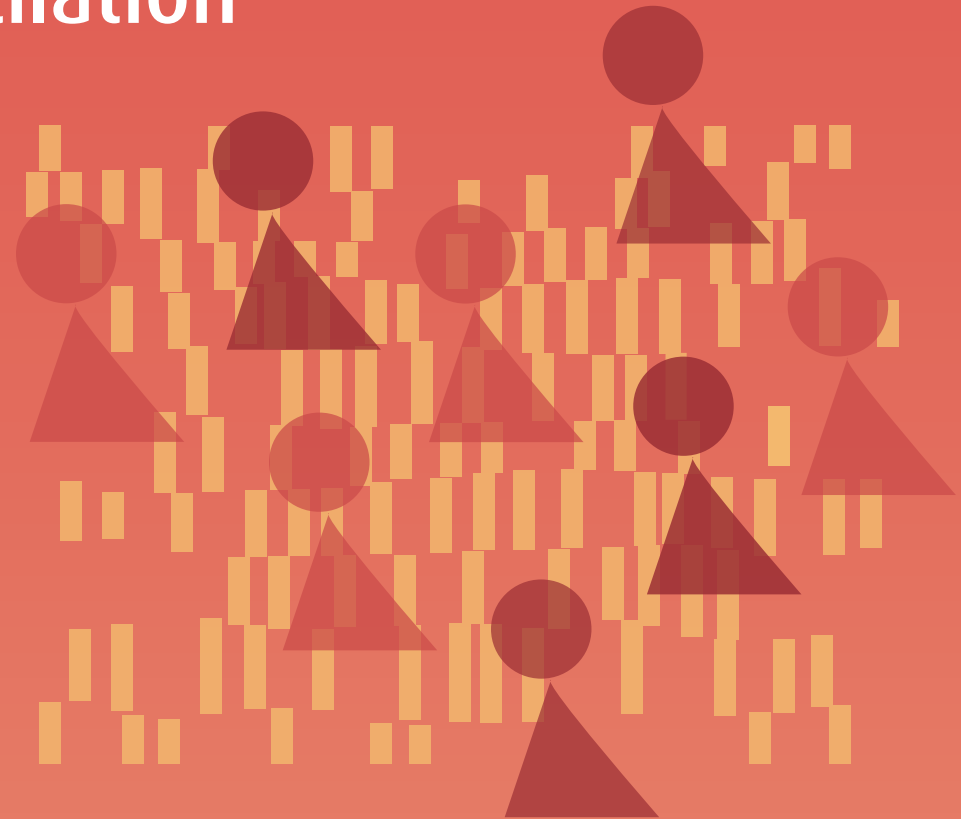


WHO guidelines on the management of health complications from female genital mutilation

May 2016

Web annex: GRADE tables



Full guidelines (English and translations) available at:

<http://www.who.int/reproductivehealth/topics/fgm/management-health-complications-fgm/en/>

WHO/RHR/16.05

© **World Health Organization 2016**

All rights reserved. Publications of the World Health Organization are available on the WHO website (www.who.int) or can be purchased from WHO Press, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel.: +41 22 791 3264; fax: +41 22 791 4857; e-mail: bookorders@who.int). Requests for permission to reproduce or translate WHO publications – whether for sale or for non-commercial distribution – should be addressed to WHO Press through the WHO website (www.who.int/about/licensing/copyright_form/en/index.html). The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters. All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

Recommendation 1

Question R1.a: Deinfibulation compared to women with infibulation to prevent and treat complications of type III FGM

Source: Okusanya BO, Oduwole OA, Nwachukwu NS, Meremikwu M. Deinfibulation for treating or preventing complications of type III female genital mutilation. 2015 (in preparation).

