# Mona Lisa<sup>®</sup> N (ST Cu300)

Intrauterine Contraceptive Device

## PHYSICIAN INSTRUCTIONS

## Description

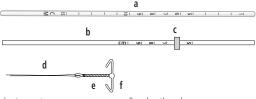
The Mona Lisa® N (ST Cu300) Intrauterine Device (IUD) is made of a T-shaped frame of polyethylene and barium sulphate. The ends of the side arms are bent down. The vertical arm is wound with copper wire. The copper surface is 300 mm<sup>2</sup>

Dimensions: 23.0 mm  $\pm$  0.1 mm wide and 29.1 mm  $\pm$  0.2 mm long.

The polyethylene frame and the wire are radiopaque.

The following insertion accessories are provided with the IUD:

- hvsterometer.
- insertion tube



a) hysterometer

Mona Lisa

ST Cu300

Intrauterine Device Insertion Accessories

Dispositif intra-utérin

Accessoires d'insertion

- b) insertion tube c) blue sliding flange
- d) nylon threads
- e) IÚD stem
- f) IUD side arms

## Mechanism of Action

The Mona Lisa® N (ST Cu300) is an intrauterine contraceptive device made of polyethylene and barium sulphate. The side arms are flexible and shaped in such a way as to keep the IUD adjacent to the fundus, without stretching the uterine cavity or touching the entrance of the fallopian tubes.

Mona Lisa® N (ST Cu300) IUD prevents pregnancy by blocking fertilization.

The contraceptive effect is likely due to a pronounced sterile inflammatory reaction, which takes place as a result of a foreign body response in the uterus. The concentration of various types of white blood cells, prostaglandins and enzymes in uterine and tubal fluids increases markedly. These changes interfere with the movement of sperm in the genital tract, reducing their potential fertilizing capacity, so that fertilization is not possible.

In the fallopian tubes, where fertilization is thought to take place, fewer sperm are found in copper IUD users than in non-users. Thus, the primary action is most likely altering the function or survival of sperm and ova before

After removal of the Mona Lisa® N (ST Cu300), fertility is promptly restored to the patient's normal fertility rate prior to insertion of the device.

Correctly inserted, the Mona Lisa® N (ST Cu300) IUD is safe for woman at low risk of sexually transmitted infection.

## Indication

PHYSICIAN INSTRUCTIONS DIRECTIVES AU MÉDECIN

Mona Lisa® N (ST Cu300) is indicated for:

- Intrauterine contraception in nulliparous and parous women;
- Women who require contraception but have contraindications or sensitivities to estrogen and or progestin:
- Women who require contraception and are breast feeding;
- Postpartum and post-abortion contraception.

Mona Lisa® N (ST Cu300) provides effective contraception for 3 years.

The pregnancy rate after the first year of use of Mona Lisa® N (ST Cu300) ranges from 0.5 to 1.5 per 100 women. The cumulative pregnancy rate is 2.5 per 100 women after the third year of use. 1,2,3

## Contraindications

Mona Lisa® N (ST Cu300) is contraindicated in the following situations:

- Pregnancy or suspicion of pregnancy
- 2. Past history of ectopic pregnancy
- Cervical or endometrial cancer 3.
- 4. Malignant trophoblastic disease
- 5. Puerperal sepsis
- Immediate post septic abortion
- Acute, subacute and chronic pelvic inflammatory disease (including a history of such an infection within the last 3 months)
- 8. Presence or suspicion of sexually transmitted infection.
- 9. Heavy or profuse menstrual bleeding
- 10. Uterine or cervical malformations (congenital or acquired)
- 11. Endometriosis
- 12. Vaqinal bleeding of unknown origin
- 13. Wilson's disease
- 14. Known allergy to copper
- 15. Conditions that can lead to or promote bacteremia (e.g. valvular defects, congenital heart disease)

## Warnings and Precautions

The Patient Package Insert must be given to the patient at the time of

Mona Lisa® N (ST Cu300) should be used with caution in patients undergoing anticoagulant therapy or suffering from a coagulation disorder.

