Laboratory Pre-Participation Screening Examination in a Chiropractic College
Development, Implementation, and Results

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Introduction: Chiropractic students often serve as subjects in laboratories where they and their classmates practice examinations, various soft tissue techniques, physiological therapeutic modalities, and active rehabilitation. There are contraindications and risks associated with these procedures. This article describes how a procedure was developed to identify potential health concerns and risks that students may face while serving as subjects or performing procedures in clinical skills laboratories. **Methods:** Screening questions and examination procedures were developed through a consensus process. Findings from the screening process determine whether students may engage in full participation or limited participation (precautions) or are prohibited from receiving certain procedures (contraindications). Skills laboratory students and their instructors are informed of any identifiable precautions or contraindications to participation. **Results**: Since its implementation, precautions regarding delivery of manual therapies were found in 4% of those examined and precautions regarding receiving manual therapies in 11.5%. Contraindications to receiving specified manual therapies were found in 8%, and 4% had contraindications to certain physiological therapeutic modalities. **Discussion:** Further work is necessary to improve compliance with follow-up regarding diagnosis of conditions revealed or suspected. Future efforts should address how well students adhered to precautions and contraindications, the nature and frequency of injuries sustained within the laboratories, and what specific measures were taken by faculty to help students with special needs. **Conclusion:** This chiropractic college now has a method to describe potential risks, explain rules of laboratory participation, and obtain consent from each student. (J Chiropr Educ 2011;25(1):16–29)

Key Indexing Terms: Chiropractic Contraindications; Chiropractic Education; Informed Consent

INTRODUCTION

Students in chiropractic colleges must learn several complex psychomotor skills to become proficient chiropractors. In order to develop these skills, students often serve as subjects for classmates to practice examination and treatment procedures. The development of complex psychomotor skills takes time, practice, and attention to details of physical performance. For example, to develop the skill of delivering a proper high-velocity, low-amplitude (HVLA) manipulation, one must learn how to isolate contact and leverage landmarks, maintain good practitioner posture and balance, transfer weight efficiently, obtain joint pretension with a light contact, and thrust with proper amplitude and speed.[1] There are different instructional methods to foster this type of learning, including physical and affective skill acquisition,[2,3] segmentation of learning objectives and skill development,[4] and quantitative feedback training methods.[5,6]

Some instructors believe that the best way for students to learn is to practice each component of delivery on live subjects, culminating in a thrust with the intent to cavitate the joint. Others believe that the level of skill necessary before a thrust can be attempted is great enough that it should not be attempted until a certain level of proficiency has been reached.[1] There have been investigations into the use of manikins and simulators to help students

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attain the compulsory skills needed to deliver an effective adjustment, for instructor assessment and to eliminate the risk associated with students practicing manipulation on other students.[7,8] At our chiropractic college, students serve as subjects in laboratories where they learn and practice examination, manipulation, various soft tissue techniques, physiological therapeutic modalities, and active rehabilitation. There is a potential ethical predicament faced when performing a procedure on healthy subjects who may not have indications for it. There are potential side effects and risks with most procedures,[9–15] and it could be well argued that one should never perform them unless there are specific indications and risks have been minimized.

In a survey of chiropractic college students, 54% reported injuries occurring during technique laboratories while practicing setups or delivering practice adjustments on their peers.[16] A recent study reported that 31.5% of chiropractic students at one college sustained injuries claimed as a result of either delivering or receiving chiropractic adjustments.[17] Interestingly, 44.4% were exacerbations of previous complaints. In another study by the same authors,[18] incoming students at a chiropractic college were surveyed for history of previous injuries. Approximately 53% of the responding incoming students reported a history of earlier neck and/or shoulder injuries and 50% had a previous low back injury. Past hand and/or wrist injuries were found in 40%. Another survey of five chiropractic colleges throughout the world indicated that student injuries during technique class were reported at rates between 7% and 56%.[19,20]

Prior to instituting the procedures below, our college had no systematic means to identify potential risks of injury for students serving as laboratory subjects. There was also no screening regarding a student's possible challenges in delivering manual procedures. Although each incoming student was required to undergo an examination in the Student or Outpatient Clinic, there was no direct means to inform instructors of students' preexisting medical conditions, which may be helpful in case a student should face a personal medical emergency. There was also no method for informing students or instructors of the presence of precautions or contraindications regarding the student's ability to deliver or receive any particular practice procedure. It seemed that for the safety of each student, it would be prudent to identify and minimize any possible risks associated with laboratory participation.

