathing problems.

### **Pulmonary Complications**

Pulmonary (lung and breathing) complications may occur from both blood clots (pulmonary emboli) and partial collapse of the lungs after general anesthesia. Should either of these complications occur, you may require hospitalization and additional treatment. Pulmonary emboli can be life-threatening or fatal in some circumstances. Fat embolism syndrome occurs when fat droplets are trapped in the lungs. This is a very rare and possibly fatal complication of fat transfer procedures.

### **Fat Transfer to the Breasts:**

Fat transfer has been used to improve the appearance of breasts reconstructed after cancer treatment, to improve the appearance of breast deformities, and to enlarge breasts for cosmetic purposes. While there is limited information regarding the long-term implications of such procedures, there are some potential concerns especially with regards to breast cancer detection. Since the transferred fat may become firm and cause lumps, it may be necessary to have radiological studies (mammogram, ultrasound, or MRI) performed to be sure these lumps are not due to cancer. It is also possible that the firmness may make it more difficult for you or your doctor to examine the breasts. It is also possible that a biopsy may be needed if there is concern about any abnormal findings in your breasts. However, there is no reason currently to believe that fat transfer procedures may cause breast cancer.

Fat Transfer to the breast for cosmetic augmentation may require additional surgical procedures to obtain your desired breast size. A limited amount of fat can be injected during each surgical procedure to maintain viability. Sometimes adjuvant devices (Brava) are recommended to assist in this process.

### **Fat Transfer to the Buttock:**

Buttock enhancement surgery potentially improves the buttock shape and increases the volume of the buttock. Large volumes of fat transfer are often required. However, the transferred fat may become firm and cause lumps, in addition to other risks such as infection, bleeding, seroma and fat necrosis. As discussed, fat resorption can also occur.

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**Fat Transfer to the Face:**

Fat can be placed throughout the face to give a more youthful appearance. Common areas of fat transfer include the temples, the folds around the mouth, cheeks & chin. This is an alternative to traditional fillers such as hyaluronic acid or hydroxyapatite. Because the fat is living, it is a more permanent solution. Fat transfer to the face may cause complications such as lumps, puffiness, infection, and bleeding. Vision abnormalities, including blindness, may occur in rare instances. In rare cases, fat transfer to the face can block oxygen supply to the brain, resulting in a stroke.

**Fat Transfer to the Hand:**

Fat can be transferred to the hands to re-contour them, give a more youthful appearance, and hide some of the underlying structures that become more apparent with age. Besides the complications related to fat grafting in general, fat transfer to the hands may cause swelling and bruising that may last for a prolonged period of time.