



KOOL DENTAL GUIDE

GUIDE TO STARTING OUT IN
IV SEDATION FOR DENTISTRY

2ND EDITION

The New Zealand Society for Anaesthesia and
Sedation in Dentistry Inc. (NZSSD)

<https://www.dentalsedation.co.nz/>

Kool Dental Guide

Guide to Starting Out in IV Sedation for Dentistry

2nd Edition

1st edition by Tom Kool, 2002

2nd edition by Graham Shaw, June 2023

Copyright © 2002-2023

The New Zealand Society for Anaesthesia and
Sedation in Dentistry Inc.

All rights reserved.

CONTENTS

| | |
|---|-----------|
| Introduction to the Society | 4 |
| Who and What Are We? | 4 |
| Our People | 5 |
| Information For Patients | 6 |
| What is Intravenous Sedation? | 6 |
| Before Your Sedation Appointment..... | 8 |
| After Your Sedation Appointment | 10 |
| Patient Consent Form | 11 |
| Patient Questionnaire | 12 |
| Sedation Checklist & Patient Sedation Summary..... | 15 |
| Practice Audit | 22 |
| Physical Facilities..... | 22 |
| Equipment | 22 |
| Practical Management..... | 24 |
| Staffing | 25 |
| Checklist for Required Documentation | 26 |
| Simulated Emergencies | 26 |
| Shopping List | 27 |
| Equipment List | 27 |
| Drugs | 28 |
| Emergency Drugs..... | 29 |
| Additional IV Sedation Equipment | 29 |
| Supplier Contacts | 31 |

INTRODUCTION TO THE SOCIETY

Who and What Are We?

The society is an affiliated special society under the NZDA approved societies for dental professionals. Our role includes all issues applying to dental sedation.

We believe dental sedation to be an important adjunct to clinical practice.

We have played a major role in retaining the ability of dental operators to provide sedation for their patients without the need of a separate specialist anaesthetist/sedationist.

We have been active in the ratification of the current NZDA Guidelines for Sedation and DCNZ Practice Standard.

Our role also extends to providing continuing education courses in intravenous midazolam sedation. These courses are always popular, and this is an important way of increasing the number of capable dental sedationists.

We also have a relationship with the International Federation of Dental Anaesthesiology and Societies.

Our effectiveness is only strong if we have a solid membership base. As representatives for the profession, we encourage you to maintain your membership with us to ensure we have the necessary strength in our negotiations.

We currently have over 150 members. Please encourage any other dental sedationists you know to maintain their membership too.

Our People

Executive:

- **President:** Graham Shaw, gshaw@jervoisdental.co.nz
- **Secretary:** Graeme Christie, graeme@dent.co.nz
- **Treasurer:** Tania Stuart, tjsbeck@slingshot.co.nz

Education Committee:

- **Rohit Bedi:** dr.rohitbedi@gmail.com
- **Nick Stretton:** nstretton@gmail.com
- **Don Macalister:** donmacalister@oralsurgeon.co.nz

INFORMATION FOR PATIENTS

What is Intravenous Sedation?

Intravenous (IV) sedation is a modern technique used in dentistry to help patients overcome their fear of dental treatment and make it a comfortable experience.

IV sedation is suitable for most patients, but if you have any health conditions or are taking medication, be sure to inform your dentist so that the sedation can be adjusted to suit your needs.

A small amount of sedative will be injected into a vein in your arm. The injection is painless, and the sedative takes effect quickly. You'll become very relaxed and drowsy, allowing the dentist to perform the necessary treatment with comfort for you. Local anaesthetic injections will also be given once the sedative has taken effect.

You will not be fully unconsciousness ("put to sleep"), which requires general anaesthetic with an anaesthetist in an operating theatre. You may, however, feel like you've been asleep for most of the treatment due to the amnesia (no memory) effect of the sedation drugs, even though you will be conscious and relaxed the whole time.

After the treatment, you will rest for a short while before your escort takes you home.

Although you may feel like you're back to normal, it takes your body several hours to eliminate all the sedative. That's why you must have someone to take you home and stay with you for 2-3 hours.

IV sedation is a pleasant way to undergo dental treatment. Your dentist will be happy to explain the procedure in more detail.

