

Group 3  
Presentation

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### Client Details

- Female, 45 years of age
- Chordoma (bone cancer)
- Lesion on forehead, but throughout body
- Chemotherapy: Vincristine
- Contemplation stage of change
- Used to do swimming when she was younger

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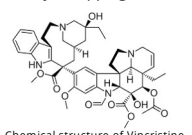
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### The Clients Treatment

**The Type of Treatment:**

-Chemotherapy (through the form of Vincristine).

-Vincristine is in a class of medications called vinca alkaloids and works by slowing or stopping the growth of cancer cells in your body. (Stopping the cancer cells from splitting in 2).



-Chemical structure of Vincristine

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## The Clients Treatment

### How The Treatment Is Administered:

- Vincristine is administered into the bloodstream through a intravenous injection into the vein (usually in the forearm or hand).
- Using a gravity drip and an IV bag the vincristine is administered down the rubber tubing through a cannula (a small tube placed into the vein) and into the bloodstream.
- There is no pill form for this type of medication.



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## The Client Treatment

### Side Effects of this Treatment/Medication:

- Risk of infection. The treatment can lower the amount of white blood cells in the blood which increases the risk of infection due to the lack of white blood cells to fight off infections.
- Fatigue, which can lead to tiredness and lack of readiness to exercise.
- Nervous system problems, for example numbness in fingers and toes.
- Muscle or bone pain.
- Swelling and pain at the drip site
- Lesions in the skin. This is something that our client has suffered with having lesions appear in the forehead due to a reaction with the medication. This therefore leads to loss in self confidence and low mood proving that not all side effects are physical and can cause physiological damage.

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## IMPLICATIONS OF SIDE EFFECTS TO EXERCISE PROGRAMMING

Picc line - in the arm, adequately protected at all times

Allergic reaction/Extravasation - (if recurrence of an allergic reaction see next slide). Lesions are visual and sore, quiet spaces, keep cool & dry, loose & natural fibre clothing

Increased risk of getting an infection - Additional Hygiene measures, bring own towel, water, sanitiser. As above quiet spaces or smaller group environs, consider ventilation, surfaces etc



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### Implications of side effects on exercise programming cont....

Bruising bleeding - Appropriate Rax, Space & time for client

Fatigue - Piper Fatigue Scale, observation and monitoring, do a little if cant' do alot, effective communication for distraction

Anaemia, Periphera Numbness & Tingling, Central Nervous System dysfunction - Watch for balance issues & include proprioception work in safe controlled way, eg use of mats & space, avoid overtightening straps, avoid heavy weights & care with free weights, use bands & body weight, more emphasis on mobility and movement, may reduce ability to grip, watch for colour changes, reduction in response levels and intention

Constipation, Diarrhoea, nausea, - Housekeeping, locations, vicinity, hygiene, breaking up sessions

Loss of Appetite - Is client eating/drinking, may have to postpone or change exercise.

Skin issues, sore mouth & nose, Hair loss, Soreness/pain in muscles and joints, Pain in jaw - comfort, privacy, positivity, work within pain and ROM, could affect speech/ability to eat & drink as above, bring own room temp water, effective breathing & relaxation

Less common - watch out for breathlessness, vision changes, hearing changes - Use of RPE/OBs/Talk Consider breaking up sessions, appropriate rest & active recovery phases, communication skills, Rax, Lighting, Effective preparation

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### POTENTIAL CONTRAINDICATIONS

Any worsening of symptoms associated with Vincristine such as: -

Acute Allergic reaction

Extravasation

Difficulty passing urine

Fever > 37.5

Infection and accompanying symptoms

Acute Anaemia

Anything new



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### Client specific exercise session

Aims and objectives:

- Reduce fatigue
- Reduce pain
- Improve well being

Design:

