This guideline provides prescribing and monitoring advice for oral ibandronic acid therapy which may or may not follow zoledronic acid infusions in secondary care. It should be read in conjunction with the Summary of Product Characteristics (SPC) available on www.medicines.org.uk/emc and the BNF.

BACKGROUND FOR USE
Bisphosphonates are indicated for reduction in the risk of developing bone metastases and risk of death from breast cancer in post-menopausal patients who have had curative treatment for breast cancer, i.e. this is an adjuvant treatment. A meta-analysis of individual participant data from 26 randomised controlled trials (RCTs) including 18,766 women with early breast cancer (the Early Breast Cancer Trialists’ Collaborative Group [EBCTCG] meta-analysis 2015) has shown that at 10 years the absolute reductions in the risk of breast cancer mortality, bone recurrence and all-cause mortality in post-menopausal women were 3.3%, 2.2% and 2.3% respectively. Bone fractures were also reduced by 15%, which is highly relevant as many of the patients offered adjuvant bisphosphonates will also be recommended to have adjuvant aromatase inhibitor treatment that can cause loss of bone density and bone fractures.

In line with cancer services in Oxfordshire and other areas, we have chosen to use zoledronic acid for intravenous administration and ibandronic acid for oral administration due to availability and relatively low cost. These medications are licensed for use in patients with osteoporosis and metastatic breast cancer. Usage in the adjuvant setting for breast cancer patients is not licensed but it is commonly used in the UK now and has been recommended by NICE guidelines for this patient group.

MODE OF ACTION
Bisphosphonates are adsorbed onto hydroxyapatite crystals in bone, slowing both their rate of growth and their dissolution and therefore reducing the rate of bony turnover.

PATIENT SELECTION
In line with NICE guidelines, adjuvant bisphosphonates should be offered to post-menopausal breast cancer patients with node positive disease (which we believe means macrometastatic nodal disease) and considered for node negative disease patients with a high risk of relapse, provided there is no contraindication for bisphosphonates. To assist with appropriate patient selection, the specialist can quantify the potential survival benefit with the use of bisphosphonates by using the online NHS PREDICT modelling system.

CONTRAINDICATIONS AND PRECAUTIONS

<table>
<thead>
<tr>
<th>Condition</th>
<th>Precaution/Advice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancy and breastfeeding</td>
<td>Not applicable – being used in post-menopausal patients</td>
</tr>
<tr>
<td>Children &lt;18 years</td>
<td>Not applicable – being used in post-menopausal patients</td>
</tr>
<tr>
<td>Hypersensitivity to the active substance or any of the excipients</td>
<td>Avoid</td>
</tr>
<tr>
<td>Hypocalcaemia</td>
<td>Withhold treatment until able to correct calcium</td>
</tr>
<tr>
<td>Abnormalities of oesophagus that delay oesophageal emptying such as stricture or achalasia</td>
<td>Avoid ibandronic acid</td>
</tr>
<tr>
<td>Inability to stand or sit upright for at least 60 minutes</td>
<td>Avoid ibandronic acid</td>
</tr>
<tr>
<td>Hereditary problems of galactose intolerance, Lapp lactase deficiency or glucose-galactose malabsorption</td>
<td>Avoid ibandronic acid as it contains lactose</td>
</tr>
</tbody>
</table>
DURATION
1. Patients receiving adjuvant or neoadjuvant chemotherapy who have normal vitamin D and have had a dental check with necessary dental work completed, can have zoledronic acid every 6 weeks alongside the chemotherapy; if a patient has one or more infusions of zoledronic acid with chemotherapy then he/she should be offered 2.5 years of oral ibandronic acid afterwards.
2. Patients who do not have zoledronic acid should be offered 3 years of oral ibandronic acid.
3. If oral ibandronic acid is not tolerated, the patient should be referred by the GP back to the Oncologist for consideration of zoledronic acid IV 6 monthly to complete 3 years of treatment.
4. At the end of the course, no further bisphosphonate treatment is normally required.
5. Patients should be given supplements with calcium and vitamin D, e.g. AdcalD3® or Calceos® 2 tablets PO daily; unless dietary calcium intake is adequate to allow a lower dose or no supplements. See Appendix 1 for patient assessment of calcium intake. If calcium intake is adequate then patients can buy vitamin D 800 units once daily over-the-counter (OTC).