Before Your Sedation Appointment

- Do not eat any food for 6 hours prior to your appointment time, but drinking water is allowed up until 2 hours before.
- Do not drink any alcohol the day before.
- Avoid wearing tight clothing, especially sleeves that cannot be easily drawn up past the elbow.
- Dress warmly for your comfort.
- Visit the restroom before entering the surgery.

Additional Instructions

- Before accepting a sedation appointment, you must agree:
 - Not to drive a vehicle or operate machinery on the same day, after the sedation.
 - Not to undertake responsible or important business matters on the same day, after the sedation.
 - Not to drink any alcohol, until the next day.
- You must be escorted home afterwards and looked after by a responsible adult (e.g. relative, friend, etc). We are not allowed to hand you over to a taxi (unless you have someone else accompanying you).
- If you develop any COVID or upper respiratory tract symptoms, please call to discuss or reschedule.

After Your Sedation Appointment

Instructions to Patient

The sedation works on your brain and you may not be fully aware until its effects have worn off. Because of the amnesia (loss of memory) effect of the sedation drugs, and the lengthy time (6-24 hours) it takes your body to eliminate them, it is important that you follow these instructions for your own safety...

- You must NOT drive a vehicle or operate machinery today.
- You must NOT drink alcohol today.
- You should NOT undertake any responsible/important business matters today.

Instructions to Person Accompanying You Home

This person has had dental treatment carried out with intravenous (IV) sedation. The sedative drugs may produce drowsiness and amnesia (loss of memory) for several hours, particularly after long appointments. You are therefore requested to:

1. Take them home and stay with them for the rest of the day, especially if their appointment was a long one.
2. Make sure they comply with the "Instructions to Patient" above.

Patient Consent Form

- ☐ I hereby consent to receiving dental treatment under intravenous (IV) sedation.
- ☐ The procedure I am about to have carried out under IV sedation has been explained to my satisfaction prior to the procedure commencing.
- ☐ I have had the opportunity to obtain additional information regarding the procedure, and any questions I have asked have been answered to my full satisfaction.
- ☐ I acknowledge that I have read and fully understand the **Before Your Sedation Appointment instructions**, and **After Your Sedation Appointment instructions**, and this **Patient Consent Form**. I sign it freely and voluntarily:

Date:

Patient's Name:

Parent/Guardian name (if applicable):

Signature (patient, parent or guardian):

Dentist's Name:

Dentist's Signature:

Patient Questionnaire

Name:

Date:

Date of birth:

Only tick a box if it relates to you...

☐ Are you receiving any medical treatment at the present time?

☐ Have you ever been in hospital?

Have you ever had any of the following?

☐ Rheumatic Fever

☐ Epilepsy

☐ Heart Trouble

☐ Anaemia

☐ High Blood Pressure

☐ Diabetes

☐ Asthma

☐ Low Blood Pressure

☐ Arthritis

☐ Gastric Problems

- ☐ Hepatitis
- ☐ Cold Sores
- ☐ Bronchitis or Chest Problems
- ☐ Depressive Illness
- ☐ Severe Headaches
- ☐ Drug use or the recreational use of prescription or non-prescription drugs present or past? *

* This information is **very important for us** so please be open with us. We are not here to judge you and we confirm that your privacy is protected by **doctor/patient confidentiality**.

- ☐ Are you taking any tablets, capsules, medicines or drugs?

If yes, please list:

.....

.....

- ☐ Do you have any allergies to medicines that you are aware of?

If yes, please list:

.....

.....

- ☐ Are you wearing an artificial or prosthetic joint?
- ☐ Have you ever experienced excessive bleeding or bruising from dental treatment, cuts or scratches?
- ☐ Have you ever had contact with the AIDS virus or Hepatitis B virus?
- ☐ Have you ever had a reaction to anaesthetic?
- ☐ Women: Are you pregnant now? Could you be pregnant now?
- ☐ Are you a Smoker?
- ☐ Do you have any allergies to eggs or Soy proteins?
- ☐ Are there any other aspects concerning your health or behaviour that you think your dentist should know about?