Quality assessment							No. of patients		Effect		Quality	Importance
No. of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Deinfibulation	Control	Relative (95% CI)	Absolute		
Episiotomy												
2 (1, 2)	Observational studies ^a	Serious ^b	Serious ^c	No serious indirectness	Serious ^{d,e}	None	62/417 (14.9%)	5/14 (35.7%)	OR 0.31 (0.09 to 1.1)	210 fewer per 1000 (from 310 fewer to 22 more)	⊕○○○ VERY LOW	CRITICAL
Caesarean section												
2 (1, 2)	Observational studies ^a	Serious ^b	No serious inconsistency	No serious indirectness	Serious ^d	None	98/457 (21.4%)	20/34 (58.8%)	OR 0.19 (0.09 to 0.39)	375 fewer per 1000 (from 230 fewer to 474 fewer)	⊕○○○ VERY LOW	CRITICAL
Postpartum haemorrhage (defined as > 500 ml of blood loss within the first 24 hours following child birth)												
1 (1)	Observational study ^a	Serious ^b	No serious inconsistency	No serious indirectness	Serious ^d	None	56/235 (23.8%)	9/18 (50%)	OR 0.31 (0.12 to 0.83)	263 fewer per 1000 (from 46 fewer to 393 fewer)	⊕○○○ VERY LOW	CRITICAL
Prolonged second stage of labour (duration not specified)												
1 (1)	Observational study ^a	Serious ^b	No serious inconsistency	No serious indirectness	Serious ^{d,e}	None	9/227 (4%)	1/14 (7.1%)	OR 0.54 (0.06 to 4.56)	32 fewer per 1000 (from 67 fewer to 188 more)	⊕○○○ VERY LOW	CRITICAL
Apgar score less than 7 at 1 minute of life												
2 (1, 2)	Observational studies ^a	Serious ^b	Serious ^f	No serious indirectness	Serious ^e	None	29/461 (6.3%)	4/38 (10.5%)	OR 0.56 (0.19 to 1.70)	43 fewer per 1000 (from 83 fewer to 61 more)	⊕○○○ VERY LOW	CRITICAL

CI: confidence interval; OR: odds ratio.

a Retrospective case–control.

b Downgraded by one for risk of bias in the selection of cases and controls.

c Overlap in confidence intervals and an I² of 68%.

d The number of participants in the control group relative to the intervention group relatively small.

e Wide confidence interval and uncertain magnitude of effect.

f Considerable overlap in confidence interval observed.

References:

1. Paliwal P, Ali S, Bradshaw S, Hughes A, Jolly K. Management of type III female genital mutilation in Birmingham, UK: a retrospective audit. *Midwifery*. 2014;30(3):282–8.
2. Raouf SA, Ball T, Hughes A, Holder R, Papaioannou S. Obstetric and neonatal outcomes for women with reversed and non-reversed type III female genital mutilation. *Int J Gynecol Obstet*. 2011;113:141–3.

Question R1.b: Deinfibulation compared to women with no FGM to prevent and treat complications of type III FGM

Source: Okusanya BO, Oduwole OA, Nwachukwu NS, Meremikwu M. Deinfibulation for treating or preventing complications of type III female genital mutilation. 2015 (in preparation).

Quality assessment							No. of patients		Effect		Quality	Importance
No. of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Deinfibulation	Control	Relative (95% CI)	Absolute		
Episiotomy												
2 (1, 2)	Observational studies ^a	Serious ^b	Serious ^c	No serious indirectness	Serious ^d	None	175/546 (32.1%)	185/504 (36.7%)	OR 0.79 (0.61 to 1.02)	53 fewer per 1000 (from 106 fewer to 5 more)	⊕○○○ VERY LOW	CRITICAL
Caesarean section												
1 (1)	Observational study ^a	Serious ^b	No serious inconsistency	No serious indirectness	Serious ^d	None	23/181 (12.7%)	28/144 (19.4%)	OR 0.60 (0.33 to 1.10)	68 fewer per 1000 (from 121 fewer to 15 more)	⊕○○○ VERY LOW	CRITICAL
Postpartum haemorrhage after vaginal birth (defined as > 500 ml of blood loss within the first 24 hours following child birth)												
1 (2)	Observational study ^a	Serious ^b	No serious inconsistency	No serious indirectness	Serious ^d	None	5/388 (1.3%)	2/388 (0.52%)	OR 2.52 (0.49 to 13.07)	8 more per 1000 (from 3 fewer to 58 more)	⊕○○○ VERY LOW	CRITICAL
Mean duration of second stage of labour (minutes)												
2 (1, 2)	Observational studies ^a	Serious ^b	No serious inconsistency	No serious indirectness	Serious ^d	None	546	504	NA	MD 0.18 lower (2.47 lower to 2.1 higher)	⊕○○○ VERY LOW	CRITICAL
Apgar score at 1 minute (Better indicated by higher values)												
1 (1)	Observational study ^a	Serious ^b	No serious inconsistency	No serious indirectness	Serious ^d	None	158	116	NA	MD 0.2 lower (0.5 lower to 0.1 higher)	⊕○○○ VERY LOW	CRITICAL
Apgar score at 5 minutes (Better indicated by higher values)												
1 (1)	Observational study ^a	Serious ^b	No serious inconsistency	No serious indirectness	Serious ^d	None	158	116	NA	MD 0.1 higher (0.16 lower to 0.36 higher)	⊕○○○ VERY LOW	CRITICAL
Vaginal laceration (all degrees)												
1 (1)	Observational study ^a	Serious ^b	No serious inconsistency	No serious indirectness	Serious ^d	None	18/158 (11.4%)	16/116 (13.8%)	OR 0.8 (0.39 to 1.65)	24 fewer per 1000 (from 79 fewer to 71 more)	⊕○○○ VERY LOW	CRITICAL
Mean blood loss (ml) (Better indicated by lower values)												
1 (1)	Observational study ^a	Serious ^b	No serious inconsistency	No serious indirectness	Serious ^d	None	158	116	NA	MD 9.5 higher (15.47 lower to 34.47 higher)	⊕○○○ VERY LOW	CRITICAL