Before inserting the IUD, a thorough medical history and an examination of the pelvic and abdominal cavity as well as a cervical smear are mandatory. Pregnancy, genital infections or sexually transmitted infections have to be excluded. The position of the uterus and the size of the uterine cavity must be determined to ensure correct insertion of the IUD.

Mona Lisa® N (ST Cu300) is designed for women with a uterine cavity depth of less than 6 cm.

## Post-partum and post-abortion application:

Postpartum women are at a higher risk of expulsion and uterine perforation. For post-partum and post-abortion application, placement may be delayed until complete involution of the uterus that is 6 weeks after an abortion or childbirth, and 12 weeks after a caesarean. Current data suggest that the risk of perforation of the uterus may be increased when insertions are made before normal uterine involution occurs.4

It is recommended that the patient return for a follow-up visit after the first menstruation after insertion. The patient must be re-examined to determine whether the IUD is properly placed and if there are signs of infection. Subsequent follow-up examinations are recommended to be performed annually.

Spotting, light bleeding, heavier or longer periods may occur in the first 3 to 6 months following insertion. These bleeding patterns are not harmful and usually decrease with time. If these events continue or are severe, they should be reported to the physician.

After insertion, the threads should remain outside the cervical canal, in the vagina. After each menstrual period the patient should be instructed to verify with a finger whether the threads of the device can be felt in the vagina. If the patient can not feel the threads or the patient senses the device, she should contact her physician.

If the threads are not visible in front of the cervix at a follow-up examination, they have been drawn up into the cervical canal or uterus and usually reappear during the next menstruation. The device may also have been expelled unnoticed. An ultrasound or an x-ray diagnostics should be performed to assess the situation after exclusion of a pregnancy.

If the nylon threads appear to be longer than at insertion, an ultrasound examination should be carried out to determine if the IUD has been displaced, which might decrease its contraceptive efficacy.

Pelvic inflammatory disease during IUD use should be treated without delay with appropriate antibiotics. There is no need to remove the intrauterine device unless symptoms fail to resolve within the following 72 hours.

Do not re-use the IUD device or its accessories.

## Pregnancy occurring with the IUD in situ

Diagnosis of ectopic or intrauterine pregnancy must be determined. Up to the end of the first trimester, if the threads are visible, the IUD should be removed. If the patient wishes to continue her pregnancy, she must be monitored closely by the physician. She should be informed about the risks of keeping the IUD in situ.

Beyond the first trimester, the patient should be informed of the possible risks of maintaining a pregnancy with the device in situ and termination of the pregnancy should be considered.

## Perforation

Perforation or penetration of the uterine corpus or cervix by the IUD may occur, most often during insertion. The number of uterine perforations is related to the experience of the person inserting the device.

In a large prospective comparative non-interventional cohort study in IUD users ( $\bar{N}$  = 61448 women), the incidence of perforation was 1.3 (95% CI: 1.1 – 1.6) per 1000 insertions in the entire cohort; 1.4 (95%CI: 1.1 – 1.8) per 1000 insertions in the LNG IUS cohort and 1.1 (95% CI: 0.7 – 1.6) per 1000 insertions in the copper IUD cohort.4

The study showed that both breastfeeding at the time of insertion and insertion up to 36 weeks after giving birth were associated with an increased risk of perforation (see Table). These risk factors were independent of the type of IUD inserted.

Table: Incident of perforation per 1000 insertions for the entire study cohort, stratified by Breastfeeding and time since delivery at insertion (parous women)

	Breast feeding at time of insertion	Not breastfeeding at time of insertion
Insertion ≤ 36 weeks after delivery	5.6 (95% CI 3.9-7.9; N=6047 insertions)	1.7 (95% CI 0.8-3.1; N=5927 insertions)
Insertion > 36 weeks after delivery	1.6 (95% CI 0.0-9.1; N=608 insertions)	0.7 (95% CI 0.5-1.1; N=41910 insertions)



The risk of perforation may be increased in women with abnormal uterine anatomy or with fixed retroverted uteri.