The purpose of this article is to describe how our college developed a procedure to identify potential health concerns and risks that students may face while serving as subjects and performing practice procedures. The article describes how students are examined, how they and their instructors are informed of precautions or contraindications, and how consent is obtained from each student prior to participation in clinical skills laboratories. Finally, the findings from the screening process are discussed.

METHODS

Screening History and Physical Examination

One of the authors (MFF) proposed that all students should be screened for possible contraindications, limitations, or precautions regarding participation in chiropractic laboratories including adjusting technique, soft tissue treatment methods, passive physiological modalities, and active rehabilitative care. An ad hoc committee, consisting of technique instructors and administrators was assembled to develop policies and procedures. A set of screening questions and examinations was proposed, based on known or reported contraindications to receiving various procedures.[11,12,21–23] After several discussions, a final version of screening questions and procedures was produced. These were designed to address contraindications and precautions due to pregnancy, cardiovascular disease, cancer, diabetes, nervous system disorders, significant musculoskeletal disorders, injuries and surgeries, and inflammatory joint disease. We also attempted to uncover conditions that could potentially affect students' delivery of effective manual therapies, for example, wrist or shoulder instability, which may affect their ability to produce adequate HVLA thrusts. Instability is defined as an abnormal increase in joint range of motion provoked by loading the joint, due in part to ligamentous disruption and often associated with pain and weakness of the musculature surrounding the joint or responsible for joint movement.[24–26]

The pre-participation examination takes place after a student is accepted and in the program, not as a prerequisite for admission. Each new first-semester class undergoes the screening process within the first 3 weeks of the semester. This examination serves as their initial history and physical examination and the results are kept in the student's clinical files. A copy of the significant findings is kept in the associate

dean's office for review by all appropriate laboratory instructors. At the beginning of the process, we screened all students in semesters 1 to 6 of our eight-semester program. Seventh- and eighth-semester seniors were not initially included since they are supervised by their clinicians in outpatient clinic or serve in community-based internships off campus.

Under the tutelage of a clinician and with the assistance of a Student Clinic intern, a senior-year intern asked specific screening questions as part of the history (Appendix A) and performed a complete systems examination. Each question answered "Yes" was detailed. Clinicians then reviewed the history and examination findings for any significant findings. Students were identified with conditions that could potentially affect their ability to perform or receive procedures in clinical laboratories. When conditions requiring further evaluation were identified in the screening process, the attending clinician decided whether follow-up was indicated and ordered further testing or made a referral to a medical specialist. This research was determined to be exempt from review according to the Institutional Review Board co-chair.

Communication of Findings With Student and Instructors

Discussions also centered on how to interpret information obtained from the screening history and examination and how to communicate any known or suspected risks of laboratory participation to students and the laboratory faculty. The committee decided to utilize a consent process (Appendix B) so students would be aware of potential risks of receiving manipulation in general and as student subjects in a laboratory setting. Students are asked to consent to serve as subjects for examination procedures (both hands-on and instrument-assisted); joint mobilization or manipulation procedures (both thrust and nonthrust techniques); soft tissue procedures (including but not limited to massage, myofascial release, manual resistance techniques, Graston instrument-assisted soft tissue manipulation and stretching methods); and passive and active physiological procedures (including but not limited to heat, cold, ultrasound, electrical stimulation, vibration, traction, exercise, and rehabilitation).