DOSE
Zoledronic acid

<table>
<thead>
<tr>
<th>Creatinine Clearance (ml/min)</th>
<th>Zoledronic Acid Recommended Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;60</td>
<td>4.0 mg zoledronic acid</td>
</tr>
<tr>
<td>50 - 60</td>
<td>3.5 mg zoledronic acid</td>
</tr>
<tr>
<td>40 - 49</td>
<td>3.3 mg zoledronic acid</td>
</tr>
<tr>
<td>30 - 39</td>
<td>3.0 mg zoledronic acid</td>
</tr>
</tbody>
</table>

Creatinine clearance is calculated from serum creatinine using the Cockcroft-Gault formula. Zoledronic acid is not recommended for patients presenting with severe renal impairment prior to initiation of therapy, which is defined for this population as creatinine clearance <30 ml/min. In clinical trials with zoledronic acid, patients with serum creatinine >265 micromol/l or >3.0 mg/dl were excluded.

Following initiation of therapy, serum creatinine should be measured prior to each dose of zoledronic acid and treatment should be withheld if renal function has deteriorated. In the clinical trials, renal deterioration was defined as follows:
- For patients with normal baseline serum creatinine (<124 micromol/l), an increase of 44 micromol/l;
- For patients with abnormal baseline creatinine (>124 micromol/l), an increase of 88 micromol/l.

In the clinical studies, zoledronic acid treatment was resumed only when the creatinine level returned to within 10% of the baseline value. Zoledronic acid treatment should be resumed at the same dose as that given prior to treatment interruption.

Administration of zoledronic acid must be as described in the injectable medicines guide - see Guideline 222 Adult and Paediatrics Injectables Guide.

Ibandronic acid

<table>
<thead>
<tr>
<th>eGFR ≥50 ml/min</th>
<th>50 mg once daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>eGFR 30 – 49 ml/min</td>
<td>50 mg on alternate days</td>
</tr>
<tr>
<td>eGFR &lt;30 ml/min</td>
<td>Stop ibandronic acid</td>
</tr>
</tbody>
</table>
RESPONSIBILITIES (ZOLEDRONIC ACID)
Secondary care will be responsible for all aspects of care related to zoledronic acid prescription, administration and monitoring.

RESPONSIBILITIES (IBANDRONIC ACID)

<table>
<thead>
<tr>
<th>Secondary Care Responsibilities (Oncology Consultant)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Discuss the treatment options with patient.</td>
</tr>
<tr>
<td>2. Counsel the patient about the potential benefit and potential side effects plus inform them that this is an unlicensed indication for this drug.</td>
</tr>
<tr>
<td>3. Ensure the patient understands the nature and complications of the therapy and their role in reporting adverse effects promptly.</td>
</tr>
<tr>
<td>4. Ensure the patient understands that they should not start the ibandronic acid until they have had appropriate dental review and any necessary dental work completed, and confirmation that the pre-treatment baseline blood tests are normal.</td>
</tr>
<tr>
<td>5. Review current medicines:</td>
</tr>
<tr>
<td>a. Advise patient to stop any other bisphosphonate that they may be taking, for example: Risedronate or alendronic acid.</td>
</tr>
<tr>
<td>b. For patients taking a regular nonsteroidal anti-inflammatory drug (NSAID) consider whether this can be discontinued.</td>
</tr>
<tr>
<td>6. Advise the patient whether to take an OTC vitamin D product or a prescribed combined calcium and vitamin D product.</td>
</tr>
<tr>
<td>7. Prescribe ibandronic acid for the first month (along with vitamin D and calcium if appropriate).</td>
</tr>
<tr>
<td>8. Write to the GP with a summary of the patient’s care in hospital and request GP to continue the prescribing for a specified duration.</td>
</tr>
<tr>
<td>9. Send off appropriate pre-treatment blood tests, check the results and correct vitamin D levels (if the levels are below 50 nanomol/L) prior to starting ibandronic acid.</td>
</tr>
<tr>
<td>10. Be available to give advice to GP and patient.</td>
</tr>
<tr>
<td>11. Review patient if required.</td>
</tr>
<tr>
<td>12. Report any adverse events to the MHRA using the yellow card.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GP Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prescribe ibandronic acid from month 2 onwards.</td>
</tr>
<tr>
<td>2. Issue ongoing prescriptions for ibandronic acid 50 mg daily for length of time specified by hospital specialist (and vitamin D with calcium if recommended by the specialist).</td>
</tr>
<tr>
<td>3. Monitor for adverse effects as detailed below.</td>
</tr>
<tr>
<td>4. Report any adverse events to the MHRA using the yellow card.</td>
</tr>
<tr>
<td>5. Ensure other bisphosphonates are stopped during this period.</td>
</tr>
<tr>
<td>6. For patients taking a regular NSAID, review and consider whether this can be discontinued.</td>
</tr>
</tbody>
</table>

HOSPITAL PHARMACY
- Dispense the first month’s supply of ibandronic acid on initiation of treatment in hospital.