In the event of suspected perforation during insertion, remove the IUD immediately. There is a small risk of perforation occurring post-insertion. If perforation is suspected, the device should be located and its removal considered.

Uterine perforation may result in pregnancy. Delayed detection of perforation may lead to IUD migration outside the uterine cavity and/or injury to other adjacent organs.<sup>4</sup>

### Interactions

Published reports have indicated diminished efficacy in the presence of long term use of non-steroidal anti-inflammatory drugs (especially acetyl salicylic acid) and of corticoids. Short term use in the treatment of dysmenorrhoea with non-steroidal anti-inflammatory drugs does not appear to reduce contraceptive efficacy.

Do not perform diathermy (short wave or microwave) of the sacral or abdominal region since heating of the copper can damage the IUD and may cause heat injury to the surrounding tissue.

## Adverse effects

Adverse effects of intrauterine devices, including Mona Lisa® N (ST Cu300), are low but include the following:

## Bleeding:

Menstrual bleeding is sometimes stronger and of longer duration than normal, or is more painful. Iron deficiency anemia may then occur in individual cases. Slight intermenstrual bleeding, often in the form of spotting, may occur but usually subsides spontaneously.

### Pelvic Infection

The risk of pelvic infection (salpingitis), usually requiring removal of the intrauterine device and appropriate antibiotic treatment, may occur and may lead to subsequent infertility. Randomized, controlled studies indicate that any risk of genital tract infection after the first month of IUD use is small. Exposure to sexually transmitted infections (STIs), and not the use of IUD itself, is responsible for PID occurring after the first month of use.

## Pain or Dysmenorrhea:

Pain in the lower abdomen or sacral area may occur initially after insertion but usually subsides with time or with analgesic treatment. Pain may be a physiological response to the presence of the device, but the possibility of infection, improper positioning of the device (including perforation and migration), and pregnancy should be excluded. Delayed detection of perforation may lead to IUD migration outside the uterine cavity and/or injury to other adjacent organs, and unintended pregnancy.

## Other:

Certain women, in particular nulliparous women, are more susceptible to syncope, bradycardia and other neurovascular episodes during and immediately after insertion or removal of an intrauterine device.

Isolated cases of skin reactions have been described in the literature which may be attributable to copper allergy.

## Insertion

Verify that the user is not pregnant. The IUD must not be inserted if there is the possibility of pregnancy.

The best time for insertion is during menstruation to prevent insertion during non-diagnosed pregnancy. At this time the external and internal cervical os are physiologically dilated. This facilitates the insertion of the IUD without the need to dilate the canal in most instances.

Insertion immediately after unprotected coitus can increase the risk of PID. Mona Lisa® N (ST Cu300) can also be inserted within 15 minutes of delivery of the placenta or abortion in the first trimester. Note that there is a higher rate of expulsion in these instances.

If the Mona Lisa® N (ST Cu300) cannot be inserted immediately after delivery of the placenta or abortion, insertion should be delayed for at least six weeks. In case of caesarean section insertion should be delayed for 12 weeks after delivery. Prior to insertion, the vagina, cervix and cervical canal should be cleansed with an antiseptic solution, using e.g. a sterile cotton bud.

It is essential to determine the exact position of the uterus by bimanual pelvic palpation so that the Mona Lisa® N (ST Cu300) can be inserted along its longitudinal axis. This can be accomplished by grasping the anterior or posterior lip of the cervix, depending on whether the uterus is anteverted or retroverted.

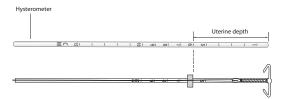
In case of vasovagal reactions after the use of a forceps a local anaesthetic can be injected in and around the cervix.

## Step-by-Step IUD insertion instructions

The Mona Lisa® N (ST Cu300) must be inserted by trained medical staff only.

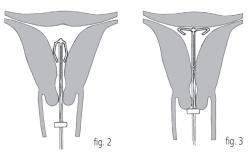
In order to minimize the risk of contamination, use sterile gloves. Use the enclosed sterile hysterometer (sound) to determine the depth and the direction of the uterus. Apply a tenaculum to the cervix and use gentle

traction to align the cervical canal with the uterine cavity. Gently insert the hysterometer into the cervical canal to measure the depth. Mark the uterus depth on the inserter tube using the blue sliding flange on the IUD. The upper end of the blue sliding flange should correspond with the measured uterus length (see fig. 1).



