



breast cancer
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Incorporating Perth Breast Cancer Institute



NIPPLE

Discharge

WHAT CAUSES

nipple discharge?

Nipple discharge is fluid leak from the nipple. There are about 10-15 milk ducts opening into the nipple, and discharge can come from one or several of these. Nipple discharge is very common and can occur in normal breasts. This is referred to as 'physiological discharge'. This type of nipple discharge usually occurs with massage or by squeezing of the nipple, or from pressure on the breast for example after a mammogram. It is usually yellow, green, or milky in colour and not a cause for concern. Milk production during pregnancy and for several months after stopping breast feeding, either spontaneous (without squeezing of the nipple or pressure) or on expression, is also physiological.

Some women with longstanding nipple inversion are aware of a thick, slightly offensive substance in the cleft. This is the result of the accumulation of skin debris and is not true nipple discharge. Likewise, curdy discharge that can be squeezed from the oil secreting glands on the nipple or areola is not to be confused with true discharge from the breast ducts

When nipple discharge is spontaneous and unrelated to pregnancy or breast feeding it is considered abnormal. There are many causes of abnormal nipple discharge. In most cases the cause is benign, that is, not related to an underlying breast cancer. Some of the benign causes of nipple discharge are described below :

- **Galactorrhoea** is pale milky discharge coming from several milk ducts that is not related to pregnancy or recent breastfeeding. It is often abundant, spontaneous and bilateral (coming from both breasts). It can be caused by abnormal production of a hormone called prolactin. This can be due to disease of certain



hormone-producing glands, such as the pituitary gland in the brain or the thyroid gland. Some drugs, such as oral contraceptives, HRT, antidepressants, opiate painkillers, and blood pressure medications can also cause high prolactin levels.

- **Thick yellow, green, or brown discharge** from multiple milk ducts, from one or both breasts, can result from a condition called duct ectasia. This is a benign dilatation of the milk ducts that is more frequent in women after the menopause.
- **A duct papilloma** is a benign growth of the cells lining of a milk duct. It may cause no symptoms, or cause nipple discharge, often from a single duct in one breast, either clear or blood-stained in appearance.
- **Eczema** of the nipple skin can cause a weepy crusty nipple discharge.

IS NIPPLE DISCHARGE LINKED WITH

breast cancer?

The great majority of nipple discharge is not associated with breast cancer, however a small proportion of women with breast cancer may have nipple discharge as the initial symptom. An underlying cancer is more of a concern if the discharge is from one breast only, arising from a single milk duct, blood-stained in colour, and associated with other symptoms such as a breast lump or inverted nipple. A particular type of breast cancer, called Paget's disease, is typically associated with discolouration or ulceration of the nipple skin, and can cause blood-stained nipple discharge.

HOW IS NIPPLE DISCHARGE

investigated?

The important features of nipple discharge that your doctor will ask about are whether the discharge comes from one milk duct or many, is induced or spontaneous, is coloured or blood stained, and whether it affects one or both breasts. The frequency and consistency of the discharge will be noted. Clinical breast examination by the doctor is also important, to note the presence or absence of a breast lump, or an abnormality affecting the skin of the nipple and areola.

Abnormal (non-physiological) discharge can be further investigated with a mammogram and/or breast ultrasound. Sometimes a smear of the discharge fluid can be sent for examination of the cells under the microscope – this is called cytology. Cytology is not very good at detecting cancer. However, when breast examination, mammogram and ultrasound are normal a smear showing normal cells can be reassuring. If any abnormality is found on any of these tests a breast biopsy may be needed. Colour changes, and eczematous changes, of the nipple and areola may also require a biopsy to exclude Paget's disease.

Prolactin and thyroid hormone levels are checked if discharge is bilateral, multi-duct and white.



HOW IS NIPPLE DISCHARGE

treated?

If the investigations reveal an underlying breast condition such as a papilloma, Paget's disease or breast cancer, then surgery may be required. If no abnormality is found after breast investigation, the discharge is managed according to whether it is from a single milk duct or from multiple ducts as follows:

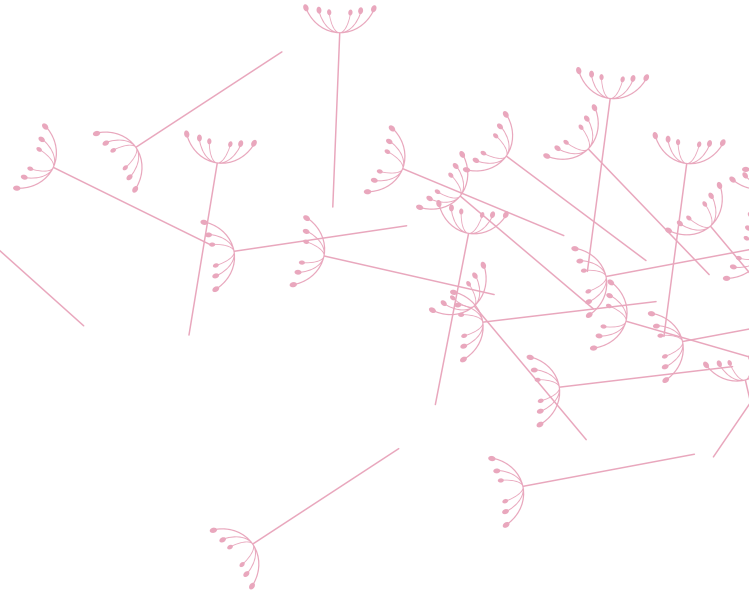
- **Multiple duct discharge** without worrying features, and not affecting quality of life, does not require treatment. If the discharge is associated with squeezing the nipple and breast, it is important to stop expressing, as the discharge will usually stop when stopping expressing. For women with persistent and/or bothersome discharge the milk ducts behind the nipple can be removed surgically. The operation is called total duct excision and is carried out through a small, curved incision around part of the areola.
- **Single duct discharge** which is not blood-stained and is intermittent can be reassessed with repeat mammogram and ultrasound at 12 months. Surgery is indicated if the discharge is either blood stained, or persistent (i.e. > twice per week) or associated with an underlying duct papilloma or with atypical cells on cytology. A single milk duct can be removed by an operation called microdochectomy. This requires identification and cannulation of the offending duct with a small probe prior to dissecting it out from surrounding breast tissue. A total duct excision is less likely to miss an underlying malignancy, and thus a good alternative for women not concerned with the ability to preserve breast feeding.

Nipple discharge is a common breast symptom. While it is usually benign and requires no specific treatment, it can indicate a more serious underlying condition. Therefore, it is important that a woman remains breast aware and consults her doctor if she has any concerns.



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Published by Breast Cancer Research Centre-WA August 2021