

## Commented knowledge base source

**/\* Title \*/**

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The vaginal lining is normally well lubricated. It is kept clean by secretions from the glands which line the vaginal wall. The quantity of "normal" vaginal discharge may vary with the time of a woman's particular cycle, sexual arousal, or during pregnancy. Birth control pills and the use of intrauterine contraceptive devices (IUD) can also influence these secretions.

Consult this system for a CRUDE evaluation of vaginal discharge that may be abnormal in colour, consistency, odour, or quantity. Click Consult|Begin Consultation.

KB developed

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**/\* start section where rules are implemented \*/**

Sections

section start : 'start section'

**/\* always begin with this message (list of diagnoses recognised by the system) \*/**

(advice 'Causes of abnormal vaginal discharge include (this is not a complete exhaustive list): non-specific discharge (e.g., with pregnancy), pelvic inflammatory disease, bacterial vaginitis (Gardnerella and mixed), Trichomonas vaginitis, vaginal foreign object, cervicitis and cancer cervix (blood-stained discharge), allergy to deodorant douches or spermicides, Herpes genitalis (this has its own big list of differential diagnoses), etc.')

**/\* rule 1: diagnosis of pelvic inflammatory disease \*/**

if abd\_lowpelv\_pain = 'yes' AND dyspareunia = 'yes'

(advice 'Provisional diagnosis: Pelvic inflammatory disease.', stop)

**/\* rule 2: diagnosis of nonspecific discharge \*/**

if heavy\_normal\_disch = 'yes' AND vag\_pain\_irrit = 'no' AND birth\_control\_preg = 'yes'

(advice 'Provisional diagnosis: Nonspecific discharge.', stop)

**/\* rule 3: diagnosis of vaginal thrush (Candidiasis) \*/**

if white\_curd\_disch = 'yes' AND dyspareunia = 'yes'

(advice 'Provisional diagnosis: Vaginal thrush (Candidiasis).', stop)

**/\* rule 4: diagnosis of vaginal foreign object \*/**

if green\_yellow\_foulsmell = 'yes' AND FO = 'yes'

(advice 'Provisional diagnosis: Vaginal foreign object.', stop)

**/\* rule 5: diagnosis of Trichomonas vaginitis \*/**

if green\_yellow\_foulsmell = 'yes' AND FO = 'no' AND dyspareunia = 'no' AND frothy = 'yes'

(advice 'Provisional diagnosis: Trichomonas vaginitis.', stop)

**/\* rule 6: diagnosis of bacterial vaginosis (Gardnerella vaginalis) \*/**

if fishy\_gray\_disch = 'yes'

(advice 'Provisional diagnosis: Bacterial vaginosis (Gardnerella vaginalis). Look for co-existing gonorrhea, trichomoniasis, candidiasis or Chlamydia trachomatis infection.', stop)

**/\* rule 7: diagnosis of Herpes genitalis \*/**

if vag\_pain\_irrit = 'yes' AND genital\_blistr\_sores = 'yes'

(advice 'Provisional diagnosis: Herpes Genitalis.', stop)

**/\* rule 8: diagnosis of cervicitis or cancer cervix \*/**

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if blood_stained = 'yes'
    (advice 'Provisional diagnosis: Cervicitis or cancer cervix/cancer higher
up in the reproductive tract.', stop)
/* rule 9: diagnosis of allergy to deodorant douches or spermicides */
if allergic_deod = 'yes'
    (advice 'Provisional diagnosis: Allergic reaction to deodorant type
douches or spermicides.', stop)
/* the following message is displayed if none of the above rules applies */
(advice 'Please consult your doctor!')

/* parameters: conditions to be evaluated, with their possible values (yes or
no), explanations and names of associated pictures (pictures referred to
below are stored in separate picture database and files) */
Parameters
/* parameter FO */
parameter FO : 'Forgotten to remove a tampon or another foreign object in
vagina'
type category
explanation 'Foreign bodies in the vagina can produce a chronic, often foul
smelling discharge. A forgotten tampon left in for too long will produce a
discharge which is generally offensive in nature. Tampons should not be left
in for longer than 6 hours and it is sensible to alternate their use with a
sanitary pad, particularly at night. Toxic Shock Syndrome is linked with the
use of certain tampons, and poor hygiene when handling them.'
Options yes, no.
question 'Could you have forgotten to remove a tampon or have another foreign
object in your vagina?'
picture 'tampon'
/* parameter abd_lowpelv_pain */
parameter abd_lowpelv_pain : 'abdominal or lower pelvic pain/tenderness'
type category
explanation 'This may be a feature of pelvic inflammatory disease (PID), as
well as other conditions. PID can be acute with fever, subacute or chronic.
Sexually transmitted organisms, especially Neisseria gonorrhoeae and Chlamydia
trachomatis are implicated in the majority of cases. Complications of PID
include Fitz Hugh-Curtis syndrome, pelvic abscess, deep dyspareunia (pain
during intercourse), infertility or ectopic pregnancy.'
Options yes, no.
question 'Do you have abdominal OR lower pelvic pain/tenderness (sometimes
with fever)?'
picture 'abdom_lowrpelv_pain'
/* parameter allergic_deod */
parameter allergic_deod : 'using/allergic to deodorant type douches and
spermicides'
type category
explanation 'An allergic reaction to deodorant type douches and spermicides
can produce a vaginal discharge.'
options yes, no.
question 'Are you using/allergic to any deodorant type douches and
spermicides?'
picture 'female_genital_tract'
/* parameter birth_control_preg */
parameter birth_control_preg : 'currently on birth control pills, using an
IUD, or possibly pregnant'
type category
explanation 'The contraceptive pill, intra-uterine devices and pregnancy can
cause a vaginal discharge, but there should be NO accompanying pain or

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vaginal irritation. While oral contraceptive pills tend to lower the risk of pelvic inflammatory disease, intra-uterine devices give a 10-fold increase in the risk of developing pelvic inflammatory disease.'