Quality assessment							No. of patients		Effect		Quality	Importance
No. of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Deinfibulation	Control	Relative (95% CI)	Absolute		
Maternal hospital stay (days) (Better indicated by lower values)												
1 (1)	Observational study ^a	Serious ^b	No serious inconsistency	No serious indirectness	Serious ^d	None	158	116	NA	MD 0.3 lower (0.69 lower to 0.09 higher)	⊕○○○ VERY LOW	IMPORTANT

CI: confidence interval; MD: mean difference; NA: not applicable; OR: odds ratio.

a Retrospective case–control.

b Downgraded by one for the risk of selection bias in the selection of cases and controls.

c Variations in the size of effect and significant statistical heterogeneity.

d Uncertainty in the magnitude of effect and wide confidence intervals.

References:

1. Rouzi AA, Aljhadali EA, Amarin ZO, Abduljabbar HS. The use of intrapartum defibulation in women with female genital mutilation. *Br J Obstet Gynaecol.* 2001;108(9):949–51.
2. Rouzi AA, Al-Sibiani SA, Al-Mansouri NM, Al-Sinani NS, Al-Jahdali EA, Darhouse K. Defibulation during vaginal delivery for women with type III female genital mutilation. *Obstet Gynecol.* 2012;120(1):98–103.

Recommendation 2

Question R2: Antepartum deinfibulation versus intrapartum deinfibulation for childbirth in women with type III FGM

Source: Ekpereonne E, Udo A, Okusanya BO, Agamse D, Meremikwu M. Antepartum or intrapartum deinfibulation for childbirth in women with type III female genital mutilation. 2015 (in preparation).

Quality assessment							No. of patients		Effect		Quality	Importance
No. of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Antepartum deinfibulation	Intrapartum deinfibulation	Relative (95% CI)	Absolute		
Prolonged labour (second stage > 120 minutes)												
1 (1)	Observational study ^a	Serious ^b	No serious inconsistency	No serious indirectness	Serious ^c	None	9/42 (21.4%)	5/16 (31.3%)	OR 0.6 (0.17 to 2.18)	98 fewer per 1000 (from 241 fewer to 185 more)	⊕○○○ VERY LOW	CRITICAL
Perineal lacerations (second, third and fourth degree)												
2 (1, 2)	Observational studies ^d	Serious ^b	Serious ^e	No serious indirectness	Serious ^c	None	22/48 (45.8%)	12/29 (41.4%)	OR 0.79 (0.28 to 2.19)	56 fewer per 1000 (from 249 fewer to 193 more)	⊕○○○ VERY LOW	CRITICAL
Postpartum haemorrhage (defined as > 500 ml of blood loss within 24 hours following child birth)												
1 (1)	Observational study ^a	Serious ^b	No serious inconsistency	No serious indirectness	Serious ^c	None	19/42 (45.2%)	7/16 (43.8%)	OR 1.06 (0.33 to 3.39)	14 more per 1000 (from 233 fewer to 288 more)	⊕○○○ VERY LOW	CRITICAL
Episiotomies												
2 (1, 2)	Observational studies ^d	Serious ^b	Serious ^f	No serious indirectness	Serious ^c	None	30/48 (62.5%)	19/29 (65.5%)	OR 0.94 (0.34 to 2.58)	14 fewer per 1000 (from 263 fewer to 175 more)	⊕○○○ VERY LOW	CRITICAL

CI: confidence interval; OR: odds ratio.