In the therapeutic setting, patients should be given the opportunity to have their proposed care thoroughly explained and any questions answered. This is the reason for an informed consent process, in which the health care provider typically describes recommended treatments or procedures, the reasons for such, and both common and significant risks, benefits, and alternatives. It is recommended that no guarantee of a specific outcome be given and that there should be an opportunity for patient questions to be answered. This discussion should be documented in the patient's chart, and a consent form should be signed by doctor and patient.[27,28]

In order to inform students of suspected, known, or potential risks involved in their laboratory activities and clearly describe laboratory policies, a Student Consent Form (Appendix B) is utilized. Clinicians supervising the screening are responsible for documenting significant findings, making arrangements for follow-up, and communicating to laboratory instructors any precautions or contraindications found. As a prerequisite to participation in chiropractic technique, soft tissue, and physiological therapeutic laboratories, students must sign the Student Consent Form, indicating they were examined at the college clinic and a Lab Pre-participation Form (Appendix C) was completed. The student denotes either that there were no contraindications or limitations to laboratory participation discovered or that the student was informed of any contraindications or limitations. Students are required to provide signed acknowledgment of the risks inherent in the practice of chiropractic. Students also authorize instructors and students in laboratories to perform examination, joint mobilization, manipulation, soft tissue procedures, and passive and active physiological procedures on them and agree that there is no therapeutic relationship to be inferred by their laboratory participation. Students are required to report to the laboratory instructor any contraindications or precautions to full participation that may arise any time during the term and must also report any adverse reactions to procedures practiced in laboratory or outside of class. Any precautions or contraindications are then reported to each laboratory instructor through the Student Consent and Lab Pre-participation Forms, which are read, approved, and signed by the instructor.

RESULTS

The laboratory pre-participation examination program has screened all students over the past $2\frac{1}{2}$ years except for the seniors in three graduating classes. A total of 174 students were screened. Positive findings from history and examination due to

injury, disability, or other physical limitations were considered either *precautions* or *contraindications* to laboratory participation. Precautions, while not precluding a student from participation, suggest that a student may participate in a laboratory setting with specific activity modification. Contraindications are present when conditions prohibit the safe use of a particular procedure. Manual procedures include manipulation, mobilization, passive manual soft tissue therapies such as massage, postisometric facilitation, manual trigger point therapy, and therapeutic stretching. The conditions found and specific precautions with regard to both delivering manual procedures and receiving manual procedures are provided in Tables 1 and 2, respectively. There were seven students with precautions regarding delivery of manual procedures (4%), 20 students had precautions for receiving manual procedures (11.5%), and no students had precautions for receiving physiological therapeutic modalities. Physiological therapeutic modalities include passive modalities such as heat, cold, electrical stimulation, ultrasound, and diathermy. Prescribed active therapeutic exercises were not included, which are taught in the sixth semester and will be monitored on an individual basis by the instructor. Specific findings and contraindications to receiving both manual therapies and physiological therapeutics are detailed in Tables 3 and 4, respectively. There were no students found with contraindications to delivering

Table 1. Precautions to delivering manual therapies

Condition	Precaution
Scaphoid fracture (fx), L wrist (past history)	Modify thrust technique
L shoulder supraspinatus tendonitis	Modify thrust technique
R shoulder anterior labrum tear	Modify thrust technique
Bilateral glenohumeral (G-H) instability	Modify thrust technique
L wrist instability	Modify thrust technique
Bilateral wrist instability	Modify thrust technique
R grade 3 acromioclavicular (A-C) separation	Modify thrust technique