PRE-TREATMENT ASSESSMENT BY THE SPECIALIST
- Assess for benefits and any contraindications to bisphosphonate treatment.
- Check full blood count, vitamin D, adjusted calcium, phosphate, magnesium and renal function.
- Ensure correction of any vitamin D deficiency prior to starting treatment.
- Request patient to arrange dental check-up and necessary treatment before starting any adjuvant bisphosphonate.
ONGOING MONITORING BY THE SPECIALIST (ZOLEDRONIC ACID)
- Full blood count, adjusted calcium, phosphate, magnesium and renal function before each session of zoledronic acid.

ONGOING MONITORING SCHEDULE BY THE GP (IBANDRONIC ACID)
- Annual check of full blood count, renal function and adjusted calcium.

TREATMENT INTERRUPTIONS
- Bisphosphonates last in the bone for many months and it is acceptable for patients to have a break in treatment (e.g. due to drug supply problems or a patient’s intercurrent illness).
- If possible, compensate for the break in treatment by making up for the missing doses later on so that the overall total period of time on treatment is as originally intended.

SIDE EFFECTS AND ACTIONS TO BE TAKEN (For full details of all side effects see SPC.¹)

<table>
<thead>
<tr>
<th>Side Effects</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local irritation of the gastric mucosa, causing dyspepsia, nausea (ibandronic acid)</td>
<td>Patients should be advised to stop taking the tablets and to seek medical attention if they develop any symptoms of oesophageal irritation such as difficulty swallowing, pain upon swallowing, chest pain, or new or worsening heartburn. Prescribing doctors should be particularly cautious if patients have any underlying oesophageal disorder (including dysphagia, Barrett’s oesophagus, gastritis, duodenitis or any past history of peptic ulcers).</td>
</tr>
<tr>
<td>Osteonecrosis of the jaw</td>
<td>Patients should be advised to have a dental examination with appropriate preventative dentistry prior to treatment with bisphosphonates. During bisphosphonate treatment, patients should maintain good oral hygiene, receive routine dental check-ups, and report any oral symptoms such as dental mobility, pain, or swelling. Avoid invasive dental procedures while on treatment and consider stopping treatment if invasive dental treatment is needed.</td>
</tr>
<tr>
<td>Osteonecrosis of the external auditory canal</td>
<td>Patients should be advised to report any ear pain, discharge from the ear or an ear infection during bisphosphonate treatment. If there is concern over the possibility of osteonecrosis of the external auditory canal then temporarily stop bisphosphonate and refer to ENT. If osteonecrosis of the external auditory canal is confirmed then permanently discontinue bisphosphonate.</td>
</tr>
<tr>
<td>Adverse effect on renal function</td>
<td>Patients should be warned about the risk of renal toxicity. Patients should be warned about the risk of renal failure with zoledronic acid and advised to be adequately hydrated before each zoledronic acid treatment.</td>
</tr>
<tr>
<td>Atypical femoral fracture</td>
<td>During bisphosphonate treatment, patients should be advised to report any thigh, hip, or groin pain. Any patient who presents with such symptoms should be evaluated for an incomplete femur fracture. If atypical femoral fracture occurs, stop bisphosphonate permanently.</td>
</tr>
<tr>
<td>Hypocalcaemia or hypomagnesaemia</td>
<td>Stop treatment until it has been possible to correct electrolytes.</td>
</tr>
<tr>
<td>Ocular inflammation</td>
<td>Stop treatment and if symptoms persist seek ophthalmic advice.</td>
</tr>
<tr>
<td>Paraesthesia</td>
<td>Not always necessary to stop treatment but this depends on the severity of symptoms.</td>
</tr>
<tr>
<td>Taste alteration</td>
<td>Not always necessary to stop treatment.</td>
</tr>
</tbody>
</table>
### NOTABLE DRUG INTERACTIONS (REFER TO **BNF AND SPC**)