- a Retrospective observational study.
- b Downgraded by one because of the risk of bias in the selection of cases and controls.
- c Downgraded by one due to uncertainty in the magnitude of the effect estimate and confidence interval.
- d One retrospective observational study and a case-control study.
- e Downgraded by one due to overlap in confidence intervals.
- f Downgraded by one due to wide overlapping confidence intervals in the meta-analysis and statistical significance of heterogeneity.

References:

1. Albert J, Bailey E, Duaso M. Does the timing of deinfibulation for women with type 3 female genital mutilation affect labour outcomes? Br J Midwif. 2015;23(6):430–7.
2. Paliwal P, Ali S, Bradshaw S, Hughes A, Jolly K. Management of type III female genital mutilation in Birmingham, UK: a retrospective audit. Midwifery. 2014;30(3):282–8.

Best practice statement 4

Question BP4: Providing information to improve body image and care-seeking behaviour of women and girls living with FGM

Source: Okoye I, Arikpo I, Nwadiaro R, Meremikwu M. Providing information to improve body image and care-seeking behaviour of women and girls living with female genital mutilation. 2015 (in preparation).

No. of studies	Design	Quality assessment					Other considerations	No. of patients		Effect		Quality	Importance
		Risk of bias	Inconsistency	Indirectness	Imprecision			Educational intervention	Control	Relative (95% CI)	Absolute		
Not recommending FGM for their daughters													
4 (1–4)	Observational studies	Serious ^a	Serious ^b	No serious indirectness	No serious imprecision	None	1102/2059 (53.5%)	186/1043 (17.8%)	OR 4.72 (3.91 to 5.69)	328 more per 1000 (from 281 more to 374 more)	⊕○○○ VERY LOW	CRITICAL	
Body image (Always shy to discuss FGM)													
1 (2)	Observational study	Serious ^a	No serious inconsistency	No serious indirectness	Serious ^c	None	66/136 (48.5%)	76/88 (86.4%)	OR 0.15 (0.07 to 0.3)	376 fewer per 1000 (from 208 fewer to 556 fewer)	⊕○○○ VERY LOW	IMPORTANT	
Body image (Never shy to discuss FGM)													
1 (2)	Observational study	Serious ^a	No serious inconsistency	No serious indirectness	Serious ^c	None	34/136 (25%)	34/88 (38.6%)	OR 0.53 (0.3 to 0.94)	136 fewer per 1000 (from 15 fewer to 227 fewer)	⊕○○○ VERY LOW	IMPORTANT	
New cases of FGM													
1 (3)	Observational studies	Serious ^a	No serious inconsistency	No serious indirectness	No serious imprecision	None	118/550 (21.5%)	26/272 (9.6%)	OR 2.58 (1.64 to 4.06)	119 more per 1000 (from 52 more to 205 more)	⊕○○○ VERY LOW	CRITICAL	

CI: confidence interval; OR: odds ratio.

a Risk of bias in selection of participants in the intervention and controls areas.

b Significant statistical heterogeneity.

c Downgraded by one for imprecision as only one small study contributed to this analysis.

References:

- Babalola S, Brasington A, Agbasimalo A, Helland A, Nwanguma E, Onah N. Impact of a communication programme on female genital cutting in eastern Nigeria. *Trop Med Int Health*. 2006;11(10):1594–603.
- Barsoum G, Rifaat N, El-Gibaly O, Elwan N, Forcier N. National efforts toward FGM-free villages in Egypt: the evidence of impact. *Poverty Gender Youth*. 2011;22:1–44.
- Diop NJ, Askew I. The effectiveness of a community-based education program on abandoning female genital mutilation/cutting in Senegal. *Stud Fam Plann*. 2009;40(4):307–18.
- Ouoba D, Congo Z, Diop NJ, Melching M, Banza B, Guiella G, Baumbarten I. Experience from a community based education program in Burkina Faso: The Tostan Program. Washington (DC): Population Council; 2004.

