

# **CLINICAL GUIDELINE**

# Paracetamol use and guidance in pain management Acute Pain Service, Royal Alexandra Hospital

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

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Lead Author:	Louise Ganeswaran
Approval Group:	Clyde Sector Clinical Governance Forum

### **Important Note:**

The online version of this document is the only version that is maintained. Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

NHS
Greater Glasgow and Clyde

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Authors – Louise Ganeswaran CNS Acute Pain Management,

Kirsty Murray CNS Acute Pain Management

Approved by – Dr Guy Fletcher Consultant Anaesthetist

#### **Aim of Guideline**

• Use and guidance on paracetamol in management of pain

#### **Contact Details**

Monday - Friday 0800 - 1600

Mobile - 07929 048 462

Office - 0141 314 7099 ext 07099

Paracetamol is an effective analgesia to treat mild to moderate pain. It also improves the effect of other analgesia in the treatment of moderate to severe pain.

# **Medical Forms of Administration**

- Tablet
- Effervescent tablet
- Orodispersible tablet
- Capsule
- Oral suspension
- Oral solution
- Solution for infusion
- Suppository

Only use one route of administration at a time

# Dose

1000mg four times daily is the maximum dose

Consider dose reduction in patients with low body weight (<50kg), renal/hepatic impairment or glutathione deficiency (chronic malnourishment, chronic alcoholism) to 15mg/kg/dose up to four times daily/max 60mg/kg/daily. An example is: paracetamol oral 500mg four times daily. In patients with hepatocellular insufficiency, a dose reduction of the oral preparation should be determined on a case by case basis with senior medical input. N.B. Patients with chronic liver failure may require a further dose adjustment (7.5mg/kg/dose, max 30mg/kg/daily).

#### **General Cautions**

- Haematology/ICU patients where pyrexia or sepsis may be masked
- Hepatic failure
- Renal impairment
- Low weight
- Before administration, check when paracetamol was last administered and cumulative paracetamol dose over previous 24 hours, body weight if under 50kg.
- Please see <a href="https://bnf.nice.org.uk/interactions/paracetamol">https://bnf.nice.org.uk/interactions/paracetamol</a> for current advice on interactions
- Paracetamol is also used in other medicines such as co-codamol, dihydrocodeine, cold and flu remedies which can also be bought over the counter

#### Intravenous Paracetamol

Use is restricted to certain clinical areas. Consultants, Clinical Nurse Specialists in Pain Management and Anaesthetists are able to prescribe IV paracetamol only Short-term treatment of moderate pain following surgery, and for the short-term treatment of pyrexia, when administration by IV route is clinically justified. If used, change to oral route as soon as possible.

Maximum dose of IV paracetamol must not exceed 3000mg/day in patients with:

- Hepatocellular insufficiency
- Chronic alcoholism
- Chronic malnutrition/lower serves of hepatic glutathione)
- Dehydration
- In overdose, paracetamol IV may possibly be more toxic than the oral route. See
   www.toxbase.org (password required) for management

#### Administration

Infuse the ready-made solution over 15 minutes. For doses <1000mg, remove and discard excess drug/volume then administer the required amount.

#### **IV Paracetamol Dose**

Varies depending on weight, renal function and other co-morbities. See general cautions, notes and dosing table below to determine dose.

 Low weight (<50kg) or renal impairment (CrCl <30m/minute) reduce dose using the table below.

Table 1 – IV Paracetamol Dosing Table

Patient Group	Dose	Dosage Interval	Maximum Daily
			Dose
Adults >50kg	1000mg up to four times daily	Four hourly	4000mg
Adults 33 – 50kg	15mg/kg per	Four hourly	60mg/kg without
	administration		exceeding 3000mg
Adults >10 – 33kg	Seek advice from		
	your clinical		
	pharmacist or		
	Medicines		
	Information		
Renal impairments	As above,	Six hourly	As above,
with CrCl 10 –	depending on		depending on
30ml/min*	weight		weight

<sup>\*</sup>If ClCr <10ml/minute recommended 500mg – 1000mg every 6 – 8 hours

**Side-effects** 

**General side-effects** 

Rare or very rare – Thrombocytopenia

**Specific side-effects** 

Common or very common

With rectal use - Anorectal erythema

Rare or very rare

With IV use - Hypersensitivity; hypotension; leucopoenia; malaise; neutropenia

**With rectal use** – Angioedema; liver injury; severe cutaneous adverse reactions (SCARs); skin reactions

# Frequency not known

With IV use – flushing; skin reactions; tachycardia

**With oral use** – Agranulocytosis; bronchospasm; herpetic function abnormal; rash; severe cutaneous adverse reactions (SCARs)

With rectal use – Agranulocytosis; blood disorder

### **Overdose**

Liver damage and less frequently renal damage can occur following overdose.

Nausea and vomiting, the only early features of poisoning, usually settle within 24 hours.

Persistence beyond this time, often associated with the onset of right subcostal pain and tenderness, usually indicates development of hepatic necrosis

# **Pregnancy and Breastfeeding**

Not known to be harmful

Amount too small to be harmful in breast milk

### Reference

- GC Therapeutic handbook Paracetamol
   https://handbook.ggcmedicines.org.uk/guidelines/acute-pain-and-post-operative-nausea-and-vomiting/prescribing-notes-for-acute-pain/
- BNF https://bnf.nice.org.uk/drugs/paracetamol/#indications-and-dose

	NHSGGC Clinic	al Guideline Fra	mework a	ind suppor		document f		stance on completing
this checklist. You can also contact <u>clinical.guidelines@ggc.scot.nhs.uk</u> if you would like any additional support with the checklist or clinical guideline approval process. <b>PLEASE NOTE: the checklist should be downloaded for completion.</b>								
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Clinical Guideline Search Terms please provide below a list of search terms (please see guidance document)						
Search Terms: RAH Acute Pain, RAH paracetamol						
Guideline Approved	Guideline Approved with provisos	Guideline not approved	Date			
Name of Approving Group:	Choose an item.					