<table>
<thead>
<tr>
<th><strong>NSAIDs</strong></th>
<th>Additive risk of gastric or oesophageal erosions - avoid combined use where feasible.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Food</strong></td>
<td>Calcium, iron and magnesium bind to bisphosphonates reducing their absorption. Take on an empty stomach at least 2 hours after and 30 minutes before food.</td>
</tr>
</tbody>
</table>

### BACK-UP INFORMATION/ADVICE

<table>
<thead>
<tr>
<th>Contact Details</th>
<th>Wycombe Hospital</th>
<th>Stoke Mandeville Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oncology consultants</strong></td>
<td>Dr Prabir Chakraborti 01494 426314</td>
<td>Dr Prabir Chakraborti 01296 316555</td>
</tr>
<tr>
<td>Dr Ketan Shah</td>
<td>01494 426254</td>
<td>Dr Andrew Eichholz 01296 316555</td>
</tr>
<tr>
<td>Medicines Resource Centre</td>
<td>01494 425355</td>
<td></td>
</tr>
<tr>
<td>Switchboard</td>
<td>01494 526161</td>
<td>01296 315000</td>
</tr>
</tbody>
</table>

### AUDIT

It is proposed that the uptake of this pathway be audited at 2 years post-implementation. The audit will include the numbers of patients referred back in from primary care for ongoing zoledronic acid due to intolerance to ibandronic acid and the impact on the Oncology day treatment units.
INFORMATION FOR PATIENTS (ZOLEDRONIC ACID)

The Oncology doctor should make patients aware of the following:

Taking the medication:
- Zoledronic acid is given as a 15 minute infusion intravenously just before or after your intravenous chemotherapy treatment

Licensing:
- Zoledronic acid is not currently licensed in the UK for reducing the risk of breast cancer going to the bones but it is licensed for the treatment of osteoporosis and for people who have breast cancer that has spread to the bones and it has been used for that purpose for many years
- Although it is not currently licensed in the UK for reducing the risk of breast cancer going to the bones, there is plenty of evidence using zoledronic acid with patients like you who have had curative treatment for breast cancer – one analysis includes a total of 18,766 women where around half the women received zoledronic acid or a similar drug of the same class

Osteonecrosis of the jaw:
- You should let your dentist know your doctor wants to give you zoledronic acid and have a dental examination and any recommended dental work prior to treatment with zoledronic acid
- During zoledronic acid treatment, you should maintain good oral hygiene, receive routine dental check-ups, and report any oral symptoms such as loose teeth, pain, or swelling
- You should remind your dentist at every visit that you are receiving zoledronic acid
- If you require any major dental work then your doctor and dentist should consider temporarily stopping the zoledronic acid

Atypical femoral fractures:
- During zoledronic acid treatment, you should report any thigh, hip, or groin pain in case of an unusual (atypical) type of hip fracture

Very rare reports of osteonecrosis of the external auditory canal:
- You should report any ear pain, discharge from the ear, or an ear infection if you are receiving zoledronic acid treatment

Adverse effects on renal function with zoledronic acid:
- There is a small risk of kidney damage and kidney failure due to zoledronic acid
- Your kidney function will be checked before each treatment and you should be adequately hydrated before treatment

Low calcium levels:
- If you get numbness or tingling around the mouth or in the fingers and toes then please let your doctor know so that they can check your calcium levels

Other possible side effects:
- These include flu-like symptoms, nausea, headaches, diarrhoea, constipation, headaches, itchy skin, taste changes and anaemia
INFORMATION FOR PATIENTS (IBANDRONIC ACID)
The Oncology doctor should make patients aware of the following:

Taking the medication:
- Take ibandronic acid on an empty stomach, first thing in the morning
- Swallow the tablet whole with a full glass of water
- Sit upright or stand when taking it and for the next 60 minutes
- Do not eat, drink or take other medications for 30 minutes after taking ibandronic acid

Licensing:
- Ibandronic acid is not currently licensed in the UK for reducing the risk of breast cancer going to the bones but it is licensed for the treatment of osteoporosis and for people who have breast cancer that has spread to the bones (which is why you may see these other conditions mentioned in the leaflet that comes with the packet)
- Although it is not currently licensed in the UK for reducing the risk of breast cancer going to the bones, there is plenty of experience using ibandronic acid with patients like you who have had curative treatment for breast cancer – one analysis includes a total of 18,766 women where around half the women received ibandronic acid or a similar drug of the same class