Best practice statement 5

Question BP5: Counselling versus no counselling prior to deinfibulation in women with type III FGM

Source: Bello S, Ogugbue M, Chibuzor MT, Okomo U, Meremikwu M. Counselling for deinfibulation in women with type III female genital mutilation. 2015 (in preparation).

Quality assessment							No. of patients		Effect		Quality	Importance
No. of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Counselling versus no counselling	Control	Relative (95% CI)	Absolute		
Deinfibulation												
1 (1)	Observational study	Serious ^a	Serious ^b	No serious indirectness	Serious ^c	None	29/49 (59.2%)	11/24 (45.8%)	OR 1.71 (0.64 to 4.59)	133 more per 1000 (from 107 fewer to 337 more)	⊕○○○ VERY LOW	CRITICAL
Re-infibulation												
1 (1)	Observational study	Serious ^a	Serious ^b	No serious indirectness	Serious ^c	None	9/49 (18.4%)	7/24 (29.2%)	OR 0.55 (0.17 to 1.71)	107 fewer per 1000 (from 226 fewer to 122 more)	⊕○○○ VERY LOW	IMPORTANT

CI: confidence interval; OR: odds ratio.

- a There is a risk of bias in the selection of participants.
- b Wide confidence intervals for only one study included in this outcome.
- c Very small number of participants from only one study.

Reference:

1. Wheeler ME, Burke M, Kramer T, Coddington C. Impact of antenatal counseling on management of patients with female circumcisions. *Obstet Gynecol.* 2005;105(4):76S.

Best practice statement 7

Question BP7: Providing information about the consequences of FGM to health-care providers caring for women and girls living with FGM to improve provider attitude and client satisfaction

Source: Oringanje C, Okoro A, Nwankwo O, Meremikwu M. Providing information about the consequences of FGM to health care providers caring for women and girls living with FGM to improve provider attitude and client satisfaction. 2015 (in preparation).

Quality assessment							No. of patients		Effect		Quality	Importance
No. of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Educational intervention	Control	Relative (95% CI)	Absolute		
Can name at least 3 types of long-term FGM complications												
1 (1)	Observational study	Serious ^a	Serious ^b	No serious indirectness	No serious imprecision ^c	None	42/59 (71.2%)	36/49 (73.5%)	RR 0.97 (0.77 to 1.22)	22 fewer per 1000 (from 169 fewer to 162 more)	⊕○○○ VERY LOW	IMPORTANT
Knowledge of any type of FGM												
1 (1)	Observational study	Serious ^a	No serious inconsistency	No serious indirectness	Serious ^d	None	56/59 (94.9%)	40/49 (81.6%)	RR 1.16 (1.01 to 1.34)	131 more per 1000 (from 8 more to 278 more)	⊕○○○ VERY LOW	IMPORTANT
Believed that FGM poses no health risks if carried out in a hygienic environment												
1 (1)	Observational study	Serious ^a	Serious ^b	No serious indirectness	Serious ^c	None	26/59 (44.1%)	14/49 (28.6%)	RR 1.54 (0.91 to 2.61)	154 more per 1000 (from 26 fewer to 460 more)	⊕○○○ VERY LOW	IMPORTANT

CI: confidence interval; RR: relative risk.

- a Selection of participants may have been related to intervention and outcome.
- b Wide confidence intervals from a single study.
- c Small sample size contributing to this analysis with uncertain magnitude of effect.
- d Small number of women contributing to this analysis.

Reference:

1. Diop NJ, Traoré F, Diallo H, Traoré O, Touré AH, Diallo Y et al. Study of the effectiveness of training Malian social and health agents in female genital cutting issues and in educating their clients. Bamako, Mali: Population Council; 1998.

Interventions for which no recommendations were issued

Question 1: Should clitoral reconstruction be used for treating female sexual dysfunction in women living with FGM?

Sources:

- Abdulcadir J, Rodriguez MI, Say L. A systematic review of the evidence on clitoral reconstruction after female genital mutilation/cutting. *Int J Gynaecol Obstet.* 2015;129(2):93–7.
- Thonnon C. Évaluation de la qualité de vie sexuelle après réparation d'excision. PhD Thesis, Université Claude Bernard Lyon; 2014.