Table 2. Precautions to receiving manual therapies

Condition	Precaution
Scaphoid fx, L wrist, (past history)	HVLA L wrist
Positive rheumatoid factor	HVLA cervical spine
Bilateral hip dysplasia	Side posture lumbar spine maneuvers
Facial numbness with neck pain	Cervical spine manual therapy
Intermittent headaches post cervical spine HVLA	HVLA cervical spine
L4–L5 discectomy, status post (s/p)	HVLA lumbar spine
L5–S1 discectomy (s/p)	HVLA lumbar spine
Thoracic scoliosis	HVLA thoracic spine
Lumbar disc herniation (documented on MRI)	HVLA lumbar spine
Osgood-Schlatter disease, bilateral (surgically treated)	Manual therapy bil. knees
L forearm fx, comminuted, w/surgical repair and metal implant	Manual therapy L forearm
L5–S1 facet syndrome w/ bilateral lower extremity pain (referred scleratogenous)	HVLA lumbar spine
L knee fx (s/p)	HVLA L knee
Lumbar disc herniation with discectomy (s/p)	HVLA lumbar spine
Bilateral G-H joint instability	HVLA bilateral G-H
L wrist instability	HVLA L wrist
Cervical dystonia	HVLA cervical spine
L5 fx (s/p)	HVLA lumbar spine
T8–T9 disc herniation	HVLA lower thoracic spine
Bilateral wrist instability (18–20 in same pt.)	HVLA bilateral wrists
R Grade 3 A-C separation	HVLA R A-C

Table 3. Contraindications to receiving manual therapies

Condition	Contraindication
Spondylolisthesis, L5 (grade 1)	No HVLA L4–L5, L5–S1
Jaw surgery w/metal implant	No HVLA jaw
R ankle fx, surgery w/metal implant	No HVLA R ankle
Pregnancy	No HVLA spine prone
Bilateral hip dysplasia	No HVLA hips
L ulna fx (past history) w/metal implant	No HVLA L wrist
Bilateral ankle instability	No HVLA bil. ankles
R sternoclavicular (S-C) instability	No HVLA R S-C
L knee surgery (LCL, ACL)	No HVLA L knee
Bilateral inguinal hernias (awaiting surgery)	No thoracolumbar or abdominal manual therapy
Bilateral rearfoot valgus deformities, surgically treated, with screws through calcanei	No HVLA ankles
Total R knee replacement	No HVLA R knee
Cervical spine permanent impairment due to prior Workers' Compensation injury	No HVLA cervical spine
R shoulder anterior labrum tear	No HVLA R G-H

Table 4. Contraindications to receiving physiological therapeutic modalities

Condition	Contraindication
Jaw surgery w/metal implant	No ultrasound (US) jaw, No electrical stimulation (ES) jaw
R ankle fx, surgery w/ metal implant	No US, ES to R ankle/foot
Pregnancy	No US, ES
L ulna fx (past history) w/metal implant	No US, ES to L wrist
Bilareal rearfoot valgus deformities, surgery w/ screws through calcanei	No US, ES to bil. feet
Total R knee replacement	No US, ES to R knee
L forearm comminuted fx w/surgical repair and metal implant	No US, ES to L forearm

manual therapies and 14 (8%) were identified with contraindications to receiving specified manual therapies. Seven students were identified with contraindications to particular physiological therapeutic modalities (4%). Table 5 identifies those students with conditions from history or examination who require referral or additional follow-up. There were no students identified with cancer or diabetes mellitus. One student was pregnant at the time of the screen; one had an inflammatory joint disease; three students had cardiovascular disease; six had various neuromusculoskeletal disorders; 13 had significant bone, joint, or muscle trauma; and nine had other conditions (Table 5). A total of 33 conditions were found (19%). Ten students had conditions requiring further evaluation or treatment at student or outpatient facilities. Thirteen additional students were referred for outside consultation or examination. Of the 23 total referrals, eight students (34.8%) did not comply with the clinician's recommendations.

