Information on NEUROLEPTIC MALIGNANT SYNDROME for Service Users and their Families

This leaflet provides general information about Neuroleptic Malignant Syndrome, a potentially serious side effect of your medication.

Neuroleptic Malignant Syndrome is also known as NMS.

The Mersey Care Medicines Information Service\(^1\) regularly updates this information sheet.

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**What is neuroleptic malignant syndrome (NMS)?**
Neuroleptic Malignant Syndrome is a rare but very serious and potentially life-threatening side effect of some medications, in particular antipsychotics. The cause of NMS is not known for certain but it is most commonly linked to medicines which block and stop a brain chemical called dopamine from working properly.

**What causes neuroleptic malignant syndrome?**
Antipsychotic medications are the most common cause of NMS but other medications that block dopamine can also cause this side effect. Taking combinations of medications that cause neuroleptic malignant syndrome can increase the risk of having NMS.

Other factors can also increase the risk of NMS, including:
- Being dehydrated or short of bodily fluids
- Brain conditions such as brain tumours, dementia and so on
- If you or a close family member has suffered NMS in the past
- Illegal drugs like cocaine, amphetamines and ecstasy may also cause symptoms of NMS.

**Which medicines cause neuroleptic malignant syndrome?**
Apart from antipsychotics, other medicines that can cause NMS include:
- Medications for treating depression or antidepressants
- Medications for sickness and vomiting such as domperidone, prochlorperazine, metoclopramide, promethazine,
- Stopping medications for Parkinson’s disease such as levodopa, bromocriptine, amantadine, cabergoline abruptly or dropping the dose too quickly
- Lithium

NMS occurs more commonly at the start of treatment or when higher doses (or overdoses) of these types of medication are used. It is also more likely to occur when the dose of such medications is increased too quickly or when combinations of medications that can cause NMS are taken together. For example, taking combinations of antipsychotics, or using antipsychotics with lithium or antidepressants, may increase the risk of NMS developing. However, NMS can occur at any time during treatment even with a stable dose of the affected medication.

Other medicines not listed here may also cause NMS. Always tell your doctor or pharmacist what medicines you take.
What are the symptoms of NMS?
Neuroleptic malignant syndrome is characterised by;
- High temperature and fever
- Excessive sweating
- Muscle stiffness
- Feeling mentally confused and disoriented
- Feeling delirious – you may see and hear things that are not there
- Drooling or dribbling saliva
- Unstable blood pressure
- Faster breathing, racing pulse and irregular heart beat
- Incontinence, wetting yourself
- Abnormal blood tests
- Muscle breakdown
- Fits (seizures)
- In serious cases, losing consciousness, going into coma and death

What to do if you think you have NMS
Neuroleptic Malignant Syndrome is a medical emergency and is best managed in a general hospital. NMS can have very serious, even life-threatening consequences if it is not recognised early and treated quickly.

If you suspect that you have NMS, you should seek immediate advice from your GP or specialist or go to your nearest hospital Accident and Emergency Department for an urgent treatment. You will be given treatments to urgently relieve the serious symptoms neuroleptic malignant syndrome and monitored closely in hospital. You will also be provided with any other supportive treatments that may be necessary. Any medications that are likely to be involved in the development of NMS should be stopped immediately.

Continuing with treatment after an episode of NMS
Your doctor will review your treatment after an episode of neuroleptic malignant syndrome. If you need to continue on medication, your doctor will wait until you are fully recovered before prescribing a medication with a lower risk of NMS. You may also be able to use a lower dose of the same medication with very small and gradual increases in the dose. Always be aware of the possibility of NMS when taking medications to treat your illness.