Signed:
(Patient/Parent/Guardian)

SEDATION CHECKLIST & PATIENT SEDATION SUMMARY

Date:

Patient Name:

| Reception | |
|---|------------------------|
| IV Sedation Consent Form signed and in file | |
| Fasting | No food since: |
| | No fluid since: |
| Patient pick-up | Escort's name: |
| | Escort's phone/mobile: |
| Notice required by Escort (hr/min): | |
| Bathroom break | |

| Surgery | |
|--|--|
| DVT exercises | |
| No nose itching | |
| Bathroom break notice 15-min prior | |
| Finger sensor tapping | |
| IV line arm bending | |
| Pulse-Ox beeping & breathing | |
| Explain BiteBlock | |
| Any medication/medical changes since last visit? | |

| Age | Height | Weight | Sex | ASA PS Classification | Mallampati Classification |
|-----|--------|--------|-----|----------------------------------|---------------------------|
| | | | | (Circle relevant classification) | |
| | | | | ASA I | Class 1 |
| | | | | ASA II | Class 2 |
| | | | | ASA III | Class 3 |
| | | | | | Class 4 |

| O ₂ Flow Rate | Midazolam | Saline |
|--------------------------|--|--|
| | Concentration (mg/ml): _____ mg/ml _____ mg used _____ mg discarded Batch: _____ Exp: _____ | _____ ml Batch: _____ Exp: _____ |

| Time | BP | HR | SpO ₂ | ETCO ₂ | Midazolam |
|------|----|----|------------------|-------------------|-----------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Discharge Criterion *(all must be met prior to discharge)*

| | |
|--|--|
| Airway patent and stable | <input type="checkbox"/> Satisfied <input type="checkbox"/> Not Satisfied |
| Return to Baseline Level of Consciousness (LOC) | <input type="checkbox"/> Satisfied <input type="checkbox"/> Not Satisfied |
| Cardiovascular function stable | <input type="checkbox"/> Satisfied <input type="checkbox"/> Not Satisfied |
| Able to talk | <input type="checkbox"/> Satisfied <input type="checkbox"/> Not Satisfied |
| Escort present | <input type="checkbox"/> Satisfied <input type="checkbox"/> Not Satisfied |
| Co-ordinated movement | <input type="checkbox"/> Satisfied <input type="checkbox"/> Not Satisfied |
| Discharge instructions given | <input type="checkbox"/> Satisfied <input type="checkbox"/> Not Satisfied |

PRACTICE AUDIT

Check through the following points, which may be helpful for your practice...

Physical Facilities

- Does the dental chair allow the patient to lie supine?
- Is the chair height adjustable?
- Is the chair stable enough to allow CPR to be carried out?
- Is there adequate floor space for CPR to be carried out?
- Is emergency O₂ available in the surgery?
- Is there an adequate recovery area?
- Is there a facility for ambulance evacuation of a patient?

Equipment

- High velocity suction
- Manual backup suction
- Yankeur suction tips and tubing (or equivalent)
- Adequate torch
- Pulse oximeter
- Blood pressure monitor (Sphygmomanometer - if manual check use)

- Capnograph
- Stethoscope
- Oxygen cylinders (note number of cylinders)
- Regulator or other means of delivering emergency O₂
- Face masks and tubing
- Nasal prongs
- Pharyngeal airways
- Laryngeal mask airways
- Blanket
- Mouth props
- Tourniquet
- Emergency kit
- Emergency drugs
- Scissors and tape
- Equipment for administering an IV infusion
- Syringes and needles
- Cannulae
- IV plugs
- SteriWipes

Practical Management

- Rapport with patient
- Preparation of drugs
- Baseline monitoring
- Recording of drugs used, batch & expiry numbers
- Venipuncture technique
- Operating method protection of airway
- Use of suction
- In-treatment monitoring
- Post-operative handling
- Post-operative instructions clearly given
- Patient discharge

Staffing

Assistant understanding of monitoring:

- Respiration
- Pulse
- Level of consciousness
- Colour
- O₂ Saturation
- Blood Pressure
- Understands technique
- Understands relevance of pre and post operative instructions
- Meets the core competencies as defined by the DCNZ Sedation Practice Standard

Checklist for Required Documentation

- Sedation records
- Pre-operative instructions
- Post-operative instructions
- Medical history records
- Consent forms
- Drug recording
- Protocol for checking facility/drugs
- Action plan for emergencies and problems
- Telephone instructions in an emergency

Simulated Emergencies

If you are practicing IV sedation it is mandatory you hold current qualifications in the appropriate level of resuscitation specified by the practice standard (NZRC CORE Advanced).

Rehearsing of emergency procedures must happen **at least once every 6 months**.