DISCUSSION

There has been debate among chiropractic educators regarding the merit of allowing chiropractic students to serve as subjects for fellow students to learn the significant affective and psychomotor skills necessary for clinical practice. There are risks associated with students practicing on each other.[16,17,19,20] Our study was conceived and carried out because we believe that as long as students are practicing skills on each other, it is wise to screen students for risks associated with such activities. This process

Table 5. Other medical conditions and follow-up

Conditions Screened	No.	Recommendations and Follow-up (if any)
Pregnancy	1	Recommend continued routine follow-up (F/U) with obstetrician. Complied, no complications.
Cardiovascular disease	3	1. Referral to primary care physician (PCP)/cardiologist for supraventricular tachycardia. Referral to cardiologist, but patient (pt.) refused stating he would go to home country (China) for surgery, to be determined. 2. Possible heart palpitations. F/U examination at Student Clinic revealed no abnormalities; no further complaints. 3. Hypertension and tricuspid systolic murmur. Referral to PCP or cardiologist. Currently under cardiologist care, awaiting echocardiogram and further diagnosis and treatment.
Cancer	0	N/A
Diabetes mellitus	0	N/A
Neuromusculoskeletal disorder	6	1. Facial numbness/neck pain. F/U, further evaluation at Student Clinic. Conservative chiropractic treatment for 1 month; condition resolved. 2. Spondylolisthesis L5 (grade 1) No F/U necessary. 3. Bilateral hip dysplasia. No F/U necessary. 4. R upper extremity paresthesia. F/U at Student Clinic. Chiropractic treatment for 3 weeks; condition resolved. 5. Bilateral Osgood Schlatter disease, s/p surgical correction. No F/U necessary. 6. Thoracic scoliosis. Recommend x-rays. No F/U made by pt.
Significant bone, joint, or muscle trauma	1 3	1. Scaphoid fx L wrist (past history). X-rays 4 views L wrist taken at Outpatient Clinic. Referral to orthopedist. Pt. declined. Conservative care at Student Clinic and Outpatient Clinic. 2. Bilateral ankle instability. F/U Student Clinic. Instituted rehabilitative exercise program with positive results. 3. Jaw surgery w/metal implant. No referral necessary. 4. R ankle fx, surgery w/metal implant. No referral necessary. 5. L ulna fx, surgery w/ metal implant. No referral necessary. 6. Post L5–S1 discectomy. No referral necessary. 7. Post L4–L5 discectomy. No referral necessary. 8. L knee surgery, s/p LCL, ACL reconstruction. No referral necessary. 9. L forearm fx (comminuted), s/p surgery w/metal implant. No referral necessary. 10. Bilateral rearfoot valgus deformity, surgery w/ screws through calcanei. No referral necessary. 11. Right total knee replacement. Recommend yearly F/U with orthopedist. F/U not completed. 12. Lumbar disc herniation (documented on MRI). No F/U necessary. 13. Cervical spine impairment due to prior Workers' Compensation injury. F/U Recommended to Outpatient Clinic. Currently under care.

Table 5. Continued

Conditions Screened	No.	Recommendations and Follow-up (if any)
Inflammatory joint disease	1	Rheumatoid factor positive. Recommend referral to PCP for evaluation. Patient did not F/U.
Other	9	1. Classic migraines. Recommend cervical x-rays and laboratory evaluation. Patient did not F/U. 2. Hx. of bruising easily. Recommend laboratory evaluation. PCP found no abnormalities. 3. Headaches post cervical spine adjustment. F/U at Outpatient Clinic. Improved with treatment. 4. Bilateral cold hands with purplish discoloration. Advise referral to PCP and laboratory. No F/U made by pt. 5. Bilateral hernias. Recommend F/U with surgeon for scheduled procedure. Surgical consultation w/ recommendation to defer surgery until weight loss. 6. Iron deficiency anemia. F/U recommended with PCP; pt. chose self-administered iron supplementation. 7. Anemia. F/U recommended with PCP; pt did not comply. 8. Fibromyalgia. F/U recommended with Lyme disease specialist; treatment with antibiotics and significant improvement noted. 9. Abdominal tenderness to palpation. F/U recommended with internist. Pt. F/U at Outpatient Clinic with resolution of sx.

identifies students with potential risks for injury when delivering treatments and provides insight for instructors to design teaching methods to help students adapt their treatment methods. Instructors also become aware of those students with special risks while serving as subjects. A concerted effort can now be made to limit the likelihood of injury during practice treatments.