Osteonecrosis of the jaw:
- You should let your dentist know your doctor wants to give you ibandronic acid and have a dental examination and any recommended dental work prior to treatment with ibandronic acid
- During ibandronic acid treatment, you should maintain good oral hygiene, receive routine dental check-ups, and report any oral symptoms such as loose teeth, pain, or swelling
- You should remind your dentist at every visit that you are taking ibandronic acid
- If you require any major dental work then your doctor and dentist should consider temporarily stopping the ibandronic acid

Atypical femoral fractures:
- During ibandronic acid treatment, you should report any thigh, hip, or groin pain in case of an unusual (atypical) type of hip fracture

Very rare reports of osteonecrosis of the external auditory canal:
- You should report any ear pain, discharge from the ear, or an ear infection if you are receiving ibandronic acid treatment

Adverse effects on renal function:
- There is a small risk of your kidneys working less well due to ibandronic acid
- Your kidney function will be checked before the treatment starts and once per year whilst having ibandronic acid treatment

Oesophageal reactions with oral ibandronic acid:
- You should stop taking the ibandronic acid tablets and seek medical attention if you develop any symptoms of oesophageal irritation such as difficulty swallowing, pain upon swallowing, chest pain, or new or worsening heartburn

Low calcium levels:
- If you get numbness or tingling around the mouth or in the fingers and toes then please let your doctor know as soon as possible so that they can check your calcium levels

Other possible side effects:
- These include flu-like symptoms, nausea, headaches, diarrhoea, constipation, headaches, itchy skin, taste changes, and anaemia
REFERENCES

1. SPC for zoledronic acid infusion and ibandronic acid tablets available on www.medicines.org.uk/emc, last updated 19.11.17 and 01.08.18 respectively


6. NHS PREDICT online modelling system https://www.predict.nhs.uk/

See also:
Guideline 222 Adult and Paediatrics Injectables Guide (BHT users only)

<table>
<thead>
<tr>
<th>Title of Guideline</th>
<th>Zoledronic Acid and Ibandronic Acid for Adjuvant Treatment in Early Breast Cancer Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guideline Number</td>
<td>834FM</td>
</tr>
<tr>
<td>Version</td>
<td>1</td>
</tr>
<tr>
<td>Effective Date</td>
<td>August 2019</td>
</tr>
<tr>
<td>Review Date</td>
<td>August 2022</td>
</tr>
<tr>
<td>Original Version Produced</td>
<td>August 2019</td>
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<tr>
<td>Approvals:</td>
<td></td>
</tr>
<tr>
<td>Medicines Value Group</td>
<td>22nd May 2019</td>
</tr>
<tr>
<td>Clinical Guidelines Subgroup</td>
<td>14th August 2019</td>
</tr>
<tr>
<td>Author/s</td>
<td>Andrew Eichholz, Consultant Clinical Oncologist</td>
</tr>
<tr>
<td>SDU(s)/Department(s) responsible for updating the guideline</td>
<td>Cancer Services BHNHST and Medicines Management of Buckinghamshire CCG</td>
</tr>
<tr>
<td>Uploaded to Intranet</td>
<td>28th August 2019</td>
</tr>
</tbody>
</table>

Buckinghamshire Healthcare NHS Trust/Buckinghamshire Clinical Commissioning Group
Appendix 1: Calcium Intake Assessment Tool

(Extracted from guidelines:
402FM Osteoporosis: Primary Fracture Prevention Guidelines in Men and Women over the Age of 50 with Risk Factors
403FM Osteoporosis: Secondary Fracture Prevention Guidelines in Men and Women over the Age of 50 who sustain a Fragility Fracture)