Options yes, no.

question 'Are you currently on birth control pills, using an IUD, or possibly pregnant?'

picture 'preg'

*/\* parameter blood\_stained \*/*

parameter blood\_stained : 'blood stained vaginal discharge particularly after intercourse'

type category

explanation 'Other causes of vaginal discharge are inflammation of the cervix particularly in the case of cancer of the cervix and even cancer higher up in the reproductive tract. This often shows up as blood stained vaginal discharge particularly after intercourse.'

options yes, no.

question 'Do you have blood stained vaginal discharge particularly after intercourse?'

picture 'female\_genital\_tract'

*/\* parameter dyspareunia \*/*

parameter dyspareunia : 'dyspareunia'

type category

explanation 'Pain during sexual intercourse (lower abdominal/cervical motion/adnexal) is called dyspareunia, and is often a feature of pelvic inflammatory disease and Candidal vaginitis.'

Options yes, no.

question 'Do you have lower abdominal pain DURING sexual intercourse?'

picture 'abdom\_lowrplv\_pain'

*/\* parameter fishy\_gray\_disch \*/*

parameter fishy\_gray\_disch : 'fishy smelling gray discharge'

type category

explanation 'A sexually transmitted disease due to Gardnerella vaginalis can produce a foul smelling discharge, watery and grayish. There is little evidence of vulval or vaginal wall inflammation or dyspareunia as may be found in Candidiasis or Trichomoniasis.'

options yes, no.

question 'Is the vaginal discharge grayish, smooth with a fishy odour?'

picture 'female\_genital\_tract'

*/\* parameter frothy \*/*

parameter frothy : 'profuse and frothy trichomonas discharge'

type category

explanation 'A sexually transmitted disease due to Trichomonas vaginalis, an anaerobic motile protozoan, can produce a foul smelling discharge, yellow green in colour and often containing bubbles.'

options yes, no.

question 'Is the vaginal discharge profuse and frothy?'

picture 'trichomonas'

*/\* parameter genital\_blistr\_sores \*/*

parameter genital\_blistr\_sores : 'blisters OR sores in vaginal area, anal area, or groin'

type category

explanation 'Recurrent clusters of painful vesicles and erosions on an erythematous base in the genital area, usually triggered by stress, is a feature of genital Herpes Simplex, a common, viral, sexually transmitted disease.'

Options yes, no.

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question 'Do you have any blisters or sores to your vaginal area, anal area,
or groin?'
picture 'herpes_genitalis'
/* parameter green_yellow_foulsmell */    - Cont'd next page -
parameter green_yellow_foulsmell : 'vaginal discharge yellow-green and foul
smelling'
type category
explanation 'A sexually transmitted disease due to Trichomonas vaginalis, an
anaerobic motile protozoan, can produce a foul smelling discharge, yellow
green in colour and often containing bubbles. Foreign bodies in the vagina
can also produce a chronic, often foul smelling discharge.'
Options yes, no.
question 'Is the vaginal discharge yellow-green and foul smelling?'
picture 'female_genital_tract'
parameter heavy_normal_disch : 'vaginal discharge normal but just HEAVIER
than usual'
type category
explanation 'The contraceptive pill, intra-uterine devices and pregnancy can
increase the normal vaginal discharge.'
Options yes, no.
question 'Does the vaginal discharge appear normal but just HEAVIER than
usual?'
picture 'female_genital_tract'
/* parameter vag_pain_irrit */
parameter vag_pain_irrit : 'marked vaginal pain or irritation?'
type category
explanation 'Recurrent clusters of PAINFUL vesicles and erosions on an
erythematous base in the genital area, usually triggered by stress, is a
feature of genital Herpes Simplex, a common, viral, sexually transmitted
disease. Candidal and trichomonas vaginitis are usually associated with
vulval irritation/sore, but also have characteristic discharges (regarding
colour, odour, consistency). The contraceptive pill, intra-uterine devices
and pregnancy can cause a vaginal discharge, but there should be NO
accompanying pain or vaginal irritation.'
Options yes, no.
question 'Do you have MARKED vaginal pain or irritation?'
picture 'herpes_genitalis'
/* parameter white_curd_disch */
parameter white_curd_disch : 'vaginal discharge thick, white, and curd-
like/cheesy in consistency'
type category
explanation 'Infection due to a yeast fungus called Candida albicans may
occur. This produces a thick creamy cheese-like discharge which is associated
with itching and redness about the entrance to the vagina. Intercourse is
usually painful. This condition is often called vaginal thrush or monilia and
can also occur with pregnancy, the use of certain antibiotics and an over use
of sugar in the diet. Diabetes might also be present. Wearing tight jeans and
pantyhose can also encourage thrush.'
Options yes, no.
question 'Is the vaginal discharge white, and curd-like/cheesy in
consistency, but odourless?'
picture 'candidiasis'
/* end of knowledge base source */

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