Ndetan et al.[17] found that first-time injuries sustained while delivering adjustments were most prevalent in third- and sixth-semester students. These injuries may be associated with increasing repetitions of delivery in laboratory and clinical settings. They also found an increased risk of sustaining hand and wrist injuries from administering adjustments and neck and shoulder injuries resulting from receiving adjustments if there was a previous injury to those areas. Most injuries from receiving adjustments occurred to first-semester students who were predominately treated by sixth-semester students. With this in mind, better efforts can be made to help students with previous hand or wrist injury who are just learning to deliver treatments and those who are increasing the number of treatments given. Those students with previous injuries, especially to the neck or shoulder, should be adequately cautioned regarding their service as subjects to limit re-injury. Our pre-participation screening program has identified students with special needs concerning clinical skills laboratories. We hope this will better inform both students and faculty of students' individual needs and ultimately reduce the incidence of injury. We are currently collecting data on injuries sustained by semester and individual chiropractic skills laboratory. We will review those data with respect to findings from the pre-participation examinations. If injury trends develop, the Curriculum Committee and technique instructors should meet to discuss remedies and alternatives.

We also believe students should give consent to serve as a subject. In order for such consent to be meaningful, students are examined as they enter the program and have a discussion of potential risks with the examining clinician. We developed a student subject informed consent process through faculty agreement. The consent process should also help make students more aware of the concept of informed consent. Furthermore, clinical services and clinical sciences faculty are involved, facilitating the integration into our program of a recommendation of the Association of Chiropractic Colleges concerning informed consent[28]:

A program be incorporated at all member institutions to ensure students learn the concept(s) regarding informed consent by incorporating in the classroom and clinics a process allowing for compliance and educational instruction at every level of the educational encounter.

This program provides senior Outpatient Clinic interns the opportunity to hone their history-taking and examination skills during the screening process while serving as role models for Student Clinic interns.

Better compliance is necessary from the student patients regarding referrals and follow-up since only 65.2% of students referred actually complied with recommendations. In the upcoming semesters, every effort will be made to improve compliance through a coordinated effort on the part of the supervising clinician and the treating intern. Additionally, dedicated time needs to be set aside to complete and review student patient charts, set up referrals, and schedule patients for diagnostic imaging or other procedures when applicable. Additional personnel are needed to ensure that appropriate measures are instituted for those student patients identified with conditions requiring follow-up which may affect participation in clinical skills laboratories. We contend that a student should not be allowed to participate in technique labs if a referral or follow-up needs to be completed. Upon completion of the appropriate follow-up, the supervising clinician should determine the student's participation status. Further work is needed to determine the level of student compliance to activity prohibition due to contraindications. The nature and effectiveness of adaptations recommended by teaching faculty for those with precautions should also be studied.

Since no data were collected on the incidence of student injury either in delivering or receiving practice chiropractic treatments prior to the current study, it will not be possible to compare results to any previous records. We are currently monitoring the incidence of injuries and hope to determine the body parts most frequently injured, the particular laboratory classes where injuries occur, what procedures were administered or received, and whether areas previously injured are associated with more frequent or severe injury. If students with specific precautions or contraindications find fewer aggravations of their conditions by this endeavor, it will have been worth the effort. We intend to survey the students and instructors regarding their perceptions of benefits from awareness of precautions and contraindications.

CONCLUSION

The laboratory pre-participation screening program began $2\frac{1}{2}$ years ago with the intent of identifying students requiring special accommodations in clinical practice laboratories. Following the history and examination, the clinician discusses pertinent findings with the treating intern and then with the student patient. It is only after this discussion and when the student patient reads and verbally acknowledges understanding, that the Student Consent Form is signed. This process informs students of the risks inherent in learning manual and physical procedures and that they must communicate any problems to instructors. Instructors are provided pertinent medical information about students in their laboratory classes in order to accommodate each individual's needs.

CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

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APPENDIX A

LAB PRE-PARTICIPATION EXAMINATION – PATIENT HISTORY

Student Name _____ Date_____
Intern_____Clinician_____

PLEASE OBTAIN ANSWERS TO ALL QUESTIONS BELOW

1. (Females only) Yes☐ No☐ N/A☐ **Are you now pregnant or do you suspect you may be pregnant?**

- If yes to second part, get pregnancy test.

2. Yes☐ No☐ **Have you been diagnosed with cardiovascular disease such as atherosclerosis (hardening of the arteries), fragile blood vessels, aneurysms or heart disease? Detail** _____

Yes☐ No☐ **Do you have a bleeding or clotting disorder? _____**
Yes☐ No☐ **Do you have any symptoms such as cold extremities, or pale or bluish extremities? Detail_____**
Yes☐ No☐ **Do you bruise easily? _____**
Yes☐ No☐ **Do you take a long time to form a clot over an open wound?**
Yes☐ No☐ **Do you feel a pulsing mass in your abdomen, chest, or elsewhere?**
Yes☐ No☐ **Do you have an irregular heart beat? Does your heart race or slow unpredictably? Detail_____**
Yes☐ No☐ **Do you suffer from drop attacks? Detail_____**
Yes☐ No☐ **Do you get dizzy easily or frequently? Detail_____**

- Perform bilateral blood pressure examination, peripheral pulse examination, including auscultation, cardiac and appropriate laboratory examinations. Make referral to Cardiologist and/or Vascular Specialist for Doppler US or other evaluation if appropriate. Obtain medical reports from above.

3. Yes☐ No☐ **Have you had or do you now have cancer?**

If Yes to above, obtain the following information:
What type, when diagnosed, how treated?_____
Yes☐ No☐ Is it in remission?
By whom and when were you last examined? _____

- Obtain letter regarding patient's status from oncologist.
- Obtain appropriate radiography, special imaging or laboratory tests.

Yes☐ No☐ **Have you been unusually fatigued, noticed a lump or had any other changes in symptoms lately?_____**

4. Yes☐ No☐ **Do you have diabetes?**

If Yes to above, what type, when diagnosed, how treated?_____
By whom and when were you last evaluated for it?_____
Yes☐ No☐ **Are you unusually fatigued, thirsty or hungry?**
Yes☐ No☐ **Do you notice any recent change in sensation or temperature in your hands or feet? Detail_____**
Yes☐ No☐ **Has the frequency of urination increased lately?**

- Obtain appropriate medical records and laboratory tests.

5. Yes☐ No☐ **Do you have now or have you had any condition or disease of the Nervous System? Detail**_____

   Yes☐ No☐ **Have you ever suffered a stroke or transient ischemic attack? Detail**_____

   Yes☐ No☐ **Do you have trouble concentrating, get dizzy or lightheaded? Detail**_____

   Yes☐ No☐ **Do you have trouble with feeling body sensations or performing controlled body movements? Detail**_____

   - Perform full neurological examination. Make referral if appropriate to Neurologist. Order or obtain results of appropriate tests.

6. Yes☐ No☐ **Do you have any known anomalies or conditions of your bones, joints or muscles? Detail** _____

   _____

   Yes☐ No☐ **Have you had surgery? Detail** _____

   _____

   Yes☐ No☐ **Are you physically disabled or limited? Detail**_____

   _____

   Yes☐ No☐ **Have you had any fractures, dislocations, or ruptured any ligaments or tendons? Detail** _____

   _____

   Yes☐ No☐ **Is your mobility or strength altered due to injury? Detail**_____

   Yes☐ No☐ **Do you feel that a joint or body region is unstable? Detail**_____

   Yes☐ No☐ **Do you wear a support? Detail** _____

   - Obtain radiographs or special imaging if appropriate. Consider Orthopedic or other referral if appropriate. Obtain past medical reports regarding injuries/ surgeries as appropriate. Perform detailed evaluation of affected part.

7. Yes☐ No☐ **Have you been diagnosed with an inflammatory disease of your joints, such as rheumatoid arthritis, lupus, ankylosing spondilitis or others**?