SHOPPING LIST

Some of the following equipment is put together into complete kits by suppliers such as Amtech and Emcare.

Equipment List

- Patient monitor (NIBP, SpO₂, CO₂)
 - **Amtech:** Lauren Reid
lauren@amtech.co.nz
0800 268-324
021 2411-778
 - **Connected Healthcare:** Janine
janine@chsnz.co.nz
021 639-414
 - **Covidien:** Christina Hughes
christina.hughes@covidien.com
021 963-230
 - **Emcare:**
upskill@emcare.co.nz
0800 362-273
- Oxygen bottles and regulator
 - Air Liquide, BOC, NitrogenX
 - Which size bottle? A or D

- Nasal Cannulae: Many types. Common are Pro-breathe for either O₂ or O₂/CO₂
- Tourniquet: Most dental suppliers.
- Cannulae: BD Venflon 22G ref:391451
- Tegaderm: 3M Tegaderm 1633
- Filling needles: 18G needle eg: ref: 300204
- 18G filter needle drawing up needle for glass ampoules eg: BD ref:305211 Syringes: 10mL Luer lock.
- 5mL 3mL / 1mL (for emergency administration of adrenaline)
- Band aids, normal and non allergenic (check allergies): Local pharmacy.
- Alcohol swabs: Local pharmacy

Drugs

All found at your local pharmacy.

- Midazolam: 5mg in 5mL
- Saline 0.9%: Polyamps 10 ml
- Water for injection: Polyamps 10 ml
- Flumazenil (minimum 3 ampoules): 0.5mg in 5mL (5 ampoules per box)

Emergency Drugs

All found at your local pharmacy - This list is taken from the NZDA codes of compliance for Conscious Sedation and Medical Emergencies...

- Oxygen Adrenaline (1:1000, 1:10000)
- Amiodarone HCL (300mg) for IV administration
- GTN spray or tablets Aspirin (chewable) tablets (300mg)
- Salbutamol aerosol inhaler (100 micrograms/actuation)
- Salbutamol for nebuliser
- Oral dextrose gel (or equivalent) 5% glucose solution IV (500mL)
- Reversal agents for drugs of sedation (flumazenil, naloxone)
- Normal saline (minimum 2000mL)

Additional IV Sedation Equipment

Most of the following equipment is available through the companies that support our society - **Amtech** and **Emcare**. There are also other supply companies such as Capes Medical or other dental supply companies.

- Suction: Backup manual suction (if patient collapses away from chair or power failure) as well as normal dental high volume suction - consider extension for the suction, e.g. 3 metre hose.

- Bag mask device, (Ambubag) - Requires oxygen reservoir.
- Oropharyngeal, laryngeal mask and nasopharyngeal airways.
- Oxygen delivery equipment and tubing.
- Oxygen Nasal Cannulae (O2 Nasal prongs).
- Oxygen tubing and face mask.
- Sterile disposable syringes and needles suitable for IV and IM injection.
- IV cannulae: Large bore 14g, 16g for emergency access.
- Nebuliser: To deliver Ventolin or adrenaline.
- Spacer device: To deliver Ventolin through Ambubag.
- Paper bag: For hyperventilation.
- Automatic external defibrillator: Many companies - Amtech and Emcare sell AEDs.

Some aspects of the shopping lists (checklists) are out of date because the suppliers change all the time, but the list is complete in terms of what is needed.

AED is compulsory for dentists administering sedation under the current guidelines for emergencies in dentistry.

Supplier Contacts

BOC Gas <https://www.boc.co.nz/shop/en/nz/medical-equipment> and **Air Liquide** <https://www.airliquide.com/new-zealand> have good health catalogues for consumables and many related aspects to sedation and emergencies in dentistry.

Onelink <https://www.onelink.co.nz/> has general supplies - nasal prongs, venflons, tegaderm.

Graham Shaw gshaw@jervoisdental.co.nz and **Nick Stretton** nick@waiheke.co.nz may have other consumable contacts too.

Janine McWhannell, Connected Healthcare Systems - Mindray monitors.

janine@chsnz.co.nz

021 639-414

<https://www.chsnz.co.nz>

Lauren Reid, Amtech - large range of medical supplies

lauren@amtech.co.nz

021 2411-778

0800 268-324

The dental supply companies and your local pharmacy can all assist as well, and a web search will also reveal other suppliers.