- Circuit training session to allow adaptations to each exercise (green, amber, red)
- Low to moderate intensity (due to fatigue from Chemotherapy)
- 2-3 sessions per week (mindful of clients recovery)
- Exercises including both resistance training and CV (from evidence of reducing fatigue with research studies)
- 6 exercises to allow both resistance and CV (allowing plenty of rest periods)
- 15 minute warm up including mobility, pulse raiser and dynamic stretching

Safe and appropriate:

- Appropriate use to equipment to avoid bruising (side effects from treatment) e.g rubber dumbbells or bands
- Includes adaptators for low intensity
- Includes plenty of breaks
- Low impact

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## Dietary Requirements



**Dietary Guidelines**

Good nutrition is key in life and even more so when fighting bone cancer.

During treatment (chemotherapy) your appetite may be affected and will change your ability to tolerate certain foods, especially when processing the nutrients.

Some key points are:

- Throughout treatment maintain a high-protein, high-calorie diet to provide energy for your body.
- Keep your weight steady.
- Load up on high-calorie foods if feeling weak or underweight. If losing fluids/nutrients then a supplement of Vitamin D may be needed.
- Reinforce the importance of eating even if the client is feeling unwell.

**Diet Before Treatment**

In preparation for bone cancer treatment you must try to maintain a healthy diet.

A healthy diet will help the client go into treatment with reserves to help maintain strength, rebuild and protect body tissues, and boost immune system against infection.

Diet should include:

- High-protein foods like fish, Chicken, Turkey, Lamb, Beef or veal, Eggs, Tuna, Sea Trout, Nuts, Oat Bran, Beans, Peas & Lentils.
- Avoid processed food & fatty cooked meats/fish and eggs. Washing fruit & veg like key to eliminate the chemicals on the products and to decrease chance of infection.
- High-calorie foods like humus, nuts, proteins, soups and grains. Cold-creaming.
- We can try and be creative in boosting the protein and calories in the foods taken on. Add eggs to casseroles, mashed potatoes, or macaroni and cheese. Use whole milk when cooking. Add powdered milk to beverages, soups, vegetables, and yogurt.
- The aim is to maximize the amount of fuel available to the body and replenish lost nutrients if possible.

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## Dietary Requirements



**During Chemotherapy**

Bone cancer treatments will affect the way a client takes in nutrition:

- Nausea/irregular (constipation) or regular (diarrhea) bowel movements from the drugs can make eating difficult.
- It's important to talk.
- A advantage of when the appetite is good and client feeling well.
- Advise when client isn't feeling well try eating small frequent meals or snacks.
- Protein can provide an energy boost against the fatigue that often comes with chemotherapy.
- Fibre based foods might be important due to constipation being a side effect - avoid fried or greasy foods.

An additional tip may be to set a timer at regular intervals to remind client to eat. When the bell goes off, eat something.

Fatigue and loss of overall appetite may leave client feeling like they do not want to eat - recognize this and reinforce some positive actions.

**Diet After Treatment**

It is important that the moved back to a normalised diet is done in consultation with dietician - a sensible eating plan might include:

- At least five to seven servings a day of fruits and vegetables, being sure to eat a colourful array of different vegetables.
- Plenty of high-fibre foods like whole grain breads and cereals.
- Less fat in your meals, choose baked or broiled foods over fried foods.
- Low fat milk and dairy products.
- Only an occasional alcoholic beverage \*Even an occasional drink might be important in allowing the client to "feel more normal" and not feel like all of their lifestyle has to change.

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## Dietary Requirements



**Dietary Supplements**

We can address some nutritional deficiencies by taking supplements.

Some supplements include:

- A multivitamin that contains vitamins A, C, E, the B-complex vitamins, and trace minerals, such as magnesium, calcium, zinc, and selenium.
- Omega-3 fatty acids, such as fish oil, to help decrease inflammation and help with immunity - Calcium citrate and vitamin D for bone support.
- A probiotic supplement for maintenance of gastrointestinal and immune health.

\*It is important to discuss any supplements with doctor / health professional to ensure it is safe.

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