   Yes☐ No☐ **Do you have any persistent joint pain, swelling, stiffness or redness around any of your joints?**

   Detail _____

   - Obtain radiographs and/or laboratory reports as indicated.
   - Make referral to Rheumatologist as indicated.

Detail positive responses on **STUDENT CONSENT FORM**

Clinician signature _____ **Date**_____

APPENDIX B

STUDENT CONSENT FORM

I, *(print name)* _____
understand that while I can participate in biomechanics labs, I can not participate in a laboratory to practice a procedure or serve as a subject until I have been examined at the Clinic and this **Student Consent Form**, together with a **Lab Pre-participation Form**, have been completed and given to my lab instructor.

1. Yes☐ No☐ I have been examined at the Clinic.

2. Yes☐ No☐ A **Lab Pre-Participation Form** has been completed and is attached.

3. Yes☐ No☐ The attached **Lab Pre-Participation Form** documents no contraindications or limitations to laboratory participation at this time.

4. Yes☐ No☐ I have been diagnosed with a condition contraindicating or limiting my participation in some or all laboratories.

_____

If Yes to #4 above, please have Clinician detail below and attach appropriate documentation along with the completed **Lab Pre-Participation Form.**
For Clinician to fill out below as indicated:

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(continues next page)

Informed Consent. I understand and am informed that, as in all health care, in the practice of chiropractic there are some rare risks to treatment, including but not limited to: muscle strains and joint sprains, fractures, dislocations, disc and nerve injuries and vascular injuries and stroke.

I hereby authorize my instructors and their delegates (including other students) to perform on me the following during the course of class:

Examination procedures (both hands-on and instrument-assisted);
Joint mobilization or manipulation procedures (both thrust and non-thrust techniques);
Soft tissue procedures (including but not limited to massage, myofascial release, manual resistance techniques, Graston Instrument-assisted soft tissue manipulation and stretching methods);
Passive and active physiological procedures (including but not limited to heat, cold, ultrasound, electrical stimulation, vibration, traction, exercise and rehabilitation).

In addition I understand that it is not the purpose of class to treat or manage a clinical condition I may have; any procedure rendered to me is not intended to be therapeutic. I therefore will not seek treatment from anyone during class for a condition I may have.

I understand that I may be a subject for demonstration and practice of various procedures during classes. I also understand that as part of normal demonstration and practice, close body contact may occur between me and a laboratory instructor or laboratory partner.

I understand that I will report to the instructor in advance any contraindications or precautions I may have to procedures during a given laboratory session.

I will immediately report to the instructor any known or suspected changes in my health status that may affect my participation in laboratories.

I will also immediately report to the instructor any adverse reactions that may occur after procedures performed during the course of class or outside class.

Finally, I acknowledge that all procedures must be supervised by a faculty member.

I do hereby willingly consent to the above.

Signed _____Date _____

Print Name _____

The attached **Lab Pre-Participation Form** has been read and approved by laboratory Instructors:

APPENDIX C

LAB PRE-PARTICIPATION FORM

Student Name_____
Examination Date_____
Clinician _____
For Clinician to fill out:

For the above-mentioned student, are there any of the following reported history and/or physical examination findings that may pose a contraindication or precaution for laboratory participation?

☐YES ☐NO Pregnancy

☐YES ☐NO Atherosclerosis

☐YES ☐NO Cardiovascular disease

☐YES ☐NO History of Cancer

☐YES ☐NO Diabetes

☐YES ☐NO Neurological Disease

☐YES ☐NO History of Stroke or Transient Ischemic Attacks

☐YES ☐NO Dizziness

☐YES ☐NO Drop Attacks

☐YES ☐NO Bleeding or Clotting Disorder

☐YES ☐NO Fracture

☐YES ☐NO Joint Instability

☐YES ☐NO Inflammatory Joint Disease

☐YES ☐NO Other Condition(s)

_____

_____

If yes to any of the above, please provide details on **Student Consent Form.**
Please attach this form to **Student Consent Form.** Thank you.

Clinician signature_____**Date**_____