



Klinikum Nordfriesland

Husum • Niebüll • Tönning • Föhr-Amrum

*The Obesity
Treatment Concept
of the AZN*

Gastric Banding Intragastric Balloon Gastric Bypass



**Adipositas
Zentrum Nord**

Klinik Tönning

Selckstraße 13

25832 Tönning / Germany

www.band-n-bypass.com

www.klinikum-nf.de



The Adipositas Zentrum Nord (AZN) Help against Severe Obesity

Recently it has been officially confirmed that Germans are the most corpulent nation in Europe. More and more people suffer from this widespread disease known as "morbid" obesity. Lavish food, incorrect eating habits and a lack of exercise make the stomach and hips grow. For many of the affected people it is not just "a few kilos too much", indeed it has major implications for their health.

The "Adipositas Zentrum Nord" at the Klinikum Nordfriesland can help in many of these cases. The small clinic in Tönning and the "Abdominal Centre" at the Clinic in Husum are involved in the project. Regarding the surgical treatment of obese patients the Adipositas Zentrum Nord belongs to the largest providers in Germany. The surgical options include the "Gastric Bypass" as well as the implantations of adjustable Gastric Bands, "Intragastric Balloons" and all the revisional procedures needed in the growing field of "Bariatric (= Obesity-) Surgery".



Severe Obesity

is a disease according to the WHO (World Health Organisation). Untreated it leads to metabolic disorders such as diabetes, hyperlipidemia and hypertension, the so called "metabolic syndrome". They again can lead to further life-threatening problems like heart-attacks and strokes. Additional problems are those related to the joints and bones (eg. disc prolaps, arthrosis) and psychological ones like depressions and social isolation, some-



times even leading to suicide. Even certain types of cancer are more frequent in obese people, eg. the colorectal cancer.

All this has been statistically proven to lead to a drastically shortened life expectancy which stands in direct correlation to the excess weight. Obesity, alongside smoking, is seen as the most frequent preventable (or at least controllable) cause of death. Approximately 1.7% of adults in Germany are morbidly obese with a clearly increasing rate. Particularly scary is the fact that more and more children in Europe, Asia and USA are overweighted.

Obesity almost always has many causes. Scientifically speaking, many of the causes are genetically disposed (up to 70%), the rest is comprised of various environmental influences. So the disease itself is not directly curable, but many of the consequences are preventable. The serious treatment of obesity has to be individual, multimodal and long-dated ending up in a "Lifestyle-Changing". Esp. the long-term effect of any obesity-surgery is a very important factor, probably making the main difference to all other non-invasive treatments.

The Body Mass Index (BMI)

Whether a person is of normal weight or overweighted is defined by the so-called "Body Mass Index". The BMI value gives the weight in relation to height and is seen as the standard measure in obesity-therapy:

• Underweight	BMI below 19 kg / m ²
• Normal weight	BMI 19 to 24,9 kg / m ²
• Overweight	BMI 25 to 29,9 kg / m ²
• Obesity	BMI 30 to 34,9 kg / m ²
• Severe obesity	BMI 35 to 39,9 kg / m ²
• Morbid obesity	BMI 40 and more kg / m ²)



The Obesity Treatment Concept of the AZN

Based on the previously described insights of modern medicine, the Adipositas Zentrum Nord at the Klinikum Nordfriesland has devised a comprehensive, interdisciplinary range for the treatment of obesity. The treatment is based on five pillars: medical care including the whole range of non-invasive and surgical techniques, psychological and nutritional scientific monitoring, an exercise programme and the self-support.

The basis of the activities of the AZN is given by the obesity consultations in the Tönning Clinic, hold by Dr. Steffen Krause. Here are brought together the logistic and medical threads, including regular team sessions in which the individual therapy suggestions are worked out.

The medical pillar comprises all types of treatments mentioned above and also all the evaluations and follow-up's before and after the therapies. The surgical procedures not only include the bariatric techniques (like Gastric Banding and Gastric Bypass) but also the reconstructive and cosmetic surgery after weight loss (e.g. the abdominoplasty resp. tightening of the abdominal wall). There is also advice given regarding the application for health insurance funds for surgical obesity-related procedures as part of the service.

Heike Christiansen's scientific nutritional guidance and care serve to optimise the composition and the volume of food intake. The guidance has to be specific to the individual and carefully take into consideration each patient's personal problems. The goal is the development of strategies for the right way of eating in everyday life. There are close links to the behaviour-orientated psychological field, where in single or respectively group sessions, strategies suitable for daily use are elaborated with Gudrun Zepter.



from left to right: Dr. Steffen Krause, Claudia Meyer, Heike Christiansen, Gudrun Zepter



The exercise component serves the increase of energy consumption. On the one hand the exercise is meant to lay the foundations for the new phase of life and on the other hand it will help to break old patterns of behaviour in a psychologically effective way. Finally, the self-support has also proven itself as a very important co-factor of success.