### Food (calcium content (mg) in brackets)

<table>
<thead>
<tr>
<th>Dairy products</th>
<th>Calcium products (may be calcium enriched)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dried, skimmed milk powder 3½ oz/100 g (1590)</td>
<td>White bread 3½ oz/100 g (177)</td>
</tr>
<tr>
<td>Milk soya 100 ml (89)</td>
<td>Wholemeal bread 3½ oz/100 g (106)</td>
</tr>
<tr>
<td>Cheese Cheddar 3½ oz/100 g (739)</td>
<td>Muesli Swiss style 3½ oz/100 g (110)</td>
</tr>
<tr>
<td>Cheese cottage 3½ oz/100 g (127)</td>
<td>Fortified instant cereals 3½ oz/100 g (up to 1333)</td>
</tr>
<tr>
<td>Yoghurt fruit low fat 3½ oz/100 g (140)</td>
<td></td>
</tr>
<tr>
<td>Yoghurt fruit 3½ oz/100 g (122)</td>
<td></td>
</tr>
<tr>
<td>Fromage frais fruit 3½ oz/100 g (86)</td>
<td></td>
</tr>
<tr>
<td>Ice cream dairy 3½ oz/100 g (100)</td>
<td></td>
</tr>
<tr>
<td>Custard from powder 3½ oz/100 g (140)</td>
<td></td>
</tr>
<tr>
<td>Rice pudding 3½ oz/100 g (88)</td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td></td>
</tr>
<tr>
<td>Pilchards in tomato sauce 3½ oz/100 g (250)</td>
<td>Apricots dried 3½ oz/100 g (73)</td>
</tr>
<tr>
<td>Sardines in tomato sauce 3½ oz/100 g (430)</td>
<td>Figs dried 3½ oz/100 g (250)</td>
</tr>
<tr>
<td>Sardines in oil 3½ oz/100 g (500)</td>
<td>Currants 3½ oz/100 g (93)</td>
</tr>
<tr>
<td>Salmon tinned 3½ oz/100 g (91)</td>
<td>Mixed peel 3½ oz/100 g (130)</td>
</tr>
<tr>
<td>Tuna in oil tinned 3½ oz/100 g (12)</td>
<td>Olives in brine 3½ oz/100 g (61)</td>
</tr>
<tr>
<td>Vegetables</td>
<td></td>
</tr>
<tr>
<td>Curly kale boiled 3½ oz/100 g (150)</td>
<td>Orange 3½ oz/100 g (47)</td>
</tr>
<tr>
<td>Okra stir fried 3½ oz/100 g (220)</td>
<td></td>
</tr>
<tr>
<td>Spring greens boiled 3½ oz/100 g (75)</td>
<td></td>
</tr>
<tr>
<td>Watercress 3½ oz/100 g (170)</td>
<td></td>
</tr>
<tr>
<td>Pulses beans &amp; seeds</td>
<td></td>
</tr>
<tr>
<td>Red kidney beans canned 3½ oz/100 g (71)</td>
<td>Lasagne frozen 3½ oz/100 g (80)</td>
</tr>
<tr>
<td>Tofu steamed 3½ oz/100 g (510)</td>
<td>Sausage low fat grilled 3½ oz/100 g (130)</td>
</tr>
<tr>
<td>Green/French beans 3½ oz/100 g (56)</td>
<td>Cornish pasty 3½ oz/100 g (60)</td>
</tr>
<tr>
<td>Baked beans 3½ oz/100 g (53)</td>
<td>Omelette cheese 3½ oz/100 g (287)</td>
</tr>
<tr>
<td>Sesame seeds 3½ oz/100 g (670)</td>
<td>Quiche cheese &amp; egg 3½ oz/100 g (262)</td>
</tr>
<tr>
<td></td>
<td>Macaroni cheese 3½ oz/100 g (170)</td>
</tr>
<tr>
<td></td>
<td>Pizza cheese &amp; tomato 3½ oz/100 g (210)</td>
</tr>
</tbody>
</table>

#### Servings of dairy (not including milk) per day

<table>
<thead>
<tr>
<th>Serving</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4+</th>
<th>Calcium (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>⅓ pint (~200 ml)</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>600</td>
<td>900</td>
</tr>
<tr>
<td>½ pint (~300 ml)</td>
<td>300</td>
<td>600</td>
<td>900</td>
<td>1200</td>
<td>1500</td>
<td>1800</td>
</tr>
<tr>
<td>¾ pint (~400 ml)</td>
<td>400</td>
<td>800</td>
<td>1200</td>
<td>1600</td>
<td>2000</td>
<td>2400</td>
</tr>
<tr>
<td>1 pint (~600 ml)</td>
<td>600</td>
<td>1200</td>
<td>1800</td>
<td>2400</td>
<td>3000</td>
<td>3600</td>
</tr>
<tr>
<td>1½ pint (~900 ml)</td>
<td>900</td>
<td>1800</td>
<td>2700</td>
<td>3600</td>
<td>4500</td>
<td>5400</td>
</tr>
</tbody>
</table>

#### Other sources: See list below or details from food labels

<table>
<thead>
<tr>
<th>Calcium (mg)</th>
<th>From:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Add totals from milk, servings of dairy and other sources to give: Total calcium intake (mg)

<table>
<thead>
<tr>
<th>Calcium intake assessment result (tick to indicate)</th>
<th>Replete (1000 mg)</th>
<th>Intermediate (500 – 1000 mg)</th>
<th>Low (500 mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>