Quality assessment							No. of patients		Effect		Quality	Importance
No. of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Surgical procedures	Control	Relative (95% CI)	Absolute		
Postoperative female sexual function index (FSFI) (follow-up 6 months; Better indicated by lower values)												
1	Observational study	Serious ^a	No serious inconsistency ^b	No serious indirectness	Serious ^c	None	10 15.5 (14.42)	10 38 (10.36)	NA	MD 22.5 lower (30.28 lower to 14.72 lower)	⊕○○○ VERY LOW	CRITICAL
Female sexual distress scale-revised (FSDS-R) (follow-up 6 months; Better indicated by lower values)												
1	Observational study	Serious ^a	No serious inconsistency ^d	No serious indirectness	Serious ^c	None	10 30 (25)	10 59 (24.6)	NA	MD 29 lower (44.37 lower to 13.63 lower)	⊕○○○ VERY LOW	CRITICAL
Chronic vulvar pain (follow-up 12 months)												
1	Observational study	Serious ^e	No serious inconsistency	No serious indirectness	No serious imprecision	None	14/840 (1.7%)	28/840 (3.3%)	RR 0.50 (0.27 to 0.94)	17 fewer per 1000 (from 2 fewer to 24 fewer)	⊕○○○ VERY LOW	CRITICAL
Dyspareunia (follow-up 12 months)												
1	Observational study	Serious ^e	No serious inconsistency	No serious indirectness	No serious imprecision	None	103/840 (12.3%)	202/840 (24%)	RR 0.51 (0.41 to 0.63)	118 fewer per 1000 (from 89 fewer to 142 fewer)	⊕○○○ VERY LOW	CRITICAL
Clitoral pleasure (Never reached orgasm)												
4	Observational studies	Serious ^f	Serious ^{g,h}	No serious indirectness	No serious imprecision ⁱ	None	507/930 (54.5%)	864/930 (92.9%)	RR 0.54 (0.44 to 0.68)	427 fewer per 1000 (from 297 fewer to 520 fewer)	⊕○○○ VERY LOW	CRITICAL
Psychological distress (follow-up 6 months)												
1	Observational study	Serious ^a	No serious inconsistency	No serious indirectness	Serious ^c	None	7/12 (58.3%)	12/12 (100%)	RR 0.60 (0.37 to 0.97)	400 fewer per 1000 (from 30 fewer to 630 fewer)	⊕○○○ VERY LOW	CRITICAL

Quality assessment							No. of patients		Effect		Quality	Importance
No. of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Surgical procedures	Control	Relative (95% CI)	Absolute		
Adverse outcomes												
4	Observational studies ^j	Serious ^a	No serious inconsistency	No serious indirectness	No serious imprecision	None	NA	0%	Not pooled	Not pooled	⊕○○○ VERY LOW	CRITICAL

CI: confidence interval; MD: mean difference; NA: not applicable; RR: relative risk.

a Downgraded by one because of the risk of bias in the selection of participants.

b Significant reduction in mean female sexual function index (FSFI) score following surgery compared with preoperative scores; $P < 0.00001$.

c Small sample of 20 patients from a single study.

d Significant reduction in mean FSFS-R score following surgery compared to preoperative scores; $P < 0.0002$.

e Downgraded by one. Loss to follow-up at one year was 71%.

f Downgraded by one. Non-validated scales used in assessing the outcome.

g Downgraded by one. Significant statistical heterogeneity observed; $I^2 = 85\%$.

h Two studies reported some women got worse clitoral response postoperatively.

i One additional study reported scores from a non-validated scale and found that at 6-month follow-up after surgery, the scores had improved significantly among women with type II/III FGM who underwent clitoral reconstruction (Thabet SMA, Thabet ASMA Defective sexuality and female circumcision: the cause and the possible management. J Obstet Gynaecol Res. 2003;29(1):12–9).

j Complication rates ranged from 5.3% to 40%. Readmission and reoperation rates ranged from 3.7% to 10% and from 3.7% to 4.2% respectively.

For more information, please contact:

Department of Reproductive Health and Research

World Health Organization

Avenue Appia 20, CH-1211 Geneva 27, Switzerland

E-mail: reproductivehealth@who.int

www.who.int/reproductivehealth