The uterus should sound to the depth of less than 6 cm except when inserting Mona Lisa® N (ST Cu300) post-partum or post-abortion. If you encounter cervical stenosis, avoid undue force. Dilators may be helpful in this situation.

- Open the sterile pouch containing the IUD and insertion accessories halfway and adjust the blue sliding flange so that the length of the insertion tube above it corresponds to the depth of the uterus as previously measured using the hysterometer (see fig.1).
- 2. Carefully remove the insertion tube with the IUD from the package. With the tenaculum fixed to the cervix and using gentle traction to align the cervical canal with the uterine cavity, carefully introduce the insertion tube with the Mona Lisa® N (ST Cu300) into the uterine cavity until it touches the fundus of the uterus. The sliding flange must be infleantact with the cervix (see fig.2 and fig.3).



Gently pull on the threads protruding from the insertion tube in order to feel whether the IUD is held by the lateral muscular wall of the uterus. After this check, gently push the insertion tube with the IUD upwards again until the sliding flange touches the cervical os.

 Remove the insertion tube carefully in a rotating movement in order to prevent the Mona Lisa® N (ST Cu300) being pulled out inadvertently (see fig.4). Cut the threads leaving 2-3 cm visible outside the cervix.



## Remova

Mona Lisa® N (ST Cu300) should be replaced after 3 years.

The Mona Lisa® N (ST Cu300) can be removed at any time during the cycle. The most appropriate time to remove the IUD is during menstruation, since both the internal and external cervical os are fully dilated. Grasp the threads of the IUD with a tenaculum and pull it along the longitudinal axis of the uterus. Try to insert the forceps at the entrance to the cervical canal in order to grasp the vertical arm of the Mona Lisa® N (ST Cu300) as soon as it has passed the internal cervical os. This avoids excessive tension on the threads, which could cause them to break. While doing this, distract the patients by asking her to cough and then remove the Mona Lisa® N (ST Cu300) with one firm tuo.

The removal of the IUD could cause slight pain and bleeding. The removal procedure may also precipitate a vasovagal attack or an epileptic seizure. After removal is complete, inspect the Mona Lisa® N (ST Cu300) to see that none of its arms have been left in the uterine cavity.

In case of a lost IUD or lost parts of an IUD in the uterine cavity either hysteroscopy or ultrasonography or x-rays should be used to determine

its location: curettage may be advisable. In very rare cases of uterine perforation, laparoscopy may be needed.

1 x 1 sterile Mona Lisa® N (ST Cu300) with insertion accessories.

The following insertion accessories are provided with the IUD:

- · hysterometer,
- · insertion tube.

## Pharmaceutical information

Each IUD is sterilized with ethylene oxide and is intended for single use only. Do not resterilize. Do not use if the pouch is damaged or open since it will not be sterile. Do not insert after the expiry date printed on the sterile pouch. After removal, the Mona Lisa® N (ST Cu300) should be disposed of as biomedical waste.

Store in a dry place, between 0 °C and 35 °C. Protect from direct sunlight and moisture.

## List of excipients

Copper, Polyethylene, Barium Sulphate, Polyamide 6.

# Nature and contents of container

The device (IUD) with accessories has been packed in heat sealed sterilized pouches made of Tyvek + PET/PE.

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Sterile

## References

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- K. H. Kurz and P. A. Meier-Oehlke: The CU SAFE 300 IUD, a new concept in intrauterine contraception: first-year results of a large study with follow-up of 1017 acceptors. Advances in Contraception, 1991;7:291-300.

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- IUDs. Advances in Contraception, 1995;11:123-129.
- Heinemann et al. Risk of uterine perforation with levonorgestrel-releasing and copper intrauterine devices in the European Active Surveillance Study on Intrauterine Devices, Contraception 2015; 91: 274-279.

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