Goal Setting and Check Up

Like any other treatment, the AZN obesity concept has to let itself be measured against defined therapeutic goals. The goals are that starting from morbid obesity, a previously determined feel-good weight is reached that will achieve at least a reduction of the BMI by 10 kg/m² or respectively a reduction of the excess weight by 50%. Further goals are of course to maintain the target weight, to improve the concomitant diseases as well as the quality of life and last but not least to increase the expectancy of life.

In Tönning these goals are achieved using the previously described concepts in terms of “evidence based medicine”. The therapists see themselves as an interdisciplinary team. They hold regular meetings, individualise treatments, evaluate and publish results and, of course, orientate all decisions using international scientific guidelines. Maximum possible consistency is ensured as, within one field of treatment, the care always stays in one and the same person’s hands, therefore the team is perfectly prepared for the long-term cooperation with its patients.

The participation in nationwide quality assurance studies and several publications concerning obesity surgery and the fact of being a “high volume centre” in this medical field have put the work of the AZN in the Klinikum Nordfriesland on a profound scientific level.



Dr. Steffen Krause



Surgical Procedures

Many decades of obesity surgery and research have led to an amazing variety of different procedures for the reduction of weight. The following list illustrates the most important requirements which need to be met in order to be able to offer bariatric surgery to an obese patient:

- BMI value greater than 35 – 40 kg / m²,
- The presence of so-called obesity-associated concomitant diseases.
- Previous serious, and in the end unsuccessful, attempts to lose weight.
- No medical reasons which would cause the use of general anaesthesia to be too risky to the individual.
- No medical reasons which would cause the use of obesity surgical procedure to present an unacceptable risk to the patient's physical or psychological condition.

Dr. Steffen Krause and his team check all the patient's suitability for obesity surgery through extensive talks and standardised test procedures. The patient furthermore receives detailed information about the various procedures and advices. The aftercare is also completely done in Tönning.

The Banding (Dr. Steffen Krause) and Balloon (Dr. Alfonso Grande) procedures are all done in Tönning whereas the Bypass is done in our Clinic in Husum (Dr. Jürgen Belz). The reconstructive operations again are all performed in our Clinic in Tönning (Dr. Rolf Schneider).



The Gastric Banding

The surgical method for the reduction of weight regarding morbid obesity used most frequently is the “minimally invasive implantation” (key hole technique) of a gastric band. Especially for the severely obese and the morbidly obese (BMI greater than 35 kg /m²) it very often is the procedure of choice as it carries the smallest risks by far regarding operation itself and anaesthesia. It is the only procedure which is individually adjustable even at a later date and also the only bariatric procedure which is almost completely reversible.

The implanted silicone band forms an artificial constriction between a very small pouch right at the top of the stomach just behind the stomach entrance (with the size of a tabletennisball), and the rest of the stomach. The small pouch is soon filled and the sensation of being full or satiety sets in. This leads to reduced calorie intake and thus to the desired weight loss.

The gastric band remains in the body for the rest of the patients life. A thin tube connects the gastric band to a port which is placed under the skin of the abdominal wall. The band can be individually adjusted via this port by using an injection of saline solution into the port, so the band becomes more or less tightened. This individual manipulation of the system is its great advantage compared to other invasive procedures. Using the gastric band, a reduction of the excess weight of roundabout 50% is to be expected even in the long-run. This rate of weight loss is very high compared to all other non-surgical methods for weight reduction.





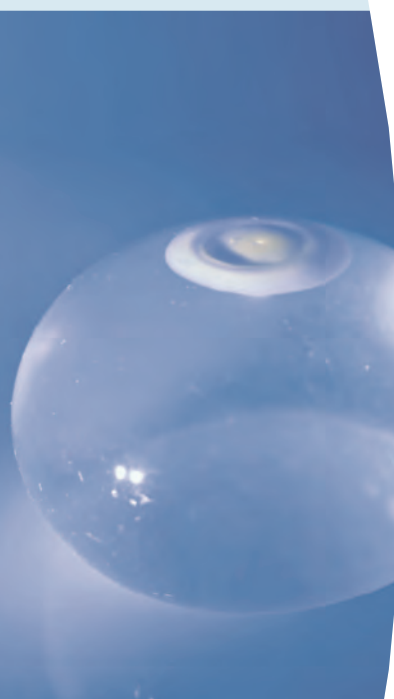
The Intra gastric Balloon

The intra gastric balloon is also made of silicone, it is inserted unfilled during a gastrocopy under a brief spell of anaesthetic. The balloon is then filled with saline solution (400 - 700 ml), so that it takes up a large part of the stomach and thus the space for consumed food is reduced. As a result the sensation of satiety can set in more quickly.

The balloon is mainly used in the moderately obese patients (BMI 30 to 35 kg / m²). This method's advantage is that no operation is necessary and thus the risks are very low.

The downside of this procedure is that it is limited to a maximum of 6 months. The balloon can be attacked by the stomach acid so that after this period of time there is the danger of faults in the material (leakiness) occurring. After the balloon's removal, the effect continues for about two months until the quantity of food which can be consumed increases again. After that, if needed and desired, a new balloon could be implanted.

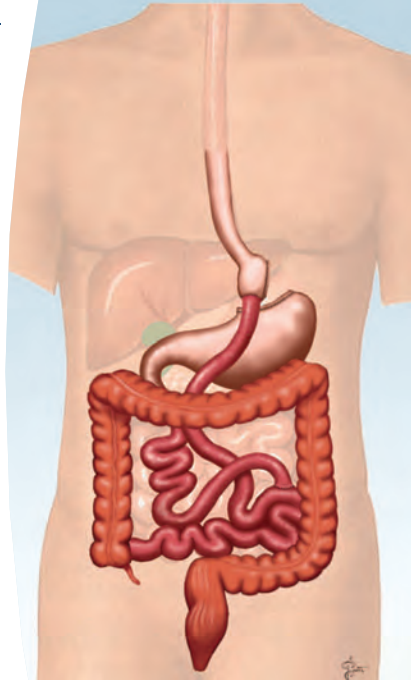
Due to the time limitation of the procedure the results are less than after gastric banding. Hence the balloon is only to be recommended as a part of interdisciplinary, multimodal and long-term therapy, such as offered in the AZN.



The Gastric Bypass

The gastric bypass operation, unlike gastric banding, is a longer and more invasive abdominal operation with consequently higher risks, although it is also performed as minimally invasive surgery. In return it can offer better long term results. Like in gastric banding, the stomach bypass reduces the quantity of food which can be consumed due to the formation of a small pouch. On top of that, the bypass facilitates a further calorie reducing effect as it does not let the chyme take the usual way through the rest of the stomach and the duodenum, but directly leads it into the small intestine in a kind of "short-cut". By this not all nutritional components and thus not all calories can be ingested by the body. This creates in the patient the lifelong need for dietary supplements, as without them the signs of nutritional deficiency are to be expected.

The gastric bypass operation is considered mainly for very high BMI values (greater than 50 kg / m^2 , also classified as "super obesity") and concurrent diabetes mellitus.





The small, popular resort of Tönning...



lies at the mouth of the river Eider at the North coast of Schleswig-Holstein, approximately 130 km North of Hamburg. Tönning itself (population 5000 inhabitants) lies in the holiday region "Nationalpark Holsteinisches Wattenmeer" on the Eiderstedt peninsula with St. Peter-Ording being the most well known holiday resort. Eiderstedt is characterised by a stiff breeze, lush green pastures, air containing iodine and a restful calmness.

The Nordfriesland Clinical Centre's Tönning Clinic ensures the medical provision of the „Eiderstedt“ region and „the North of Dithmarschen“ in close cooperation with the region's residential doctors. A dedicated and experienced team of workers provide this region's inhabitants and guests with high quality internal medical and surgical care.

In addition the centre has grown these medical fields to such a great extent over the last few years that the Clinic meanwhile is considered an authority in these fields. In addition to the AZN, the Tönning Clinic also provides surgical treatment of the varicose veins on the legs (phlebology, approx. 450 procedures a year), proctology (hindgut disease, rather painless piles operation) and cosmetic surgery (corrections of the female breast area, skin tightening after great weight reduction after large weight loss and facelifts among others).



Have you got any further questions?



Adipositas Zentrum Nord

Klinik Tönning

Dr. Steffen Krause
Selckstraße 13
25832 Tönning / Germany

Secretary: Frau Jansky
Tel. 0049 (0)4861 / 611-3310
Fax 0049 (0)4861 / 611-3334
E-mail: steffen.krause@klinikum-nf.de
www.band-n-bypass.com
www.klinikum-nf.de





Klinikum Nordfriesland gGmbH

www.klinikum-nf.de

Klinik Husum
Erichsenweg 16
25813 Husum
Fon 04841/660-0
Fax 04841/660-1333
husum@klinikum-nf.de

Klinik Tönning
Selckstraße 13
25832 Tönning
Fon 04861/611-0
Fax 04861/611-3334
toenning@klinikum-nf.de

Klinik Niebüll
Gather Landstraße 75
25899 Niebüll
Fon 04661/15-0
Fax 04661/15-2319
niebuell@klinikum-nf.de

Inselklinik Föhr-Amrum
Rebbelstieg 24
25938 Wyk/Föhr
Fon 04681/48-0
Fax 04681/50378
wyk@klinikum-nf.de



**Adipositas
Zentrum Nord**



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*Klinikum Nordfriesland
Kardiologische Praxis Dr. Geffert/Rack
Universitäres Herzzentrum Hamburg*



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